CURRICULUM VITA

ROGER AZEVEDO, PH.D.
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University of Central Florida
School of Modeling Simulation and Training
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Personal Information

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Education

1993–1998	Educational Psychology, McGill University Montréal, Québec, Canada *Specialization*: Applied Cognitive Science and Instructional Psychology *Advisor*: Dr. Susanne P. Lajoie	Ph.D.
1989–1993	Educational Technology, Concordia University Montréal, Québec, Canada *Advisor*: Dr. Robert M. Bernard	M.A.
1986–1989	Psychology, Concordia University Montréal, Québec, Canada *Advisor*: Dr. Pierre-Paul Rompré	B.A.

Professional Work Experience

2021-present	Professor, School of Modeling Simulation and Training, University of Central Florida, Orlando
2020-2023	Fulbright Specialist
2019	Fulbright Scholar, University of South Australia, Adelaide, Australia

2019–present	Associate Faculty, Department of Internal Medicine, University of Central Florida, Orlando
2019–present	Co-Cluster Lead, Learning Sciences Faculty Cluster Initiative, University of Central Florida, Orlando
2018–present	Associate Faculty, Department of Computer Science, University of Central Florida, Orlando
2018–present	Lead Scientist, Learning Sciences Faculty Cluster Initiative, University of Central Florida, Orlando
2018–2021	Professor, Department of Learning Sciences & Educational Research, University of Central Florida, Orlando
2017-2018	Faculty Fellow, Center for Geospatial Analytics, North Carolina State University, Raleigh
2013–2018	Professor, Department of Psychology, North Carolina State University, Raleigh
2013–2018	Associate Faculty, Department of Computer Science, North Carolina State University, Raleigh
2011–2013	Endowed Senior Canada Research Chair (Tier 1), Department of Educational and Counseling Psychology, McGill University, Montréal, Canada
2010–2013	Professor, Department of Educational and Counseling Psychology, McGill University, Montréal, Canada
2008–2010	Associate Tenured Professor, Department of Psychology, University of Memphis, TN
2008–2010	Cognitive Area Director, Department of Psychology, University of Memphis, TN
2007–2008	Associate Professor, Department of Psychology, University of Memphis, TN
2006–2010	Faculty Associate, Institute for Intelligent Systems, University of Memphis, TN
2006–2007	Assistant Professor, Department of Psychology, University of Memphis, TN
2005–2006	Associate Tenured Professor, Department of Human Development, University of Maryland, College Park
1999–2005	Assistant Professor, Department of Human Development, University of Maryland, College Park
1999	Faculty Lecturer, Department of Psychology, Carnegie Mellon University, Pittsburgh, PA
1998–1999	Postdoctoral Fellow, Department of Psychology, Carnegie Mellon University, Pittsburgh, PA
1998–1999	Project Coordinator, Center for Biomedical Informatics and Division of Radiology Informatics, University of Pittsburgh, PA
1997–1998	Research Coordinator and Intelligent Tutoring System Designer, McGill University, Faculties of Medicine and Education, Montréal, Canada
1997	Faculty Lecturer, Department of Psychology, Universidad Nacional Autónoma de México, Mexico City

1996–1997 Faculty Lecturer, Department of Educational Psychology, McGill University, Montréal, Canada

1995–1997 Faculty Lecturer, Department of Education, Graduate Program in Educational Technology, Concordia University, Montréal, Canada

1995 Educational Computing Consultant, TecNed International, Segré, France

1994–1997 Applied Cognitive Scientist, Faculty of Medicine & Medical Informatics Group, McGill University, Montréal, Canada

1993–1997 Research Assistant, Department of Educational Psychology, McGill University, Montréal, Canada

1992–1993 Statistical Consultant, Canadian Pacific Rail, Montréal, Canada

1991–1994 Technical Officer, Department of Education and Graduate Program in Educational Technology, Concordia University, Montréal, Canada

1991–1992 Courseware Developer, Department of Education and Graduate Program in Educational Technology, Concordia University, Montréal, Canada

1990–1991 Courseware Designer and Developer, Asian Institute of Technology (AIT), Bangkok, Thailand

1990 Course Evaluator, Department of Education and Graduate Program in Educational Technology, Montréal, Canada

1989–1993 Research Assistant, Department of Education, Graduate Program in Educational Technology, Concordia University, Montréal, Canada

1987–1989 Research Assistant, Department of Psychology, Center for Studies in Behavioral Neurobiology, Concordia University, Montréal, Canada

Publications

Co-Edited Book

Azevedo, R., & Aleven, V. (Eds.). (2013). *International handbook of metacognition and learning technologies*. Amsterdam, The Netherlands: Springer.

Co-Edited Refereed Conference Proceedings

Nkambou, R., Azevedo, R., & Vassileva, J. (Eds.). (2018). *Proceedings of the 14th International Conference on Intelligent Tutoring Systems (ITS 2018)*. Amsterdam, The Netherlands: Springer.

Book Chapters

Azevedo, R., & Wiedbusch, M. (under review). Theories of metacognition and pedagogy applied in AIED systems. In du Boulay (Ed.), *Handbook of Artificial Intelligence in Education*. The Netherlands: Springer.

Gabriel, F., Cloude, E. B., & Azevedo, R. (2021). Using learning analytics to measure motivational and affective processes during self-regulated learning with advanced learning technologies. In Y. Wang, S. Joksimović, M. O. Z. San Pedro, J. Way, & J.

Whitmer (Eds), *Social and Emotional Learning: An Inclusive Learning Analytics Perspective*. Amsterdam: The Netherlands: Springer.

Azevedo, R., & Dever, D. (in press). Metacognition in multimedia learning. In R. E. Mayer & L. Fiorella (Eds.), *Cambridge handbook of multimedia* (3nd ed.). Cambridge, MA: Cambridge University Press.

Winne, P.H., & Azevedo, R. (in press). Metacognition. In K. Sawyer (Ed.), *Cambridge Handbook of the learning sciences (3nd ed.)*. Cambridge, MA: Cambridge University Press.

Azevedo, R., & Taub, M. (2020). The challenge of measuring processes and outcomes during learning from multiple representations with advanced learning technologies. In P. Kendeou, P. Van Meter, A. List, & D. Lombardi (Eds.), *Handbook of learning from multiple representations and perspectives* (pp. 532-553). Cambridge, MA: Cambridge University Press.

Taub, M., Mudrick., N., Bradbury, A. E., & Azevedo, R. (2019). Self-regulation, self-explanation, and reflection in game-based learning. In J. Plass, B. Horner, & R. Mayer (Eds.), *Handbook of game-based learning* (pp. 239-262). Boston, MA: MIT Press.

Azevedo, R., Mudrick, N. V., Taub, M., & Bradbury, A. (2019). Self-regulation in computer-assisted learning systems. In J. Dunlosky & K. Rawson (Eds.), *Handbook of cognition and education* (pp. 587-618). Cambridge, MA: Cambridge University Press.

Azevedo, R., Taub, M., & Mudrick, N.V. (2018). Using multi-channel trace data to infer and foster self-regulated learning between humans and advanced learning technologies. In D. Schunk & Greene, J.A (Eds.), *Handbook of self-regulation of learning and performance (2nd ed.,* pp. 254-270). New York, NY: Routledge.

Mudrick, N. V., Taub, M., & Azevedo, R. (2018). MetaMentor: An interactive system that uses visualizations of students' real-time cognitive, affective, metacognitive, and motivational self-regulatory processes to study human tutors' decision making. In S. Craig (Ed.), *Tutoring and intelligent tutoring systems* (pp. 157-184). Hauppauge, NY: Nova Science Publishers.

Rutherford, T., Spencer, D., Azevedo, R., & Davidson, A. (2018). Applying self-regulated learning to the dynamic STEM classroom. In M. K. DiBenedetto (Ed.), *Connecting self-regulated learning and performance with instruction across high school content areas* (pp. 185-209). Amsterdam, The Netherlands: Springer.

Azevedo, R., Mudrick, N.V., Taub, M., & Wortha, F. (2017). Coupling between metacognition and emotions during STEM learning with advanced learning technologies: A critical analysis, implications for future research, and design of learning systems. In T. Michalsky & C. Schechter (Eds.), *Self-regulated learning: Conceptualization, contribution, and empirically based models for teaching and learning* (pp. 1-18). NY: Teachers College Press.

Azevedo, R., Taub, M., Mudrick, N. V., Millar, G. C., Bradbury, A. E., & Price, M. J. (2017). Using data visualizations to foster emotion regulation during self-regulated learning with advanced learning technologies. In J. Buder & F. Hesse (Eds.), *Informational environments: Effects of use and effective designs* (pp. 225-247). Amsterdam, The Netherlands: Springer.

Taub, M., Mudrick, N. V., & Azevedo, R. (2017). Strategies for designing advanced learning technologies to foster self-regulated learning. In R. Zheng (Ed.), *Strategies for deep learning with digital technology: Theories and practices in educatio*n (137-170). Amsterdam, The Netherlands: Springer.

Azevedo, R., Taub, M., Mudrick, N., Farnsworth, J., & Martin, S. (2016). Using research methods to investigate emotions in computer-based learning environments. In P. Schutz & M. Zembylas (Eds.), *Methodological advances in research on emotion and education* (pp. 231-243). Amsterdam, The Netherlands: Springer.

Azevedo, R. (2015). An interview with Roger Azevedo. In H. Bembenutty (Ed.), *Contemporary pioneers in educational psychology: Theory, research, and applications* (pp. 103-120). Charlotte, NC: Information Age Publishing.

Azevedo, R., Taub, M., & Mudrick, N. (2015a). Technologies supporting self-regulated learning. In M. Spector, C. Kim, T. Johnson, W. Savenye, D. Ifenthaler, & G. Del Rio (Eds.), *The SAGE Encyclopedia of educational technology* (pp. 731-734). Thousand Oaks, CA: SAGE.

Azevedo, R., Taub, M., & Mudrick, N. (2015b). Think-aloud protocol analysis. In M. Spector, C. Kim, T. Johnson, W. Savenye, D. Ifenthaler, & G. Del Rio (Eds.), *The SAGE Encyclopedia of educational technology* (pp. 763-766). Thousand Oaks, CA: SAGE.

Taub, M., Martin, S. A., Azevedo, R., & Mudrick, N. V. (2015). The role of pedagogical agents on learning: Issues and trends. In F. Neto, R. Souza, & A. Gomes (Eds.) *Handbook of research on 3-D virtual environments and hypermedia for ubiquitous learning* (pp. 362-386). Hershey, PA: IGI Global.

Azevedo, R. (2014). Metacognition and multimedia learning. In R. E. Mayer (Ed.), *Cambridge handbook of multimedia* (2nd ed., pp. 647-672). Cambridge, England: Cambridge University Press.

Winne, P.H., & Azevedo, R. (2014). Metacognition. In K. Sawyer (Ed.), *Cambridge Handbook of the Learning Sciences (2nd ed.)* (pp. 63-87). Cambridge, MA: Cambridge University Press.

Azevedo, R., & Aleven, V. (2013). Metacognition and learning technologies: An overview of the current interdisciplinary research. In R. Azevedo & V. Aleven (Eds.), *International handbook of metacognition and learning technologies* (pp. 1–16). Amsterdam, The Netherlands: Springer.

Azevedo, R., Harley, J., Trevors, G., Duffy, M., Feyzi-Behnagh, R., Bouchet, F., & Landis, R. S. (2013). Using trace data to examine the complex roles of cognitive, metacognitive, and emotional self-regulatory processes during learning with multi-agent systems. In R. Azevedo & V. Aleven (Eds.), *International handbook of metacognition and learning technologies* (pp. 427–449). Amsterdam, The Netherlands: Springer.

Kay, J., Kleitman, S., & Azevedo, R. (2013). Empowering teachers to design learning resources with metacognitive interface elements. In R. Luckin, P. Goodyear, B. Grabowski, & S. Puntambekar (Eds.), *Handbook on design in educational computing* (pp. 124–134). New York, NY: Routledge.

Azevedo, R., Behnagh, R., Duffy, M., Harley, J., & Trevors, G. (2012). Metacognition and self-regulated learning in student-centered leaning environments. D. Jonassen & S. Land (Eds.), *Theoretical foundations of student-center learning environments* (2nd ed., pp. 171–197). New York, NY: Routledge.

Lintean, M., Rus, V., Cai, Z., Witherspoon-Johnson, A., Graesser, A. C., & Azevedo. R. (2012). Computational aspects of the intelligent tutoring system MetaTutor. In P. McCarthy & C.

Boonthum (Eds.), *Applied natural language processing and content analysis: Identification, investigation, and resolution* (pp. 247–260). Hershey, PA: IGI Global.

Opfermann, M., Azevedo, R., & Leutner, D. (2012). Metacognition and hypermedia learning: How do they relate? In N. Seel (Ed.), *Encyclopedia of the sciences of learning* (pp. 2224–2228). Amsterdam, The Netherlands: Springer.

Azevedo, R., & Chauncey Strain, A. D. (2011). Integrating cognitive, metacognitive, and affective regulatory processes with MetaTutor. In R. A. Calvo & S. K. D'Mello (Eds.), *New perspectives on affect and learning technologies* (pp. 141–154). Amsterdam, The Netherlands: Springer.

Azevedo, R., Johnson, A., Chauncey, A., & Graesser, A. (2011). Use of hypermedia to convey and assess self-regulated learning. In B. Zimmerman & D. Schunk (Eds.), *Handbook of self-regulation of learning and performance* (pp. 102–121). New York, NY: Routledge.

Greene, J. A., Torney-Purta, J., Azevedo, R., & Robertson, J. (2010). Using cognitive interviewing to explore elementary and secondary school students' epistemic and ontological cognition. In L. D. Bendixen & F. C. Feucht (Eds.), *Personal epistemology in the classroom: Theory, research, and implications for practice* (pp. 368–406). Cambridge, England: Cambridge University Press.

Azevedo, R., Johnson, A., Chauncey, A., & Burkett, C. (2010). Self-regulated learning with MetaTutor: Advancing the science of learning with MetaCognitive tools. In M. Khine & I. Saleh (Eds.), *New science of learning: Computers, cognition, and collaboration in education* (pp. 225–247). Amsterdam, The Netherlands: Springer.

Azevedo, R., & Witherspoon, A. M. (2009). Self-regulated learning with hypermedia. In D. J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), *Handbook of metacognition in education* (pp. 319–339). Mahwah, NJ: Routledge.

Azevedo, R. (2008). The role of self-regulation in learning about science with hypermedia. In D. Robinson & G. Schraw (Eds.), *Recent innovations in educational technology that facilitate student learning* (pp. 127–156). Charlotte, NC: Information Age Publishing.

Lajoie, S. P., & Azevedo, R. (2006). Teaching and learning in technology-rich environments. In P. Alexander & P. Winne (Eds.), *Handbook of educational psychology* (2nd ed., pp. 803–821). Mahwah, NJ: Erlbaum.

Lajoie, S. P., & Azevedo R. (2000). Cognitive tools for medical informatics. In S. P. Lajoie (Ed.), *Computers as cognitive tools II: No more walls: Theory change, paradigm shifts and their influence on the use of computers for instructional purposes* (pp. 247–271). Mahwah, NJ: Erlbaum.

Manuscripts/Journal Articles (indicates refereed manuscript, + indicates invited manuscript)*

* Cloude, E. B., Carpenter, D., Dever, D. A., Lester, J., & Azevedo, R. (in press). Game-based learning analytics for supporting adolescents' reflection. *Journal of Learning Analytics.*

* Dever, D. A., Wiedbusch, M., Cloude, E. B., Lester, J., & Azevedo, R. (accepted with minor revisions). Scientific text comprehension during game-based learning: The impact of prior knowledge and emotions. *Discourse Processes.*

* Geden, M., Emerson, A., Carpenter, D. Rowe, J., Azevedo, R., & Lester, J. (2021). Predictive student modeling in game-based learning environments with word embedding

representations of reflection. *International Journal of Artificial Intelligence in Education, 31*, 1-23.

* Taub, M., Azevedo, R., Rajendran, R., Cloude, E., Biswas, G., & Price, M. (2021). How are students' emotions related to the accuracy of cognitive and metacognitive processes during learning with an intelligent tutoring system? *Learning and Instruction, 72* https://doi.org/10.1016/j.learninstruc.2019.04.001

* Wiedbusch, M., Azevedo, R., Chi, M., Kite, V., Park, S., Taub, M., & Yang, X. (2021). Intelligent teacher dashboards that support students' self-regulated learning, engagement, and teachers' decision making. *Frontiers in Education, 6* doi: https://doi.org/10.3389/feduc.2021.570229

+ Azevedo R. (2020). Reflections on the field of metacognition: issues, challenges, and opportunities. *Metacognition & Learning,15*, 91-98. https://doi.org/10.1007/s11409-020-09231-x

* Cloude, E., Dever, D., Wiedbusch, M., & Azevedo, R. (2020). Quantifying scientific thinking using multichannel data with Crystal Island: Implications for individualized game-learning analytics. Editorial *Frontiers in Education, 5*, 572546. https://doi.org/10.3389/feduc.2020.572546

* Dever, D. A., Azevedo, R., Cloude, E. B., & Wiedbusch, M. (2020). The impact of autonomy and types of informational text presentations in game-based environments on learning: Converging multi-channel processes data and learning outcomes. *International Journal of Artificial Intelligence in Education, 30*, 581-615.

* Emerson, A., Cloude, E., Azevedo, R.,& Lester, J. (2020). Multimodal learning analytics for game-based learning. *British Journal of Educational Technology, 51*, 1505-1526. doi: 10.1111/bjet.12992

+ Lajoie, S. P., Pekrun, R., Azevedo, R., & Leighton, J. (2020). Understanding and measuring emotions in technology-rich learning environments. *Learning and Instruction, 70*. https://doi.org/10.1016/j.learninstruc.2019.101272

* Taub, M., Sawyer, R., Smith, A., Rowe, J., Azevedo, R., & Lester, J. (2020). The agency effect: The impact of student agency on learning, emotions, and problem-solving behaviors in a game-based learning environment. *Computers & Education, 147* doi https://doi.org/10.1016/j.compedu.2019.103781

* Taub, M., Sawyer, R., Lester, R., & Azevedo, R. (2020). The impact of contextualized emotions on self-regulated learning and scientific reasoning during learning with a game-based learning environment. *International Journal of Artificial Intelligence in Education, 30*-97-120.

* Azevedo, R., & Gasevic, D. (2019). Analyzing multimodal multichannel data about self-regulated learning with advanced learning technologies: Issues and challenges. *Computers in Human Behavior, 96*, 207-210.

* Mudrick, N.V., Azevedo, R., & Taub, M. (2019). Integrating metacognitive judgements and eye movements using sequential pattern mining to understand processes underlying successful multimedia learning. *Computers in Human Behavior, 96*, 223-234.

* Taub, M., & Azevedo, R. (2019a). How does prior knowledge influence fixations on and sequences of cognitive and metacognitive SRL processes during learning with an ITS? *International Journal of Artificial Intelligence in Education, 29*, 1-28.

* Taub, M., & Azevedo, R. (2019b). Using sequence mining to assess self-regulated learning and scientific inquiry based on levels of efficiency and emotional expressivity during game-based learning. *Journal of Educational Data Mining, 10*, 1-26.

* Wortha, F., Azevedo, R., Taub, M., & Narciss, S. (2019). Multiple negative emotions during learning with digital learning environments: Evidence on their detrimental effect on learning from two methodological approaches. *Frontiers in Psychology*, 10, 1-28.

* Jeelani, J., Albert. A., Han, K., & Azevedo, R. (2018). Are visual search patterns predictive of hazard recognition performance? Empirical investigation using eye-tracking technology. *Journal of Construction Engineering and Management, 145*, 1-13.

* Taub, M., Azevedo, R., Bradbury, A. E., Millar, G. C., & Lester. J. (2018). Using sequence mining to reveal the efficiency in scientific reasoning during STEM learning with a game-based learning environment. *Learning and Instruction, 54, 93-103*.

* Harley, J. M., Taub, M., Azevedo, R., & Bouchet, F. (2018). "Let's set up some subgoals": Understanding human-pedagogical agent collaborations and their implications for learning and prompt and feedback compliance. *IEEE Transactions on Learning Technologies, 11*, 54-66.

* Jeelani, I., Albert, A., Azevedo, R., & Jaselskis, E.J. (2017). Development and testing of a personalized hazard recognition training intervention. *Journal of Construction Engineering and Management, 143*, 1-11.

[**Best Paper Award by the *Journal of Construction Engineering and Management***]

* Taub, M., Mudrick, N. V., Azevedo, R., Millar, G. C., Rowe, J., & Lester, J. (2017). Using multi-channel data with multi-level modeling to assess in-game performance during gameplay with CRYSTAL ISLAND. *Computers in Human Behavior, 76*, 641-655.

* Harley, J.M., Carter, C.K., Papaionnou, N., Bouchet, F., Azevedo, R., Landis, R. L., & Karabachian, L. (2016). Examining the predictive relationship between personality and emotion traits and students' agent-directed emotions: Towards emotionally-adaptive agent-based learning environments. *User Modeling and User-Adapted Interaction, 26*, 177-219.

* Trevors, G., Feyzi-Behnagh, R., Azevedo, R., & Bouchet, F. (2016). Self-regulated learning processes vary as a function of epistemic beliefs and contexts: Evidence from eye tracking and concurrent and retrospective reports. *Learning and Instruction, 42*, 31-46.

+ Azevedo, R. (2015). Defining and measuring engagement and learning in science: Conceptual, theoretical, methodological, and analytical issues. *Educational Psychologist, 50*, 84-94.

* Duffy, M., & Azevedo, R. (2015). Motivation matters: Interactions between achievement goals and agent scaffolding for self-regulated learning within an intelligent tutoring system. *Computers in Human Behavior, 52*, 338-348.

* Duffy, M., Azevedo, R., Sun, N.-Z., Griscom, S., Stead, V., Dhillon, I., Crelinsten, L., Wiseman, J., Maniatis, T., & Lachapelle, K. (2015). Team regulation in a simulated medical

emergency: A in-depth analysis of the cognitive, metacognitive, and affective processes. *Instructional Science, 43*, 401-426.

* Harley, J. M., Bouchet, F., Hussain, S., Azevedo, R., & Calvo, R. (2015). A multi-componential analysis of emotions during complex learning with an intelligent multi-agent system. *Computers in Human Behavior, 48*, 615-625.

* Muis, K. R., Pekrun, R., Azevedo, R., Sinatra, G. M., Trevors, G., Meier, E., & Heddy, B. (2015). The curious case of climate change: Testing a theoretical model of epistemic beliefs, epistemic emotions, and complex learning. *Learning and Instruction, 39*, 168-183.

+ Azevedo, R. (2014). Issues in dealing with sequential and temporal characteristics of self- and socially-regulated learning. *Metacognition and Learning, 9*, 217-228.

* Feyzi-Behnagh, R., Azevedo, R., Legowski, E., Reitmeyer, K., Tseytlin, E., & Crowley, R. (2014). Metacognitive scaffolds improve self-judgaments of accuracy in a medical intelligent tutoring system. *Instructional Science, 42*, 159–181.

* Harley, J.M. & Azevedo, R. (2014). Toward a feature-driven understanding of students' emotions during interactions with agent-based learning environments: A selective review. *International Journal of Gaming and Computer-Mediated Simulations, 6*(3), 17-34.

* Taub, M., Azevedo, R., Bouchet, F., & Khosravifar, B. (2014). Can the use of cognitive and metacognitive self-regulated learning strategies be predicted by learners' levels of prior knowledge in hypermedia-learning environments? *Computers in Human Behavior, 39,* 356-367.

* Trevors, G., Duffy, M., & Azevedo, R. (2014). Note-taking within MetaTutor: Interactions between an intelligent tutoring system and prior knowledge on note-taking and learning. *Educational Technology Research & Development, 62*, 507–528.

* Bouchet, F., Harley, J., Trevors, G., & Azevedo, R. (2013). Clustering and profiling students according to their interactions with an intelligent tutoring system fostering self-regulated learning. *Journal of Educational Data Mining, 5*(1), 104–146.

* Chauncey Strain, A., Azevedo, R., & D'Mello, S. (2013). Using a false biofeedback methodology to explore relationships among learners' affect, metacognition, and performance. *Contemporary Educational Psychology, 38*, 22–39.

* Burkett, C., & Azevedo, R. (2012). The effect of multimedia discrepancies on metacognitive judgments. *Computers and Human Behavior, 28*, 1276–1285.

* Azevedo, R., Cromley, J. G., Moos, D. C., Greene, J. A., & Winters, F. I. (2011). Adaptive content and process scaffolding: A key to facilitating students' self-regulated learning with hypermedia. *Psychological Testing and Assessment Modeling, 53*, 106–140.

+ Azevedo, R., & Feyzi-Behnagh, R. (2011). Dysregulated learning with advanced learning technologies. *Journal of e-Learning and Knowledge Society, 7*(2), 9–18.

* Cromley, J. G., & Azevedo, R. (2011). Measuring strategy use in context with multiple-choice items. *Metacognition and Learning, 6*, 155–177.

* Greene, J. A., Moos, D. C., & Azevedo, R. (2011). Self-regulated learning with computer-based learning environments. *New Directions for Teaching and Learning, 126*, 107–115.

* Johnson, A. M., Azevedo, R., & D'Mello, S. K. (2011). The temporal and dynamic nature of self-regulatory processes during independent and externally assisted hypermedia learning. *Cognition and Instruction, 29*(4), 471–504.

* Lintean, M., Rus, V., & Azevedo, R. (2011). Automatic detection of student mental models during prior knowledge activation in MetaTutor. *International Journal of Artificial Intelligence and Education, 21*(3), 169–190.

* Azevedo, R., Moos, D., Johnson, A., & Chauncey, A. (2010a). Measuring cognitive and metacognitive regulatory processes used during hypermedia learning: Issues and challenges. *Educational Psychologist, 45*(4), 210–223.

+ Azevedo, R., Moos, D., Johnson, A., & Chauncey, A. (2010b). La misurazione dei processi di regolazione cognitive e metacognitive durante lo studio con gli ipermedia [Challenges and issues in the measurement of cognitive and metacognitive regulatory processes used during hypermedia learning]. *Tecnologie Didattiche, 49*(1), 4–12.

* El Saadawi, G., Azevedo, R., Castine, M., Payne, V., Medvedeva, O., Tseytlin, E., … Crowley, R. (2010). Factors affecting feeling-of-knowing in a medical intelligent tutoring system: The role of immediate feedback as a metacognitive scaffold. *Advances in Health Sciences Education, 15*, 9–30.

* Greene, J. A., & Azevedo, R. (2010). The measurement of learners' self-regulated cognitive and metacognitive processes while using computer-based learning environments. *Educational Psychologist, 45*(4), 203–209.

* Greene, J. A., Torney-Purta, J., & Azevedo, R. (2010). Empirical evidence regarding relations among a model of epistemic and ontological cognition, academic performance, and educational level. *Journal of Educational Psychology, 102*(1), 234–255.

+ Azevedo, R. (2009). Theoretical, methodological, and analytical challenges in the research on metacognition and self-regulation: A commentary. *Metacognition & Learning*, *4*(1), 87–95.

* Cromley, J. G., & Azevedo, R. (2009). Locating information within extended hypermedia. *Educational Technology Research & Development*, *57*, 287–313.

* Greene, J. A., & Azevedo, R. (2009). A macro-level analysis of SRL processes and their relations to the acquisition of sophisticated mental models. *Contemporary Educational Psychology*, *34*, 18–29.

* Moos, D. C., & Azevedo, R. (2009a). Learning with computer-based learning environments: A literature review of computer self-efficacy. *Review of Educational Research, 79*, 576–600.

* Moos, D. C., & Azevedo, R. (2009b). Self-efficacy and prior domain knowledge: To what extent does monitoring mediate their relationship with hypermedia learning. *Metacognition & Learning*, *4*(3), 197–216.

* Azevedo, R., & Jacobson, M. (2008). Advances in scaffolding learning with hypertext and hypermedia: A summary and critical analysis. *Educational Technology Research & Development*, *56*(1), 93–100.

* Azevedo, R., Moos, D. C., Greene, J. A., Winters, F. I., & Cromley, J. G. (2008). Why is externally-regulated learning more effective than self-regulated learning with hypermedia? *Educational Technology Research & Development*, *56*(1), 45–72.

[2008 Outstanding Article of the Year Award by the Association for Educational Communications and Technology]

* Jacobson, M. J., & Azevedo, R. (2008). Advances in scaffolding learning with hypertext and hypermedia: Theoretical, empirical, and design issues. *Educational Technology Research & Development*, *56*(1), 1–3.

* Greene, J. A., Azevedo, R., & Torney-Purta, J. (2008). Modeling epistemological and ontological cognition: Philosophical perspectives and methodological directions. *Educational Psychologist*, *4*(3), 142–160.

* Greene, J. A., Moos, D. C., Azevedo, R., & Winters, F. I. (2008). Exploring differences between gifted and grade-level students' use of self-regulatory learning processes with hypermedia. C*omputers & Education*, *50*, 1069–1083.

* Moos, D. C., & Azevedo, R. (2008a). Self-regulated learning with hypermedia: The role of prior knowledge. C*ontemporary Educational Psychology*, *33*, 270–298.

* Moos, D. C., & Azevedo, R. (2008b). Monitoring, planning, and self-efficacy during learning with hypermedia: The impact of conceptual scaffolds. C*omputers in Human Behavior*, *24*(4), 1686–1706.

* Moos, D. C., & Azevedo, R. (2008c). Exploring the fluctuation of motivation and use of self-regulatory processes during learning with hypermedia. *Instructional Science*, *36*, 203–231.

* Azevedo, R. (2007). Understanding the complex nature of self-regulated learning processes in learning with computer-based learning environments: An introduction. *Metacognition & Learning*, *2*(2/3), *57–65*.

* Azevedo, R., Greene, J. A., & Moos, D. C. (2007). The effect of a human agent's external regulation upon college students' hypermedia learning. *Metacognition & Learning*, *2*(2/3), *67–87*.

* Cromley, J. G., & Azevedo, R. (2007). Testing and refining the Direct and Inferential MEdiation (DIME) model of reading comprehension. *Journal of Educational Psychology*, *99*(2), 311–325.

* Greene, J. A., & Azevedo, R. (2007a). A theoretical review of Winne and Hadwin's model of self-regulated learning: New perspectives and directions. *Review of Educational Research*, *77*(3), 334–372.

* Greene, J. A., & Azevedo, R. (2007b). Adolescents' use of self-regulatory processes and their relation to qualitative mental model shifts while using hypermedia. *Journal of Educational Computing Research*, *36*(2), 125–148.

+ Azevedo, R., Cromley, J. G., Winters, F. I., Moos, D. C., & Greene, J. A. (2006). Using computers as metacognitive tools to foster students' self-regulated learning. *Technology, Instruction, Cognition, and Learning Journal*, *3*, 97–104.

* Cromley, J. G., & Azevedo, R. (2006). Self-report of reading comprehension strategies: What are we measuring? *Metacognition & Learning*, *1*, 229–247.

+ Hmelo-Silver, C. E., & Azevedo, R. (2006). Understanding complex systems: Some core challenges. *Journal of the Learning Sciences*, *15*(1), 53–61.

* Moos, D. C., & Azevedo, R. (2006). The role of goal structure in undergraduates' use of self-regulatory variables in two hypermedia learning tasks. *Journal of Educational Multimedia and Hypermedia*, *15*(1), 49–86.

+ Winne, P. H., Nesbit, J. C., Kumar, V., Hadwin, A. F., Lajoie, S. P., Azevedo, R., & Perry, N. E. (2006). Supporting self-regulated learning with gStudy software: The Learning Kit project. *Technology, Instruction, Cognition, and Learning Journal*, *3*, 105–113.

+ Azevedo, R. (2005a). Computers as metacognitive tools for enhancing learning. *Educational Psychologist (Special Issue on Computers as Metacognitive Tools for Enhancing Student Learning)*, *40*(4), 193–197.

+ Azevedo, R. (2005b). Using hypermedia as a metacognitive tool for enhancing student learning? The role of self-regulated learning. *Educational Psychologist (Special Issue on Computers as Metacognitive Tools for Enhancing Student Learning)*, *40*(4), 199–209.

* Azevedo, R., Cromley, J. G., Winters, F. I., Moos, D. C., & Greene, J. A. (2005). Adaptive human scaffolding facilitates adolescents' self-regulated learning with hypermedia. *Instructional Science (Special Issue on Scaffolding Self-Regulated Learning and Metacognition: Implications for the Design of Computer-Based Scaffolds)*, *33*, 381–412.

* Azevedo, R., & Hadwin, A. F. (2005). Scaffolding self-regulated learning and metacognition: Implications for the design of computer-based scaffolds. *Instructional Science (Special Issue on Scaffolding Self-Regulated Learning and Metacognition: Implications for the Design of Computer-Based Scaffolds)*, *33*, 367–379.

* Cromley, J. G., & Azevedo, R. (2005). What do reading tutors do? A naturalistic study of more and less experienced tutors in reading. *Discourse Processes*, *40*(2), 83–113.

* Winters, F. I., & Azevedo, R. (2005). High school students' regulation of learning during computer-based science inquiry. *Journal of Educational Computing Research*, *33*(2), 189–215.

* Azevedo, R., & Cromley, J. G. (2004). Does training on self-regulated learning facilitate students' learning with hypermedia? *Journal of Educational Psychology*, *96*, 523–535.

* Azevedo, R., Cromley, J. G., & Seibert, D. (2004). Does adaptive scaffolding facilitate students' ability to regulate their learning with hypermedia? *Contemporary Educational Psychology*, *29*(3), 344–370.

* Azevedo, R., Guthrie, J. T., & Seibert, D. (2004). The role of self-regulated learning in fostering students' conceptual understanding of complex systems with hypermedia. *Journal of Educational Computing Research*, *30*(1), 87–111.

* Azevedo, R., Winters, F. I., & Moos, D. C. (2004). Can students collaboratively use hypermedia to learn about science? The dynamics of self- and other-regulatory processes in an ecology classroom. *Journal of Educational Computing Research*, *31*(3), 215–245.

+ Azevedo, R. (2002). Beyond intelligent tutoring systems: Computers as METAcognitive tools to enhance learning? *Instructional Science*, *30*(1), 31–45.

* Azevedo, R., & Lajoie, S. P. (1998). The cognitive basis for the design of a mammography interpretation tutor. *International Journal of Artificial Intelligence in Education*, *9*, 32–44.

* Lajoie, S. P., Azevedo, R., & Fleiszer, D. M. (1998). Cognitive tools for assessment and learning in a high information flow environment. *Journal of Educational Computing Research*, *18*(3), 203–233.

* Azevedo, R., & Bernard, R. M. (1995a). Assessing the effects of feedback in computer-assisted learning. *British Journal of Educational Technology*, *26*(1), *57*–58.

* Azevedo, R., & Bernard, R. M. (1995b). A meta-analysis of the effect of feedback in computer-based instruction. *Journal of Educational Computing Research*, *13*(2), 109–125.

* Shaw, S. G., Azevedo, R., & Bret, P. M. (1995). The effectiveness of hypermedia instructional modules for radiology residents. *Canadian Journal of Educational Communication*, *24*(3), 245–268.

Manuscripts Under Review

* Cloude, E. B., Dever, D., Hahs-Vaughn, D., Emerson, A., Azevedo, R., & Lester, J. (under review). Dynamically modeling negative emotions and their impact ion high-order thinking: Implications for building affect-aware systems. *IEEE Transactions on Affective Computing*

Manuscripts in Preparation

Azevedo, R., Bouchet, F., Duffy, M., Harley, J., Taub, M., Trevors, G., Cloude, E., Dever, D., Wiedbusch, M., & Wortha, F. (in prep). Leveraging multichannel data to foster self-regulated learning with MetaTutor: Lessons learned and future directions. *Frontiers in Psychology*.

Cloude, E. B., Azevedo, R., Winne, P. H., Biswas, G., & Jang, E. E. (in prep). System design for using multimodal trace data in modeling self-regulated learning. *International of Artificial Intelligence in Education*

Dever, D., Amon, M. J., Vrzakova, H., Wiedbusch, M., Cloude, E., Ballelos, N., & Azevedo, R. (in prep). Capturing patterns of learners' interactions with scientific text during game-based learning. *Frontiers in Psychology*.

(Co-)Edited Journals (Special Issues)

Lajoie, S. P., Azevedo, R., Pekrun, R., & Leighton, J. (2020). Understanding and measuring emotions in technology-rich learning environments. 70, *Learning and Instruction*

Azevedo, R., & Gašević, D. (2019). Analyzing multimodal multichannel data about self-regulated learning with advanced learning technologies. *Computers in Human Behavior, 96*, 207-289.

Azevedo, R., & Greene, J. A. (2010). The measurement of learners' self-regulated learning and metacognitive processes while using computer-based learning environments. *Educational Psychologist*, *45*(4), 203–276.

Jacobson, M., & Azevedo, R. (2008). Scaffolding learning with hypermedia: An exploration of the theoretical, empirical, and design issues. *Educational Technology Research and Development*, *56*(1), 1–100.

Azevedo, R. (2007). Understanding the complex nature of self-regulatory processes when learning with computer-based learning environments. *Metacognition & Learning*, *2*(2/3), *57*–183.

Azevedo, R. (2005). Using computers as metacognitive tools for enhancing student learning. *Educational Psychologist*, *40*(4), 193–271.

Azevedo, R., & Hadwin, A. F. (2005). Scaffolding self-regulated learning and metacognition: Implications for the design of computer-based scaffolds. *Instructional Science*, *33*(5/6), 367–565.

Edited Conference Workshop Proceedings

Azevedo, RF., Siemens, G., Dawson, S. (in preparation). *Proceedings of the LAK 2020 Workshop on integrating multi-channel learning data to model complex learning processes*. Vancouver, BC: SOLAR.

Biswas, G., Azevedo, R., Shute, V., & Bull, S. (Eds.). (2013). *Proceedings of the AIED 2013 Workshop on Scaffolding in Open-Ended Learning Environments (OELEs)*. Amsterdam, The Netherlands: Springer.

Pirrone, R., Azevedo, R., & Biswas, G. (Eds.). (2010). *Proceedings of the AAAI Fall Symposium on Cognitive and Metacognitive Educational Systems*. Menlo Park, CA: AAAI Press.

Pirrone, R., Azevedo, R., & Biswas, G. (Eds.). (2009). *Proceedings of the AAAI Fall Symposium on Cognitive and Metacognitive Educational Systems*. Menlo Park, CA: AAAI Press.

Azevedo, R. (Ed.). (2003). *Metacognition and self-regulation in learning with MetaCognitive tools*. Amsterdam, The Netherlands: IOS Press. http://www.education.umd.edu/EDHD/faculty2/Azevedo/AIED/

Refereed Conference Proceedings

* Cloude, E. B., & Azevedo, R. (2020). Contextualizing multimodal learning analytics to theoretical frameworks and learning environments. *Proceedings of integrating multi-channel learning to model complex learning processes workshop @ LAK'20. 10th International Learning Analytics & Knowledge Conference (LAK)*. Frankfurt, Germany: ACM.

* Cloude, E. B., Wortha, F., Dever, D., & Azevedo, R. (2020). How do emotions change during learning with an intelligent tutoring system? Metacognitive monitoring and performance with MetaTutor. *The 42nd Annual Meeting of the Cognitive Science Society*. Toronto, Ontario, Canada.

* Dever, D. A., Cloude, E. B., & Azevedo, R. (2020). Does prior knowledge influence learners' cognitive and metacognitive strategies over time during game-based learning? In S. Denison, M. Mack, Y. Xu, & B. C. Armstrong (Eds.), *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*. Toronto, Canada.

* Wiedbusch, M., & Azevedo, R. (2020). Modeling metacomprehension monitoring accuracy with eye gaze on informational content in a multimedia learning environment. In *Symposium on Eye Tracking Research and Applications (ETRA '20 Full Papers)*, ACM, New York, NY, USA.

* Wiedbusch, M., Azevedo, R., & Brown, M. (2020). Can a composite metacognitive judgment accuracy score successfully capture performance variance during multimedia learning? *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*. Toronto, Canada

* Cloude, E. B., Taub, M., Lester, J., & Azevedo. R. (2019). The role of achievement goal orientation on metacognitive process use in game-based learning. In S. Isotani, E. Millán, A. Ogan, P. Hastings, B. McLaren, & Luckin, R. (Eds.), *Proceedings of the 20th International Conference on Artificial Intelligence in Education (AIED 2019)* (pp. 36-40). Amsterdam, The Netherlands: Springer.

* Dever, D., & Azevedo. R. (2019a). Autonomy and types of informational text presentations in game-based learning environments. In S. Isotani, E. Millán, A. Ogan, P. Hastings, B. McLaren, & Luckin, R. (Eds.), *Proceedings of the 20th International Conference on Artificial*

Intelligence in Education (AIED 2019) (pp. 110-120). Amsterdam, The Netherlands: Springer.

* Dever, D., & Azevedo. R. (2019b). Examining gaze behaviors and metacognitive judgments of informational text within game-based learning environments. In S. Isotani, E. Millán, A. Ogan, P. Hastings, B. McLaren, & Luckin, R. (Eds.), *Proceedings of the 20th International Conference on Artificial Intelligence in Education (AIED 2019)* (pp. 121-132). Amsterdam, The Netherlands: Springer.

* Dever, D., Wiedbusch, M., & Azevedo. R. (2019). Learners' gaze behaviors and metacognitive judgments with an agent-based multimedia environment. In S. Isotani, E. Millán, A. Ogan, P. Hastings, B. McLaren, & Luckin, R. (Eds.), *Proceedings of the 20th International Conference on Artificial Intelligence in Education (AIED 2019)* (pp. 58-61). Amsterdam, The Netherlands: Springer.

* Azevedo. R., Mudrick, N. V., Taub, M., Lester, J., Taylor, R., Sawyer, R., Culberston, K., & Roberts, C. (2018). MetaMentor: A system designed to study, teach, train, and foster self-regulated learning for students and experts using their multimodal data visualizations. In R. Nkambou, R. Azevedo, & J. Vassileva (Eds.), *Proceedings of the 14th International Conference on Intelligent Tutoring Systems (ITS 2018)* (pp. 411-414). Amsterdam, The Netherlands: Springer.

* Bouchet, F., Harley. J., & Azevedo, R. (2018). Evaluating adaptive pedagogical agents' prompting strategies effect on students' emotions. In R. Nkambou, R. Azevedo, & J. Vassileva (Eds.), *Proceedings of the 14th International Conference on Intelligent Tutoring Systems (ITS 2018)* (pp. 33-43). Amsterdam, The Netherlands: Springer.

* Cloude, E. Taub, M.., & Azevedo, R. (2018). Investigating the role of goal orientation: Metacognitive and cognitive strategy use and learning with intelligent tutoring systems. In R. Nkambou, R. Azevedo, & J. Vassileva (Eds.), *Proceedings of the 14th International Conference on Intelligent Tutoring Systems (ITS 2018)* (pp. 44-53). Amsterdam, The Netherlands: Springer.

* Emerson, A., Sawyer, R., Azevedo, R., & Lester, J. (2018). Gaze-enhanced student modeling for game-based learning. In D. Chin & L. Chen (Eds.), *Proceedings of the Twenty-Sixth ACM Conference on User Modeling, Adaptation and Personalization* (pp. 63-72). Washington, DC: ACM.

* Harley, J., Bouchet, F., & Azevedo, R. (2018). Examining how students' typical studying emotions relate to those experienced while studying with an ITS. In R. Nkambou, R. Azevedo, & J. Vassileva (Eds.), *Proceedings of the 14th International Conference on Intelligent Tutoring Systems (ITS 2018)* (pp. 438-441). Amsterdam, The Netherlands: Springer.

* Mudrick, N. V., Sawyer, R., Price, M. J., Lester, J. Azevedo, R., & Roberts, C. (2018). Identifying how metacognitive judgments influence student performance during learning with MetaTutorIVH. In R. Nkambou, R. Azevedo, & J. Vassileva (Eds.), *Proceedings of the 14th International Conference on Intelligent Tutoring Systems (ITS 2018)* (pp. 140-149). Amsterdam, The Netherlands: Springer.

* Price, M. J., Mudrick, N. V., Taub, M., & Azevedo, R. (2018). The role of negative emotions and emotion regulation on self-regulated learning with MetaTutor. In R. Nkambou, R. Azevedo, & J. Vassileva (Eds.), *Proceedings of the 14th International Conference on*

Intelligent Tutoring Systems (ITS 2018) (pp. 170-179). Amsterdam, The Netherlands: Springer.

* Sawyer, R., Rowe, J., Azevedo, R., & Lester, J. (2018). Modeling player engagement with Bayesian Hierarchical Models. In J. Rowe (Ed). In *Proceedings of the Fourteenth AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment* (pp. 215-221). Washington, DC: AAAI.

* Sinclair, J., Jang, E., Azevedo, R., Lau, C., Taub., M., & Mudrick, N. V. (2018). Changes in emotion and their relationship with learning gains in the context of MetaTutor. In R. Nkambou, R. Azevedo, & J. Vassileva (Eds.), *Proceedings of the 14th International Conference on Intelligent Tutoring Systems (ITS 2018)* (pp. 202-211). Amsterdam, The Netherlands: Springer.

* Taub, M., Mudrick, N. V., & Azevedo, R. (2018). How do different levels of AU4 impact metacognitive monitoring during learning with intelligent tutoring systems? In R. Nkambou, R. Azevedo, & J. Vassileva (Eds.), *Proceedings of the 14th International Conference on Intelligent Tutoring Systems (ITS 2018)* (pp. 223-232). Amsterdam, The Netherlands: Springer.

* Taub, M., Mudrick, N. V., Rajendran, R., Dong, Y., Biswas, G., & Azevedo, R. (2018). How are students' emotions associated with the accuracy of their note taking and summarizing during learning with ITSs? In R. Nkambou, R. Azevedo, & J. Vassileva (Eds.), *Proceedings of the 14th International Conference on Intelligent Tutoring Systems (ITS 2018)* (pp. 233-242). Amsterdam, The Netherlands: Springer.

Azevedo, R., Millar, G. C., Taub, M., Mudrick, N. V., Bradbury, A. E., & Price, M. J. (2017). *Using data visualizations to foster emotion regulation during self-regulated learning with advanced learning technologies: a conceptual framework*. In X. Ochoa, I. Molenaar, & S. Dawson (Eds.), *Proceedings of the 7th International Conference on Learning Analytics & Knowledge: Understanding, Informing, and Improving Learning* (pp. 444-448). New York, NY: ACM.

Bradbury, A. E., Taub, M., & Azevedo, R (2017). The effects of autonomy on emotions and learning in game-based learning environments. In G. Gunzelmann, A. Howes, T. Tenbrink, & E. J. Davelaar (Eds.), *Proceedings of the 39th Annual Conference of the Cognitive Science Society* (pp. 1666-1671). Austin, TX: Cognitive Science Society.

Lallé, S., Conati, C., Azevedo, R., Mudrick, N. V., & Taub, M. (2017). On the influence on learning of students compliance with prompts fostering. In X. Hu, T. Barnes, A. Hershkovitz, & L. Paquette (Eds.), *Proceedings of the 10th International Conference on Educational Data Mining (pp.* 120-127). New York, NY: ACM.

Lallé, S., Taub, M., Mudrick, N. V., Conati, C., & Azevedo, R. (2017). The impact of student individual differences and visual attention to pedagogical agents during learning with MetaTutor. In E. André, R. Baker, M. Rodrigo, & B. du Boulay (Eds.), *Proceedings of the 18th International Conference on Artificial Intelligence in Education* (pp. 149-161). Amsterdam, The Netherlands: Springer.

Lau, C., Sinclair, J., Taub, M., Azevedo, R., & Jang, E. E. (2017). *Transitioning self-regulated learning profiles in hypermedia-learning environments.* In X. Ochoa, I. Molenaar, & S. Dawson (Eds.), *Proceedings of the 7th International Conference on Learning Analytics &*

Knowledge: Understanding, Informing, and Improving Learning (pp. 198-202). New York, NY: ACM.
[Winner of the Best Conference Short Paper Award]

Liu, S., Mudrick, N. V., Taub, M., Azevedo, R., & Nam, C. S. (2017). Investigating eye movements, attention, and multitasking with MATB-II. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (pp. 863-865). Thousand Oaks, CA: SAGE.

Mudrick, N. V., Rowe, J., Taub, M., Lester, J., & Azevedo, R. (2017). Toward affect-sensitive virtual human tutors: The influence of facial expressions on learning and emotion. In C. Busso & J. Epps (Eds.) *Proceedings of the 2017 seventh international conference on affective computing and intelligent interaction (ACII)* (pp. 184-189). Washington, DC: IEEE Computer Society.

Mudrick, N. V., Taub, M., & Azevedo, R. (2017). Do accurate metacognitive judgments predict successful multimedia learning? In G. Gunzelmann, A. Howes, T. Tenbrink, & E. J. Davelaar (Eds.), *Proceedings of the 39th Annual Conference of the Cognitive Science Society* (pp. 2766-2771). Austin, TX: Cognitive Science Society.

Sawyer, R., Smith, A., Rowe, J., Azevedo, R., & Lester, J. (2017a). Is more agency better? The impact of student agency on game-based learning. In E. André, R. Baker, M. Rodrigo, & B. du Boulay (Eds.), *Proceedings of the 18th International Conference on Artificial Intelligence in Education* (pp. 335-346). Amsterdam, The Netherlands: Springer.

Sawyer, R., Smith, A., Rowe, J., Azevedo, R., & Lester, J. (2017b). Enhancing student models in game-based learning with facial expressions. In M. Bielikova, E. Herder, F. Cena,& M. Desmarais (Eds.), *Proceedings of the 25th Conference on User Modeling and Personalization* (pp. 192-201). New York, NY: ACM.

Lallé, S., Mudrick, N. V., Taub, M., Grafsgaard, J. F., Conati, C., & Azevedo, R. (2016). *Impact of individual differences on affective reactions to pedagogical agents scaffolding*. In D. Traum & B. Swartout (Eds.), *Proceedings of the 16th International Conference on Intelligent Virtual Agents* (pp. 262-275). The Netherlands: Springer.
[Winner of the Best Conference Paper Award]

Azevedo, R., Martin, S. A., Taub, M., Mudrick, N. V., Millar, G. C., & Grafsgaard, J. (2016). *Are pedagogical agents' external regulation effective in fostering learning with intelligent tutoring systems?* In A. Micarelli, J. Stamper, & K. Panourgia (Eds.), *Proceedings of the 13th International Conference on Intelligent Tutoring Systems—Lecture Notes in Computer Science 9684* (pp. 197-207). The Netherlands: Springer.
[Winner of the Best Conference Paper Award]

Bouchet, F., Harley, J., & Azevedo, R. (2016). *Can adaptive pedagogical agents' prompting strategies improve students' learning and self-regulation?* In A. Micarelli, J. Stamper, & K. Panourgia (Eds.), *Proceedings of the 13th International Conference on Intelligent Tutoring Systems—Lecture Notes in Computer Science 9684* (pp. 368-374). The Netherlands: Springer.

Martin, S. A., Azevedo, R., Taub, M., Mudrick, N., Millar, G., & Grafsgaard, J. (2016). *Are there benefits of using multiple pedagogical agents to support and foster self-regulated*

learning in an intelligent tutoring system? In A. Micarelli, J. Stamper, & K. Panourgia (Eds.), *Proceedings of the 13th International Conference on Intelligent Tutoring Systems—Lecture Notes in Computer Science 9684* (pp. 273-279). The Netherlands: Springer.

Taub, M., & Azevedo, R. (2016). *Using eye-tracking to determine the impact of prior knowledge on self-regulated learning with an adaptive hypermedia- learning environment?* In A. Micarelli, J. Stamper, & K. Panourgia (Eds.), *Proceedings of the 13th International Conference on Intelligent Tutoring Systems—Lecture Notes in Computer Science 9684* (pp. 34-47). The Netherlands: Springer.

Taub, M., Mudrick, N., Azevedo, R., Millar, G. Rowe, J., & Lester, J. (2016). *Using multi-level modeling with eye-tracking data to predict metacognitive monitoring and self-regulated learning with Crystal Island*. In A. Micarelli, J. Stamper, & K. Panourgia (Eds.), *Proceedings of the 13th International Conference on Intelligent Tutoring Systems—Lecture Notes in Computer Science 9684* (pp. 240-246). The Netherlands: Springer.

Azevedo, R., Johnson, A., & Burkett, C. (2015). *Does training of cognitive and metacognitive regulatory processes enhance learning and deployment of cognitive and metacognitive processes with hypermedia?* In D. C. Noelle, R. Dale, A. S., Warlaumont, J. Yoshimi, T. Matlock, C. D. Jennings, & P. P. Maglio (Eds.), *Proceedings of the 37th Annual Meeting of the Cognitive Science Society* (pp.136-141) . Austin, TX: Cognitive Science Society.

Mudrick, M., Azevedo, R., Taub, M., & Bouchet, F. (2015). *Does the frequency of pedagogical agent intervention relate to learners' self-reported boredom while using multiagent intelligent tutoring systems?* In D. C. Noelle, R. Dale, A. S., Warlaumont, J. Yoshimi, T. Matlock, C. D. Jennings, & P. P. Maglio (Eds.), *Proceedings of the 37th Annual Meeting of the Cognitive Science Society* (pp.1661-1666) . Austin, TX: Cognitive Science Society.

Taub, M., Farnsworth, J., & Azevedo, R. (2015). *Does prior knowledge reveal cognitive and metacognitive processes during learning with a hypermedia-learning system based on eye-tracking data?* In D. C. Noelle, R. Dale, A. S., Warlaumont, J. Yoshimi, T. Matlock, C. D. Jennings, & P. P. Maglio (Eds.), *Proceedings of the 37th Annual Meeting of the Cognitive Science Society* (pp. 2999) . Austin, TX: Cognitive Science Society.

Harley, J. M., Carter, C.K., Papaionnou, N., Bouchet, F., Landis, R. L., Azevedo, R., & Karabachian, L.R. (2015). Examining the predictive relationship between personality and emotion traits and learners' agent-directed emotions. In C. Conati, N. Heffernan, A. Mitrovic, & M. F. Verdejo (Eds.), *Proceedings of the 17th International Conference on Artificial Intelligence in Education* (pp. 145-154). Amsterdam, The Netherlands: Springer.

Jaques, N., Conati, C., Harley, J., & Azevedo, R. (2014). *Predicting affect from gaze data during interaction with an intelligent tutoring system*. In S. Trausan-Matu, K. E. Boyer, M. Crosby, & K. Panourgia (Eds.), *Proceedings of the 12th International Conference on Intelligent Tutoring Systems (ITS 2014)* (pp. 29–38). Amsterdam, The Netherlands: Springer.

Harley, J., & Azevedo, R. (2014). Understanding students' emotions during interactions with agent-based learning environments: A selective review. In S. Trausan-Matu, K. E. Boyer, M. Crosby, & K. Panourgia (Eds.), *Proceedings of the 12th International Conference on Intelligent Tutoring Systems (ITS 2014)* (pp. 629–631). Amsterdam, The Netherlands: Springer.

Mudrick, N., Azevedo, R., Taub, M., Feyzi, R., & Bouchet, F. (2014). A study of subjective emotions, self-regulatory processes, and learning gains: Are pedagogical agents effective in fostering learning? In J. Polman, E. Kyza, K. O'Neil, I. Tabak, W. Penuel, A. Jurow, K. O'Connor, T. Lee., & L. D'Amico (Eds.), *Proceedings of the International Conference of the Learning Sciences* (pp. 309–316). Boulder, CO: International Society of the Learning Sciences.

Taub, M., Azevedo, R., Bouchet, F., Clodfelter, E., & Mudrick, N. (2014). Can scaffolds from pedagogical agents influence effective completion of sub-goals during learning with a multi-agent hypermedia-learning environment? In J. Polman, E. Kyza, K. O'Neil, I. Tabak, W. Penuel, A. Jurow, K. O'Connor, T. Lee., & L. D'Amico (Eds.), *Proceedings of the International Conference of the Learning Sciences* (pp. 1052–1056). Boulder, CO: International Society of the Learning Sciences.

Bouchet, F., Harley, J. M., & Azevedo, R. (2013). The impact of different pedagogical agents' adaptive self-regulated prompting strategies with MetaTutor. In C. H. Lane, K. Yacef, J. Mostow, & P. Pavlik (Eds.), *Lecture Notes in Computer Science, Vol. 7926. Artificial Intelligence in Education* (pp. 815–819). Berlin, Germany: Springer-Verlag.

Bondareva, D., Conati, C., Feyzi-Behnagh, R., Harley, J., Azevedo, R., & Bouchet, F. (2013). Inferring learning from gaze data during interaction with an environment to support self-regulated learning. In C. H. Lane, K. Yacef, J. Mostow, & P. Pavlik (Eds.), *Lecture Notes in Computer Science, Vol. 7926. Artificial Intelligence in Education* (pp. 229–238). Berlin, Germany: Springer-Verlag.

Feyzi-Behnagh, R., Azevedo, R., Legowski, E., Reitmeyer, K., Tseytlin, E., & Crowley, R. (2013). Fostering diagnostic accuracy in a medical intelligent tutoring system. In G. Biswas, R. Azevedo, V. Shute, & S. Bull (Eds.), *Proceedings of the AIED 2013 Workshop on Scaffolding in Open-Ended Learning Environments (OELEs)*. Amsterdam, The Netherlands: Springer.

Harley, J. M., Bouchet, F., & Azevedo, R. (2013). Aligning and comparing data on learners' emotions experienced with MetaTutor. In C. H. Lane, K. Yacef, J. Mostow, & P. Pavlik (Eds.), *Lecture Notes in Computer Science, Vol. 7926. Artificial Intelligence in Education* (pp. 61–70). Berlin, Germany: Springer-Verlag.

Khosravifar, B., Azevedo, R., Feyzi-Behnagh, R., Taub, M., Biswas, G., & Kinnebrew, J. S. (2013). Adaptive multi-agent architecture to track students' self-regulated learning. In G. Biswas, R. Azevedo, V. Shute, & S. Bull (Eds.), *Proceedings of the AIED 2013 Workshop on Scaffolding in Open-Ended Learning Environments (OELEs)*. Amsterdam, The Netherlands: Springer.

Azevedo, R., Landis, R. S., Feyzi-Behnagh, R., Duffy, M., Trevors, G., Harley, J., Bouchet, F., Burlison, J., Taub, M., Pacampara, N., Yeasin, M., Rahman, A. K. M. M., Tanveer, M. I., & Hossain, G. (2012). The effectiveness of pedagogical agents' prompting and feedback in facilitating co-adapted learning with MetaTutor. In S. A. Cerri, W. J. Clancey, G. Papadourakis, & K. Panourgia (Eds.), *Proceedings of the 11th International Conference on Intelligent Tutoring Systems. Lecture Notes in Computer Science, Vol. 7315* (pp. 212–221). Amsterdam, The Netherlands: Springer.

Bouchet, F., Kinnebrew, J., Biswas, G., & Azevedo, R. (2012). Identifying students' characteristic learning behaviors in an intelligent tutoring system fostering self-regulated

learning. In K. Yacef, O. Zaïane, A. Hershkovitz, M. Yudelson, & J. Stamper (Eds.), *Proceedings of the 5th International Conference on Educational Data Mining* (pp. 65–72).

Harley, J., Bouchet, F., & Azevedo, R. (2012). Measuring learners' co-occurring emotional responses during their interaction with a pedagogical agent in MetaTutor. In S. A. Cerri, W. J. Clancey, G. Papadourakis, & K. Panourgia (Eds.), *Proceedings of the 11th International Conference on Intelligent Tutoring Systems. Lecture Notes in Computer Science, Vol. 7315* (pp. 4–45). Amsterdam, The Netherlands: Springer.

Chauncey-Strain, A., Azevedo, R., & D'Mello, S. D. (2012). Exploring relationships between learners' affective states, metacognitive processes, and learning outcomes. In S. A. Cerri, W. J. Clancey, G. Papadourakis, & K. Panourgia (Eds.), *Proceedings of the 11th International Conference on Intelligent Tutoring Systems. Lecture Notes in Computer Science, Vol. 7315* (pp. 59–64). Amsterdam, The Netherlands: Springer.

Feyzi-Behnagh, R., & Azevedo, R. (2012, June). The effectiveness of a pedagogical agent's immediate feedback on learners' metacognitive judgments during learning with an adaptive hypermedia system. In S. A. Cerri, W. J. Clancey, G. Papadourakis, & K. Panourgia (Eds.), *Proceedings of the 11th International Conference on Intelligent Tutoring Systems. Lecture Notes in Computer Science, Vol. 7315* (pp. 651–652). Amsterdam, The Netherlands: Springer.

Azevedo, R. (2011). Can we design artificial pedagogical agents to be intelligent enough to detect, model, and foster regulatory learning processes? In R. Pirrone & F. Sorbello (Eds.), *Proceedings of the AI*IA 2011: Artificial intelligence around man and beyond* (p. 9). Amsterdam, The Netherlands: Springer.

Burkett, C., & Azevedo, R. (2011). Metacognitive judgments, study-time allocation and inferences: The effects of multimedia discrepancies. In L. Carlson, C. Hoelscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 1013–1018). Austin, TX: Cognitive Science Society.

Feyzi-Behnagh, R., Khezri, Z., & Azevedo, R. (2011). An investigation of accuracy of metacognitive judgments during learning with an intelligent multi-agent hypermedia environment. In L. Carlson, C. Hoelscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 96–101). Austin, TX: Cognitive Science Society.

Harley, J., Bouchet, F., & Azevedo, R. (2011). Examining learners' emotional responses to pedagogical agents' tutoring strategies. In H. H. Vilhjálmsson, S. Kopp, S. Marsella, & K. R. Thórisson (Eds.), *Proceedings of the 11th International Conference on Intelligent Virtual Agents (IVA 2011). Lecture Notes in Artificial Intelligence, Vol. 6895* (pp. 449–450). Berlin, Germany: Springer.

Trevors, G., Duffy, M., & Azevedo, R. (2011). Are intelligent pedagogical agents effective in fostering students' note-taking while learning with multi-agent adaptive hypermedia environments? In H. H. Vilhjálmsson, S. Kopp, S. Marsella, K. R. Thórisson (Eds.), *Proceedings of the 11th International Conference on Intelligent Virtual Agents (IVA 2011). Lecture Notes in Artificial Intelligence, Vol. 6895* (pp. 475–476). Berlin, Germany: Springer.

Azevedo, R., & Feyzi-Behnagh, R. (2010). Dysregulated learning with advanced learning technologies. In R. Pirrone, R. Azevedo, & G. Biswas (Eds.), *Proceedings of the AAAI Fall Symposium on Cognitive and Metacognitive Educational Systems* (pp. 5–10). Menlo Park, CA: AAAI Press.

Azevedo, R., Johnson, A., Burkett, C., Fike, A., Lintean, M., Cai, Z., & Rus, V. (2010). The role of prompting and feedback in facilitating students' learning about science with MetaTutor. In R. Pirrone, R. Azevedo, & G. Biswas (Eds.), *Proceedings of the AAAI Fall Symposium on Cognitive and Metacognitive Educational Systems* (pp. 11–16). Menlo Park, CA: AAAI Press.

Rus, V., Lintean, M., & Azevedo, R. (2010). Computational aspects of the intelligent tutoring system MetaTutor. In H. W. Guesgen & R. C. Murray (Eds.), *Proceedings of the 23rd International Florida Artificial Intelligence Research Society Conference (FLAIRS 2010)* (pp. 522–527). Menlo Park, CA: AAAI Press.

Azevedo, R., Witherspoon, A., Chauncey, A., Burkett, C., & Fike, A. (2009). MetaTutor: A MetaCognitive tool for enhancing self-regulated learning. In R. Pirrone, R. Azevedo, & G. Biswas (Eds.), *Proceedings of the AAAI Fall Symposium on Cognitive and Metacognitive Educational Systems* (pp. 14–19). Menlo Park, CA: AAAI Press.

Azevedo, R., Moos, D. C., Witherspoon, A., & Chauncey, A. (2009). Issues in the measurement of cognitive and metacognitive regulatory processes used during hypermedia learning. In R. Pirrone, R. Azevedo, & G. Biswas (Eds.), *Proceedings of the AAAI Fall Symposium on Cognitive and Metacognitive Educational Systems* (pp. 8–13). Menlo Park, CA: AAAI Press.

Azevedo, R., Witherspoon, A., Graesser, A., McNamara, D., Chauncey, A., Siler, E., Cai, Z., Rus, V., & Lintean, M. (2009). MetaTutor: Analyzing self-regulated learning in a tutoring system for biology. In V. Dimitrova, R. Mizoguchi, B. du Boulay, & A. Graesser (Eds.), *Building learning systems that care: From knowledge representation to affective modeling* (pp. 635–637). Amsterdam, The Netherlands: IOS Press.

Rus, V., Lintean, M., & Azevedo, R. (2009). Automatic detection of student mental models during prior knowledge activation in MetaTutor. In T. Barnes, M. Desmarais, C. Romero, & S. Ventura (Eds.), *Proceedings of the 2nd International Conference on Educational Data Mining* (pp. 161–170). Cordoba, Spain.

Azevedo, R., Lewis, G., Klatzky, R., & Siler, E. (2008). The effects of disease category on diagnostic problem solving in mammography. In B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (pp. 577–582). Austin, TX: Cognitive Science Society.

Azevedo, R., & Witherspoon, A. (2008). Detecting, tracking, and modeling self-regulatory processes during complex learning with hypermedia. In A. Samsonovich (Ed.), *Proceedings of the AAAI Fall Symposium on Biologically Inspired Cognitive Architectures* (pp. 16–26). Menlo Park, CA: AAAI Press.

Azevedo, R., Witherspoon, A., Lewis, G., & Siler, E. (2008). The role of prior knowledge and system structure on self-regulated learning with hypermedia [Abstract]. In B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (p. 2351). Austin, TX: Cognitive Science Society.

Jeon, M., & Azevedo, R. (2008). Automatic analyses of cohesion and coherence in human tutorial dialogues during hypermedia learning: A comparison among mental model jumpers. In B. Woolf, E. Aimeur, R. Nkambou, & S. Lajoie (Eds.), *Proceedings of the International Conference on Intelligent Tutoring Systems. Lecture Notes in Computer Science, Vol. 5091* (pp. 690–692). Berlin, Germany: Springer.

Witherspoon, A., & Azevedo, R. (2008a). The role of integration scaffolding in learners' self-regulated learning with multiple external representations [Abstract]. In B. C. Love,

K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (p. 2352). Austin, TX: Cognitive Science Society.

Witherspoon, A., & Azevedo, R. (2008b). The role of integration scaffolding during multimedia learning with text and diagrams. In A. Maes & S. Ainsworth (Eds.), *Proceedings of the EARLI Special Interest Group on Text and Graphics* (pp. 157–161). Tilburg, The Netherlands: European Association for Research on Learning and Instruction.

Witherspoon, A., Azevedo, R., & D'Mello, S. (2008). The dynamics of self-regulatory processes within self- and externally-regulated learning episodes. In B. Woolf, E. Aimeur, R. Nkambou, & S. Lajoie (Eds.), *Proceedings of the International Conference on Intelligent Tutoring Systems. Lecture Notes in Computer Science, Vol. 5091* (pp. 260–269). Berlin, Germany: Springer.

Witherspoon, A., Azevedo, R., & Lewis, G. (2008). Adolescents' use of multiple representations of information in self-regulated and externally-regulated learning with hypermedia. In B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (pp. 2359–2364). Austin, TX: Cognitive Science Society.

Azevedo, R., Faremo, S., & Lajoie, S. P. (2007). Expert-novice differences in mammogram interpretation. In D. S. McNamara & J. G. Trafton (Eds.), *Proceedings of the 29th Annual Cognitive Science Society* (pp. 65–70). Austin, TX: Cognitive Science Society.

Azevedo, R., Moos, D. C., & Greene, J. A. (2007). External regulating agents' adaptive content and process scaffolding: The key to fostering mental model development during hypermedia learning. In D. S. McNamara & J. G. Trafton (Eds.), *Proceedings of the 29th Annual Cognitive Science Society* (pp. 71–76). Austin, TX: Cognitive Science Society.

Jeon, M., & Azevedo, R. (2007). Analyzing human tutorial dialogues for cohesion and coherence during hypermedia learning of a complex science topic. In D. S. McNamara & J. G. Trafton (Eds.), *Proceedings of the 29th Annual Cognitive Science Society* (pp. 1127–1132). Austin, TX: Cognitive Science Society.

Sullins, J., & Azevedo, R. (2007). Developmental differences in self-regulated learning and question asking during learning with hypermedia. In D. S. McNamara & J. G. Trafton (Eds.), *Proceedings of the 29th Annual Cognitive Science Society* (p. 1862). Austin, TX: Cognitive Science Society.

Witherspoon, A., & Azevedo, R. (2007). The effectiveness of modeling learners' motivation and self-regulated learning of science with hypermedia. In D. S. McNamara & J. G. Trafton (Eds.), *Proceedings of the 29th Annual Cognitive Science Society* (p. 1886). Austin, TX: Cognitive Science Society.

Azevedo, R., & Jeon, M. (2007). Analyzing the coherence and cohesion in human tutorial dialogues when learning with hypermedia. In R. Luckin, K. Koedinger, & J. Greer (Eds.), *Artificial Intelligence in Education: Building Technology Rich Learning Contexts That Work* (pp. 341–348). Amsterdam, The Netherlands: IOS Press.

Azevedo, R., Witherspoon, A., Baker, S., Greene, J. A., Moos, D. C., Sullins, J., Trousdale, A., & Scott, J. (2007). Do various self-regulatory processes predict different learning outcomes with hypermedia? In R. Luckin, K. Koedinger, & J. Greer (Eds.), *Artificial Intelligence in Education: Building Technology Rich Learning Contexts That Work* (pp. 527–529). Amsterdam, The Netherlands: IOS Press.

Sullins, J., Azevedo, R., Trousdale, A., & Scott, J. (2007). The influence of self-regulation on student-generated questions during hypermedia learning. In R. Luckin, K. Koedinger, & J. Greer (Eds.), *Artificial Intelligence in Education: Building Technology Rich Learning Contexts That Work* (pp. 187–194). Amsterdam, The Netherlands: IOS Press.

Witherspoon, A., Azevedo, R., & Baker, S. (2007). Learners' use of various types of representations during self-regulated learning and externally-regulated learning episodes. In *Proceedings of the Workshop on Metacognition and Self-Regulated Learning in Intelligent Tutoring Systems at the 13th International Conference on Artificial Intelligence in Education (AIED)* (pp. 43–51). Marina del Rey, CA. (See http://www.itari.in/categories/metacognition /MetacogntionandSelfLearningusingIntelligentTutoringSystems.pdf.)

Witherspoon, A., Azevedo, R., Greene, J. A., Moos, D. C., & Baker, S. (2007). The dynamic nature of self-regulatory behavior in self-regulated learning and externally-regulated learning episodes. In R. Luckin, K. Koedinger, & J. Greer (Eds.), *Artificial Intelligence in Education: Building Technology Rich Learning Contexts That Work* (pp. 179–186). Amsterdam, The Netherlands: IOS Press. [**Nominated for Best Student Paper**]

Azevedo, R., Greene, J. A., Moos, D. C., Winters, F. I., Cromley, J. G., & Godbole-Chaudhuri, P. (2006). Is externally-regulated learning by a human tutor always effective in facilitating learning with hypermedia? In S. Barab, K. Hay, & D. Hickey (Eds.), *Proceedings of the 7th International Conference of the Learning Sciences* (pp. 16–22). Mahwah, NJ: Erlbaum.

Azevedo, R., & Hmelo-Silver, C. (2006). Core challenges in understanding complex systems. In S. Barab, K. Hay, & D. Hickey (Eds.), *Proceedings of the 7th International Conference of the Learning Sciences* (pp. 1073–1077). Mahwah, NJ: Erlbaum.

Godbole-Chaudhuri, P., Winters, F. I., Azevedo, R., & Hofman, N. (2006). Help-seeking behavior and learning with hypermedia. In S. Barab, K. Hay, & D. Hickey (Eds.), *Proceedings of the 7th International Conference of the Learning Sciences* (pp. 928–929). Mahwah, NJ: Erlbaum.

Greene, J. A., & Azevedo, R. (2006). Adolescents' use of self-regulatory processes and their relation to qualitative mental model shifts while using hypermedia. In S. Barab, K. Hay, & D. Hickey (Eds.), *Proceedings of the 7th International Conference of the Learning Sciences* (pp. 203–209). Mahwah, NJ: Erlbaum.

Greene, J. A., Moos, D. C., Azevedo, R., & Winters, F. I. (2006). Exploring differences between gifted and grade-level students' use of self-regulatory learning processes with hypermedia. In S. Barab, K. Hay, & D. Hickey (Eds.), *Proceedings of the 7th International Conference of the Learning Sciences* (pp. 210–216). Mahwah, NJ: Erlbaum.

Moos, D. C., & Azevedo, R. (2006). Examining the fluctuation of strategy use during learning with hypermedia. In S. Barab, K. Hay, & D. Hickey (Eds.), *Proceedings of the 7th International Conference of the Learning Sciences* (pp. 481–487). Mahwah, NJ: Erlbaum.

Azevedo, R., Moos, D. C., Winters, F. I., Greene, J. A., Cromley, J. G., Olson, E. D., & Godbole-Chaudhuri, P. (2005). Why is externally-regulated learning more effective than self-regulated learning with hypermedia? In C.-K. Looi, G. McCalla, B. Bredeweg, & J. Breuker (Eds.), *Artificial Intelligence in Education: Supporting Learning through Intelligent and Socially Informed Technology* (pp. 41–48). Amsterdam, The Netherlands: IOS Press.

Cromley, J. G., Azevedo, R., & Olson, E. D. (2005). Self-regulation of learning with multiple representations in hypermedia. In C.-K. Looi, G. McCalla, B. Bredeweg, & J. Breuker (Eds.), *Artificial Intelligence in Education: Supporting Learning through Intelligent and Socially Informed Technology* (pp. 184–191). Amsterdam, The Netherlands: IOS Press.

Greene, J. A., & Azevedo, R. (2005). Adolescents' use of SRL behaviors and their relation to qualitative mental model shifts while using hypermedia. In C.-K. Looi, G. McCalla, B. Bredeweg, & J. Breuker (Eds.), *Artificial Intelligence in Education: Supporting Learning through Intelligent and Socially Informed Technology* (pp. 233–240). Amsterdam, The Netherlands: IOS Press.

Azevedo, R. (2004). How does adaptive scaffolding facilitate high school students' ability to regulate their learning with hypermedia? In Y. Kafai, W. Sandoval, N. Enyedy, A. Nixon, & F. Herrera (Eds.), *Embracing Diversity in the Learning Sciences* (p. 583). Mahwah, NJ: Erlbaum.

Azevedo, R., Winters, F. I., & Moos, D. C. (2004). Can students collaboratively use hypermedia to learn about science? The dynamics of self- and other-regulatory processes in the classroom. In Y. Kafai, W. Sandoval, N. Enyedy, A. Nixon, & F. Herrera (Eds.), *Embracing Diversity in the Learning Sciences* (pp. 50–57). Mahwah, NJ: Erlbaum.

Azevedo, R., Cromley, J. G., Winters, F. I., Xu, L., & Iny, D. (2003). Is strategy instruction effective in facilitating students' ability to regulate their learning with hypermedia? In U. Hoppe, F. Verdejo, & J. Kay (Eds.), *Artificial Intelligence in Education: Shaping the Future of Learning through Intelligent Technologies* (pp. 193–200). Amsterdam, The Netherlands: IOS Press.

Azevedo, R. (2001). Using hypermedia to learn about complex systems: A self-regulation model. In R. Luckin (Ed.), *Papers of the AIED-2001 Workshop on Help Provision and Help Seeking in Interactive Learning Environments*. Amsterdam, The Netherlands: IOS Press.

Azevedo, R., Verona, M. E., & Cromley, J. G. (2001). Fostering students' collaborative problem solving with RiverWeb. In J. D. Moore, C. L. Redfield, & W. L. Johnson (Eds.), *Artificial Intelligence in Education: AI-ED in the Wired and Wireless Future* (pp. 166–175). Amsterdam, The Netherlands: IOS Press.

Azevedo, R., & Faremo, S. L. (1999). Novice-expert differences in radiology: Extending the RadTutor to foster medical students' diagnostic skills. In S. P. Lajoie & M. Vivet (Eds.), *Frontiers in Artificial Intelligence and Applications. Open Learning Environments: New Computational Technologies to Support Learning, Exploration and Collaboration* (pp. 501–508). Amsterdam, The Netherlands: IOS Press.

Azevedo, R. (1998). Expert problem solving in a visual medical domain. In M. A. Gernsbacher & S. J. Derry (Eds.), *Proceedings of the Twentieth Annual Conference of the Cognitive Science Society* (pp. 72–77). Mahwah, NJ: Erlbaum.

Azevedo, R., & Lajoie, S. P. (1998). The cognitive basis for the design of a mammography interpretation tutor. In M. A. Gernsbacher & S. J. Derry (Eds.), *Proceedings of the Twentieth Annual Conference of the Cognitive Science Society* (pp. 78–83). Mahwah, NJ: Erlbaum.

Azevedo, R., Lajoie, S. P., Desaulniers, M., & Fleiszer, D. (1997). Radiological expertise and the effects of perceptual scaffolding on the diagnosis of mammograms. In M. G. Shafto & P. Langley (Eds.), *Proceedings of the Nineteenth Annual Conference of the Cognitive Science Society* (p. 855). Mahwah, NJ: Erlbaum.

Azevedo, R., Lajoie, S. P., Desaulniers, M., Fleiszer, D., & Bret, P. M. (1997). RadTutor: The theoretical and empirical basis for the design of a mammography interpretation tutor. In D. du Boulay & R. Mizoguchi (Eds.), *Frontiers in Artificial Intelligence and Applications. Knowledge and Media in Learning Systems* (pp. 386–393). Amsterdam, The Netherlands: IOS Press.

Rahilly, T. J., Saroyan, A., Greer, J., Lajoie, S. P., Breuleux, A., Azevedo, R., & Fleiszer, D. (1996). The InforMed Professor: Clinical instruction of breast disease diagnosis and management. In A. Diaz & I. Fernandez (Eds.), *Proceedings of the Third International Conference on Computer-Aided Learning and Instruction in Science and Engineering* (pp. 390–398). New York, NY: Springer-Verlag.

Technical Research Reports

Lajoie, S. P., Azevedo, R., Zhao, X., Kinnon, J., & Fleiszer, D. M. (1997). *Cognitive tools for assessment and learning in a high information flow environment* (SAFARI Report, SYNERGIE). Montréal, Canada: McGill University.

Azevedo, R., & Lajoie, S. P. (1996). *RADTUTOR: The theoretical and empirical basis for the design of a chest X-ray tutor* (SAFARI Report, SYNERGIE). Montréal, Canada: McGill University.

Azevedo, R., Lajoie, S. P., & Fleiszer, D. M. (1996). *Complex clinical decision making in an ill-structured task* (SAFARI Report, SYNERGIE). Montréal, Canada: McGill University.

Azevedo, R., & Lajoie, S. P. (1995). *Learning styles underlying radiological expertise* (SAFARI Report, SYNERGIE). Montréal, Canada: McGill University.

Lajoie, S. P., Azevedo, R., Bouchard, R., & Gu, W. (1995). *Report on the activities of the McGill Group* (SAFARI Report, SYNERGIE). Montréal, Canada: McGill University.

Papers and Poster Presentations (* indicates refereed paper, + indicates invited presentation)

Paper presentations

* Dever, D. A., Lester, J., & Azevedo, R. (2020, November). Adapting game-based learning environments to reflect learners' emotions and autonomy while reading. Paper presented at the annual meeting of the Association for Educational Communications and Technology (AECT), Jacksonville, Florida, USA.

* Dever, D. A., Lester, J., & Azevedo, R. (2020, November). Forming game elements to learners' emotions and metacognition within game-based learning environments. Paper presented at the annual meeting of the Association for Educational Communications and Technology (AECT), Jacksonville, Florida, USA.

* Wiedbusch, M., & Azevedo, R., (2020, November). *Predicting performance in a multimedia learning environment using ease of learning metacognitive judgements*. Paper presented at the annual Conference for the Association for Educational Communications & Technology (AECT), Jacksonville, Florida.

* Yang, X., Zhou, G., Chi, M., & Azevedo, R. (2020, July). *Student subtyping via EM-inverse reinforcement learning*. Paper submitted for presentation at the EDM 2020 conference, virtual conference.

* Cloude, E. B., Wortha, F., Dever, D. A., & Azevedo, R. (2020, July). How do emotions change during learning with an intelligent tutoring system? Metacognitive monitoring and performance with MetaTutor. The 42nd Annual Meeting of the Cognitive Science Society. Virtual meeting.

* Wiedbusch, M., Azevedo, R., & Brown, M. (2020, July). Can a composite metacognitive judgment accuracy score successfully capture performance variance during multimedia learning? In Proceedings for the 42nd Annual Meeting of the Cognitive Science Society. Toronto, Canada.

* Cloude, E. B. & Azevedo, R. (TBD). *Self-regulated learning with virtual environments: Challenges for classroom-based research*. No-or-not-so-perfect data presentation to be presented at the SIG 27 9th international biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Antwerpen, Belgium.

* Cloude, E. B., Wortha, F., & Azevedo, R. (TBD). *Emotions Change over Time: Metacognition and Learning with Intelligent Tutoring Systems*. Paper to be presented at the SIG 8 meets SIG 16 9th international biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Dresden, Germany.

* Cloude, E. B., Lester, J., & Azevedo, R. (TBD). *Do eye-gaze behaviors predict self-reported motivation after game-based learning?* Paper to be presented at the SIG 8 meets SIG 16 9th international biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Dresden, Germany.

* Dever, D. A., Wortha, F., & Azevedo, R. (TBD). *Understanding learners' metacognitive processes over time in intelligent tutoring systems*. Paper to be presented at the annual meeting of the European Association for Research on Learning and Instruction (EARLI), Antwerp, Belgium.

* Wiedbusch, M., & Azevedo, R., (TBD). *Achievement Goal Orientation and Note Taking Behavior within MetaTutor*. Paper to be presented at the SIG 8 Meets SIG 16 international biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Dresden, Germany.

* Wiedbusch, M., & Azevedo, R., (TBD). *Using metacognitive judgments to predict performance and gaze behaviors in a multimedia environment*. Paper to be presented at the SIG 8 Meets SIG 16 international biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Dresden, Germany.

* Wiedbusch, M., Cloude, C., & Azevedo, R. (TBD). *Are online behaviors enough? Scientific reasoning and performance during game-based learning*. Paper to be presented at the SIG 27 9th international biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Antwerpen, Belgium.

* Carpenter, D., Geden, M., Rowe, J., Azevedo, R., & Lester, J. (2020, July). Automatic assessment of students' written reflections in game-based learning environment. Paper to be presented at the virtual meeting of Artificial Intelligence in Educational (AIED-2020)

* Wiedbusch, M., & Azevedo, R. (2020, June). *Modeling metacomprehension monitoring accuracy with eye gaze on informational content in a multimedia learning environment*. In *Symposium on Eye Tracking Research and Applications (ETRA '20 Full Papers)*, ACM, New York, NY, USA.

* Azevedo, R., Taub, E., Cloude, E., & Lester, J. (2020, April). *MetaMentor: A system designed to study, teach, train, and foster self-regulated learning for students and teachers using their multimodal multichannel data visualizations.* Paper to be presented at the annual meeting of the American Educational Research Association (AERA), San Francisco, CA.

* Azevedo, R., Wortha, F., Cloude, E. B., Wiedbusch, M., & Dever, D. (2020, April). *Supporting students' self-regulated learning using adaptive scaffolding in an intelligent tutoring system*. Paper to be presented at the annual meeting of the American Educational Research Association (AERA), San Francisco, CA.

* Cloude, E. B., Azevedo, R., & Wortha, F. (2020, April). *Emotions change over time: Metacognitive and cognitive processes and learning with intelligent tutoring systems*. Paper submitted to the annual meeting of the American Educational Research Association (AERA), San Francisco, CA.

* Cloude, E. B., Wiedbusch, M., Wortha, F., Azevedo, R., & Lester, J. (2020, April). *Do scientific-reasoning processes predict motivation during game-based learning using multichannel data?* Paper submitted to the annual meeting of the American Educational Research Association (AERA), San Francisco, CA.

* Jang, E., & Azevedo, R. (2020, April). *Tracking dynamic emotional trajectories in MetaTutor using Latent Growth Curve Modeling: Role of self-regulated learning*. Paper to be presented at the annual meeting of the American Educational Research Association (AERA), San Francisco, CA.

* Kite, V., Nugent, M., Park, S., Azevedo, R., Chi, M., & Taub, M. (2020, April). *What does engagement look like?: Secondary science teachers' reported evidence of student engagement*. Interactive poster to be presented at the international conference of National Association for Research in Science Teaching (NARST), Portland, OR.

* Taub, M., & Azevedo R. (2020, April). *How does content difficulty impact physiological responses and performance during learning with advanced learning technologies?* Paper to be presented at the annual meeting of the American Educational Research Association (AERA), San Francisco, CA.

* Cloude, E. B., Doderlein, N. H., Azevedo, R., & Lester, J. (2020, April). *Are eye-gaze behaviors related to scientific-reasoning actions? Quantifying 21st century skills using eye tracking during game-based learning*. Paper to be presented at the annual Graduate Research Forum for the College of Graduate Studies, University of Central Florida, Orlando, Florida.

* Dever, D. A., Lester, J., & Azevedo, R. (2020, April). *Game elements and metacognitive monitoring use within game-based learning environments.* Paper to be presented at the annual meeting of the European Association for Research on Learning and Instruction (EARLI), Dresden, Germany.

* Dever, D. A., Lester, J., & Azevedo, R. (2020, April). *Reading in game-based learning environments: The influence of autonomy on learners' affective states*. Paper to be presented

at the annual meeting of the European Association for Research on Learning and Instruction (EARLI), Dresden, Germany.

* Wortha, F., Appel, T., Azevedo, R., Tibus, M., Kasneci, E., & Gerjets, P. (2020, April). *Self-regulation profiles: Evidence on the effectiveness of learning strategies from a person-centered approach*. Paper to be presented at the annual meeting of the American Educational Research Association (AERA), San Francisco, CA.

* Wiedbusch, M., & Azevedo, R., (2020, April). *Using eye gaze on informational content during multimedia learning to model metacomprehension*. Paper to be presented at the annual Graduate Research Forum for the College of Graduate Studies, University of Central Florida, Orlando, Florida.

* Cloude, E. B., & Azevedo, R. (2020, March). *Contextualizing multimodal learning analytics to theoretical frameworks and learning environments*. Paper presented at the workshop on Integrating multi-channel learning to model complex learning processes @ the 10th International Learning Analytics & Knowledge Conference (LAK), Frankfurt, Germany.

* Dever, D., & Azevedo. R. (2019a, June). *Autonomy and types of informational text presentations in game-based learning environments*. Paper presented at the annual meeting of International Artificial Intelligence in Education Society, Chicago, IL.

* Dever, D., & Azevedo. R. (2019b, June). *Examining gaze behaviors and metacognitive judgments of informational text within game-based learning environments*. Paper presented at the annual meeting of International Artificial Intelligence in Education Society, Chicago, IL.

* Azevedo, R., Taub, M., Cloude, E., & Price, M. (2019, April). *Understanding self-regulatory processes using multimodal trace data during human-machine interactions with an intelligent tutoring system*. Paper presented at the annual meeting of the American Educational Research Association, Toronto, Ontario, Canada.

* Azevedo, R., Taub, M., Price, M., & Cloude, E. (2019, April). *Adaptive scaffolding with pedagogical agents during self-regulated learning with an intelligent tutoring system*. Paper presented at the annual meeting of the American Educational Research Association, Toronto, Ontario, Canada.

* Cloude, E., Price, M., Azevedo, R., Taub, M., Mudrick, V., McKenzie, K., Burnette, M., & McArdle. (2019, April). *Can all students benefit from virtual reality? Evidence from learning outcomes and process data*. Paper presented at the annual meeting of the American Educational Research Association, Toronto, Ontario, Canada.

* Lester, J., Mudrick, N., & Azevedo, R. (2019, April). *Do eye movements contribute to accurate metacognitive judgments during multimedia learning?* Paper presented at the annual meeting of the American Educational Research Association, Toronto, Ontario, Canada.

* Price, M., Taub, M., Cloude, E., & Azevedo, R. (2019, April). *How negative emotions impact performance and metacognitive processes use during learning with intelligent tutoring systems*. Paper presented at the annual meeting of the American Educational Research Association, Toronto, Ontario, Canada.

* Taub, M., Azevedo, R., Price, M., Cloude, E., Rejendran, R., & Biswas, G. (2019, April). *How do emotions impact the accuracy of self-regulated processes during learning with advanced*

learning technologies? Paper presented at the annual meeting of the American Educational Research Association, Toronto, Ontario, Canada.

* Taub, M., Sawyer, R., Lester, J., & Azevedo, R. (2019, April). How do contextual emotions differ for self-regulated learning and scientific reasoning during game-based learning? Paper presented at the annual meeting of the American Educational Research Association, Toronto, Ontario, Canada.

* Sawyer, R., Rowe, J., Azevedo, R., & Lester, J. (2018, November). *Modeling player engagement with Bayesian Hierarchical linear models.* Paper presented at the 14th Annual AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE-2018), Edmonton, Alberta, Canada.

* Emerson, A., Sawyer, R., Azevedo, R., & Lester, J. (2018, July). *Gaze-enhanced student modeling for game-based learning*. Paper presented at the annual User Modelling, Adaptation and Personalization (UMAP 2018) conference, Singapore.

* Lallé, S., Conati, C., & Azevedo, R. (2018, July). *Prediction of student achievement goals and emotion valence during interaction with pedagogical agents.* Paper presented at the annual meeting of the 17th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2018), Stockholm, Sweden.

* Bouchet, F., Harley. J., & Azevedo, R. (2018, June). *Evaluating adaptive pedagogical agents' prompting strategies effect on students' emotions.* Paper presented at the 14th International Conference on Intelligent Tutoring Systems (ITS 2018), Montréal, Quebec, Canada.

* Cloude, E. Taub, M.., & Azevedo, R. (2018, June). *Investigating the role of goal orientation: Metacognitive and cognitive strategy use and learning with intelligent tutoring systems.* Paper presented at the 14th International Conference on Intelligent Tutoring Systems (ITS 2018), Montréal, Quebec, Canada.

* Mudrick, N. V., Sawyer, R., Price, M. J., Lester, J. Azevedo, R., & Roberts, C. (2018, June). *Identifying how metacognitive judgments influence student performance during learning with MetaTutorIVH.* Paper presented at the 14th International Conference on Intelligent Tutoring Systems (ITS 2018), Montréal, Quebec, Canada.

* Price, M. J., Mudrick, N. V., Taub, M., & Azevedo, R. (2018, June). *The role of negative emotions and emotion regulation on self-regulated learning with MetaTutor.* Paper presented at the 14th International Conference on Intelligent Tutoring Systems (ITS 2018), Montréal, Quebec, Canada.

* Sinclair, J., Jang, E., Azevedo, R., Lau, C., Taub., M., & Mudrick, N. V. (2018, June). *Changes in emotion and their relationship with learning gains in the context of MetaTutor*. Paper presented at the 14th International Conference on Intelligent Tutoring Systems (ITS 2018), Montréal, Quebec, Canada.

* Taub, M., Mudrick, N. V., & Azevedo, R. (2018, June). *How do different levels of AU4 impact metacognitive monitoring during learning with intelligent tutoring systems?* Paper presented at the 14th International Conference on Intelligent Tutoring Systems (ITS 2018), Montréal, Quebec, Canada.

* Taub, M., Mudrick, N. V., Rajendran, R., Dong, Y., Biswas, G., & Azevedo, R. (2018, June). *How are students' emotions associated with the accuracy of their note taking and*

summarizing during learning with ITSs? Paper presented at the 14th International Conference on Intelligent Tutoring Systems (ITS 2018), Montréal, Quebec, Canada.

+ Azevedo, R., (2018a, May). *Measuring self-regulation during learning with advanced learning technologies*. Invited keynote talk presented at the 6th annual meeting of TeachLivE, Orlando, FL.

+ Azevedo, R., (2018b, May). *Assessing real-time self-regulatory processes during Complex human-machine interactions*. Invited talk presented at the Triangle Assessment Research Group, Durham, NC.

* Azevedo, R., & Molenaar, I. (2018, April). *What can multimodal data streams reveal about students' self-regulated learning?* Symposium presented at the annual meeting of the American Educational Research Association, New York, NY.

* Azevedo, R., Mudrick, N. V., Taub, M., & Price, M. J. (2018, April). *External regulation by artificial agents: Can intelligent virtual humans impact learners' self-regulation during complex multimedia learning?* Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

* Azevedo, R., Taub, M., Mudrick, N. V., Bradbury, A. E., Price, M J., & Cloude, E. (2018, April). *Studying self-regulatory processes using multimodal trace data: What does the evidence reveal?* Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

* Azevedo, R., Taub, M., Mudrick, N. V., Price, M., & Cloude, E. (2018, April). *The effectiveness of pedagogical agents' adaptive scaffolding on self-regulation during complex learning with an Intelligent Tutoring System*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

* Bradbury, A. E., Taub, M., Azevedo, R., & Lester, J. (2018, April). *The effects of context and achievement goals on confusion and frustration in game-based learning environments*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

* Bradbury, A. E., Taub, M., Azevedo, R., & Lester, J. (2018, April). *The role of agency on emotions and learning in game-based learning environments*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

* Zhong, B., Qin, Z., Yang, S., Chen, J., Mudrick, N. V., Taub, M., Azevedo, R., & Lobaton, E. (2017, November-December). *Emotion recognition with facial expressions and physiological signals*. Paper presented at the annual IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2017), Honolulu, HI.

+ Azevedo, R., (2017, December). *Assessing real-time self-regulatory processes using multimodal multichannel process data: Implications for Intelligent Systems*. Invited talk presented at the Learning Science Cluster meeting of the University of Central Florida, Orlando, FL.

* Liu, S., Mudrick, N. V., Taub, M., Azevedo, R., & Nam, C. S. (2017, October). *Investigating eye movements, attention, and multitasking with MATB-II*. Paper presented at the annual meeting of the Human Factors and Ergonomics meeting, Austin, TX.

* Mudrick, N. V., Taub, M., Azevedo, R., & Lester, J. (2017, October). *Toward affective-sensitive virtual human tutors: The influence of facial expressions of learning and emotion*. Paper presented at the 7th International Conference on Affective Computing and Intelligent Interaction (ACII) Conference, San Antonio, TX.

* *Azevedo, R., Mudrick, N. V., Taub, M., Millar, G. C., Bradbury, A. E., & Price, M. J.* (2017, August). *Examining cognitive, metacognitive, and affective processes during multimedia learning with an intelligent virtual human*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Tampere, Finland.

* *Azevedo, R., Taub, M., Mudrick, N. V., Millar, G. C., Bradbury, A. E., & Price, M. J.* (2017, August). *Measuring, analyzing, and inferring temporally unfolding self-regulatory processes from multimodal data*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Tampere, Finland.

* Mudrick, N. V., Azevedo, R., Taub, M., Millar, G. C., Price, M. J., Bradbury, A. E., & Grafsgaard, J. F. (2017, August). *Physiological indicators of critical affective processes during multimedia learning with a virtual human*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Tampere, Finland.

* Taub, M., Mudrick, N. V., & Azevedo, R. (2017, August). *Measuring middle school students' metacognitive monitoring during science learning with SimSelf*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Tampere, Finland.

* Taub, M., Azevedo, R., Bradbury, A. E., Millar, G. C., Price, M. J., & Mudrick, N. V. (2017, August). *Sequence mining to measure SRL and scientific reasoning in a game-based learning environment*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Tampere, Finland.

+ Azevedo, R. (2017, July). *Assessing real-time self-regulatory processes using multimodal multichannel process data*. Invited keynote talk presented at the annual meeting of the European Association for Psychological Assessment (ECPA14), Lisbon, Portugal.

* Lallé, S., Conati, C., Taub, M., Mudrick, N. V., & Azevedo, R. (June, 2017). *On the influence of student compliance with prompts fostering self-regulated learning*. Paper presented at the 10th International Conference on Educational Data Mining, Wuhan, China.

* Lallé, S., Mudrick, N. V., Taub, M., Conati, C., & Azevedo, R. (June, 2017). *The influence of individual differences on student attention to pedagogical agents during learning with a hypermedia-based intelligent tutoring system*. Paper presented at the 18th biennial meeting of the International Conference on Artificial Intelligence and Education, Wuhan, China.

* Sawyer, R., Smith, A., Rowe, J., Azevedo, R., & Lester, J. (June, 2017). *Is more agency better? The impact of student agency on game-based learning*. Paper presented at the 18th biennial meeting of the International Conference on Artificial Intelligence and Education, Wuhan, China.

[+] Azevedo, R. (2017, June). *Using process data to measure and foster self-regulated learning in real-time with advanced learning technologies*. Invited keynote talk presented at the 2nd International Seminar on Social Cognitive Theory, Rio Claro, Sao Paulo, Brazil.

[*] Sawyer, R., Smith, A., Rowe, J., Azevedo, R., & Lester, J. (June, 2017). *Enhancing student models in game-based learning with expression recognition*. Paper presented at the 25th annual meeting of the Conference on User Modeling, Adaptation and Personalization, Bratislava, Slovakia.

[+] Azevedo, R. (2017, April). *Enhancing metacognitive monitoring during multimedia learning with human facial expressions of emotion: Evidence from multimodal, multichannel data*. Invited plenary talk presented at the annual meeting of the National Science Foundation's Cyberlearning 2017 conference, Arlington, VA.

[*] Azevedo, R., Grafsgaard, J. F., Taub, M., Mudrick, N. V., Jang, E. E., Lau, C., & Sinclair. J. (2017, April). *Challenges in using data mining to identify robust indicators of cognitive, affective, and metacognitive self-regulatory processes from trace data during learning with advanced learning technologies*. Paper presented at the annual meeting of the American Educational Research, San Antonio, TX.

[*] Azevedo, R., Taub, M., Mudrick, N. V., Grafsgaard, J. F., Millar, A. C., & Price. M. (2017, April). *Understanding and reasoning about cognitive, metacognitive, and affective processes used during complex learning with advanced learning technologies*. Paper presented at the annual meeting of the American Educational Research, San Antonio, TX.

[+] Azevedo, R. (2017a, April). *Enhancing metacognitive monitoring during multimedia learning with human facial expressions of emotion: Evidence from multimodal, multichannel data*. Invited paper presented at the annual meeting of the Cyberlearning Summit, Arlington, VA.

[+] Azevedo, R. (2017b, April). F*ostering metacognition using multimodal multichannel process data: Challenges for Learning Analytics*. Invited talk presented at the annual meeting of the East Coast Game Conference, Raleigh, NC.

[*] Grafsgaard, J. F., Azevedo, R., Mudrick, N. V., Taub, M., & Millar, A. C. (2017, April). *Does skin conductance response indicate metacognitive processes?* Paper presented at the annual meeting of the American Educational Research, San Antonio, TX.

[*] Lau, C., Jang, E. E., Sinclair, J., Azevedo, R., & Taub, M. (2017, April). *Latent class profiling of self-regulated learning in MetaTutor: A technology-rich learning environment*. Paper presented at the annual meeting of the American Educational Research, San Antonio, TX.

[*] Mudrick, N. V., Azevedo, R., & Taub, M. (2017, April). Inferring emotional states during metacomprehension judgments: Evidence from facial expressions, eye movements, ad metacognitive judgements. Paper presented at the annual meeting of the American Educational Research, San Antonio, TX.

[*] Mudrick, N. V., Grafsgaard, J. F., & Azevedo, R. (2017, April). *Can sequence mining augment our understanding of metacomprehension during multimedia learning: Evidence from eye movements*? Paper presented at the annual meeting of the American Educational Research, San Antonio, TX.

[*] Taub, M., Mudrick, N. V., Azevedo, R., Millar, A. C., Rowe, J., & Lester, J. (2017, April). *Using eye-tracking and log-file data as indicators of metacognitive monitoring and cognitive*

learning strategies with game-based learning environments? Paper presented at the annual meeting of the American Educational Research, San Antonio, TX.

+ Azevedo, R., Taub, M., & Mudrick, N V., (March, 2017). *Thinking about the complexities of metacognition during human-machine interactions.* Invited paper presented at the annual meeting of the Southern Society for Philosophy and Psychology, Savannah, GA.

* Azevedo, A., Millar, G. C., Taub, M., Mudrick, N. V., Bradbury, A. E., & Price, M. J. (2017, March). *Using data visualizations to foster emotion regulation during self-regulated learning with advanced learning technologies: A conceptual framework*. Paper presented at the 7th International Conference on Learning Analytics & Knowledge Conference, Vancouver, BC, Canada.

* Lau, C., Sinclair, J., Taub, M., Azevedo, R., & Jang, E. E. (2017, March). *Transitioning self-regulated learning profiles in hypermedia-learning environments*. Paper presented at the 7th International Conference on Learning Analytics & Knowledge Conference, Vancouver, BC, Canada.

* Mudrick, N., Azevedo, R., Taub, M., & Grafsgaard, J. (2016, November). *How do time and multimedia discrepancies influence students' learner-centered emotions?* Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Online Measures of Learning Processes SIG, Oulu, Finland.

* Mudrick, N., & Azevedo, R. (2016, November). *The theoretical, methodological, and analytical challenges of facial expressions of emotions during multimedia learning*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Online Measures of Learning Processes SIG, Oulu, Finland.

* Taub, M., Azevedo, R., Rowe, J., & Lester, J. (2016, November). *Time vs. meaningful time: How do duration and fixation duration differentially impact using a monitoring tool during SRL and gameplay with a game-based learning environment?* Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Online Measures of Learning Processes SIG, Oulu, Finland.

+ Azevedo, R., (2016, November). *Using multimodal data for research on learning and instruction.* Invited keynote talk presented at the annual IV International Congress of Psychological Contexts, Educational and Health, Almeria, Spain.

+ Azevedo, R., (2016, November). *Multimodal data for designing intelligent learning systems.* Invited talk presented at the University of Oviedo, Oviedo, Spain.

* Lallé, S., Mudrick, N., Taub, M., Grafsgaard, J., Conati, C., & Azevedo, R. (2016, September). *Impact of individual differences on affective reactions to pedagogical agents scaffolding*. Paper presented at the annual meeting of the Intelligent Virtual Agents conference, Los Angeles, CA.

* Azevedo, R., Taub, M., Mudrick, N., Martin, S. A., & Grafsgaard, J. (2016, August). *Measuring and supporting the dynamic interplay between self- and externally-regulated learning with advanced learning technologies*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Nijmegen, The Netherlands.

* Azevedo, R., Taub, M., Mudrick, N., Martin, S. A., & Grafsgaard, J. (2016, August). *Using adaptive scaffolding by animated pedagogical agents to improve self-regulation during complex learning: Evidence from multi-modal trace data*. Paper presented at the biennial

meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Nijmegen, The Netherlands.

* Martin, S. A., Mudrick, N., Taub, M., & Azevedo, R. (2016, August). *The importance of regulatory flexibility in learning with advanced learning technologies*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Nijmegen, The Netherlands.

* Mudrick, N., Taub, M., & Azevedo, R. (2016, August). *Multimedia discrepancies and their influence on metacomprehension during multimedia learning*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Nijmegen, The Netherlands.

* Mudrick, N., Taub, M., & Azevedo, R. (2016, August). *Using eye-movements to understand metacomprehension during learning with multimedia discrepancies*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Nijmegen, The Netherlands.

* Taub, M., Mudrick, N., & Azevedo, R. (2016, August). *Using multi-level models to predict how metacognitive monitoring predicts performance assessment with MetaTutor*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Nijmegen, The Netherlands.

* Wortha, F., Azevedo, R., Taub, M., Mudrick, N., Martin, S. A., & Millar, G. C., & Narciss, S. (2016, August). *Judgements of learning during learning with hypermedia: How do they affect study time allocation and study behaviors?* Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Nijmegen, The Netherlands.

+ Azevedo, R. (2016, June). *Interdisciplinary fusion: Reasoning about cognitive, metacognitive, and affective processes used during complex learning with advanced learning technologies*. Invited talk presented at the Université du Quebéc à Montréal, Quebéc, Canada.

* Azevedo, R., Martin, S. A., Taub, M., Mudrick, N., Millar, G., & Grafsgaard, J. (2016, June). *Are pedagogical agents' external regulation effective in fostering learning with intelligent tutoring systems?* Paper presented at the 13th International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia.

* Azevedo. R., Mudrick, N. V., Taub, M., Martin, S., Wortha, F., & Millar, G. (2016, June). *The coupling between metacognition and emotions during STEM learning with advanced learning technologies: A critical analysis and implications for future research*. Paper presented at the 2nd International Workshop on Affect, Meta-Affect, Data and Learning (AMADL 2016) at the 13th International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia.

* Bouchet, F., Harley, J., & Azevedo, R. (2016, June). *Can adaptive pedagogical agents' prompting strategies improve students' learning and self-regulation?* Paper presented at the 13th International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia.

* Martin, S. A., Azevedo, R., Taub, M., Mudrick, N., Millar, G., & Grafsgaard, J. (2016, June). *Are there benefits of using multiple pedagogical agents to support and foster self-regulated learning in an intelligent tutoring system?* Paper presented at the 13th International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia.

* Martin, S., Grafsgaard, J., Mudrick, N. V., Taub, M., & Azevedo. R. (2016, June). *On the feasibility of providing real-time adaptive support for motivation and emotion in intelligent tutoring systems*. Paper presented at the 2nd International Workshop on Affect, Meta-Affect, Data and Learning (AMADL 2016) at the 13th International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia.

* Taub, M., & Azevedo, R. (2016, June). *Using eye-tracking to determine the impact of prior knowledge on self-regulated learning with an adaptive hypermedia- learning environment?* Paper presentated at the 13th International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia.

* Taub, M., Mudrick, N., Azevedo, R., Millar, G. Rowe, J., & Lester, J. (2016, June). *Using multi-level modeling with eye-tracking data to predict metacognitive monitoring and self-regulated learning with Crystal Island*. Paper presented at the 13th International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia.

+ Azevedo, R., (2016, April). *Multimodal data tracking, alignment, and analyses of Metacognitive processes: Measurement issues and challenges in learner modeling*. Paper presented at the annual Learning Environments Across Disciplines (LEADS) workshop, Washington, DC.

* Taub, M., Azevedo, R., Martin, S. A., Millar, G. C., & Wortha, F. (2016, April). *Aligning log-file and facial expression data to validate assumptions linking SRL, metacognitive monitoring, and emotions during learning with a multi-agent hypermedia-learning environment*. Structured poster presented at the annual meeting of the American Educational Research Association, Washington, DC.

* Taub, M., Mudrick, N. V., Azevedo, R., Markhelyuk, M., & Powell, G. S. (2016, April). *Assessing middle school students' use of a metacognitive monitoring tool during learning with SimSelf*. Paper presented at the annual meeting of the American Educational Research Association, Washington, DC.

* Feyzi-Behnagh, R, Azevedo, R., Bouchet, F, & Tian, Y. (2016, April). *The role of an open learner model and immediate feedback on metacognitive calibration in MetaTutor*. Paper presented at the annual meeting of the American Educational Research Association, Washington, DC.

* Wortha, F., Azevedo, R., Taub, M., Mudrick, N. V., Martin, S. A., Millar, G. C., & Narciss, S. (2016, April). *Emotion profiles: The importance of emotions during learning with a multi-agent hypermedia-learning environment*. Paper presented at the annual meeting of the American Educational Research Association, Washington, DC.

+ Azevedo, R. (2015, October). *Understanding and reasoning about real-time cognitive, affective, and metacognitive processes to foster self-regulation with advanced learning*

technologies. Invited talk presented at the Université du Quebéc à Montréal, Quebéc, Canada.

* Azevedo, R. (2015, August). *Using process data to examine self-regulation with advanced learning technologies: Issues and challenges*. Paper presented at an invited session of the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Limassol, Cyprus.

* Azevedo, R., Mudrick, N., Taub, M., & Martin, S. A., (2015, August). *Issues in capturing, analyzing, and inferring self-regulatory processes from multi-channel data*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Limassol, Cyprus.

* Azevedo, R., Taub, M., Mudrick, N., & Martin, S. A. (2015, August). *Monitoring and regulating emotions between humans and pedagogical agents during learning with MetaTutor*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Limassol, Cyprus.

* Lebeau, I., Baetan, S., Azevedo, R., & Crauwels, M. (2015, August). *Does students' SRL-training in an authentic learning environment improve their performance?* Paper presented at an invited session of the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Limassol, Cyprus.

* Taub, M., Azevedo, R., Mudrick, N., & Martin, S. A. (2015, August). *Using process data to examine self-regulatory processes during learning with MetaTutor*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Limassol, Cyprus.

* Taub, M., Azevedo, R., Lisk, S., Kabat, G., Martin, S. A., & Smith, T. (2015, August). *Product vs process: PA influence on time and use of SRL processes on relevant pages with MetaTutor*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Limassol, Cyprus.

* Harley, J. M., Carter, C.K., Papaionnou, N., Bouchet, F., Landis, R. L., Azevedo, R., & Karabachian, L.R. (2015, June). *Examining the predictive relationship between personality and emotion traits and learners' agent-directed emotions*. Paper presented at the 17th International Conference on Artificial Intelligence in Education, Madrid, Spain.

+ Azevedo, R., (2015, April). *Advances in self-regulated learning and advanced learning technologies*. Invited paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

+ Azevedo, R., (2015, April). *Fusing multi-channel trace data to understand self-regulated learning with advanced learning technologies*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

+ Azevedo, R., Mudrick, N., & Taub, M. (2015, April). *Scaffolding metacognitive processes using pedagogical agents during complex learning with MetaTutor*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

+ Azevedo, R., Taub, M., & Mudrick, N. (2015, April). *A critical review of interdisciplinary methods used to examine the role of emotions and computer-based learning environments*.

Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

[+] Azevedo, R., Taub, M., & Mudrick, N. (2015, April). *Modeling self-regulated learning wit intelligent multi-agent learning technologies: Beyond cognition and metacognition*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

[*] Duffy, M., Lajoie, S., Jarrell, A., Pekrun, R., Azevedo, R., & Lachapelle, K. (2015, April). *Emotions in medical education: Developing and testing a self-report emotions scale across medical learning environments*. Paper presented at the annual meeting American Educational Research Association, Chicago, IL.

[*] Taub, M., Azevedo, R., Kabat, G., Martin, S., Lisk, S., & Mudrick, N. (2015, April). *How do pedagogical agents impact how students deploy self-regulated learning strategies during learning with hypermedia?* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

[+] Taub, M., Mudrick, N., & Azevedo, R. (2015, April). *Scaffolding learning with pedagogical agents in advanced learning technologies: Understanding the role of self- versus external-regulation*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

[+] Azevedo, R., (2015b, March). *Measuring and assessing self-regulated learning using interdisciplinary techniques: Issues, challenges, and applications*. Paper presented at the first international workshop on Self-Regulated Learning, Tel Aviv, Israel.

[+] Azevedo, R., (2015a, March). *Measuring and fostering metacognition during learning with advanced learning technologies*. Paper presented at an invited symposium on Self-Regulation in a Digital World at the biennial meeting of the International Convention of Psychological Science, Amsterdam, The Netherlands.

[+] Azevedo, R. (2014, September). *An interdisciplinary data fusion approach to measuring and fostering metacognition with advanced learning technologies*. Invited paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Istanbul, Turkey.

[*] Azevedo, R., Johnson-Witherspoon, A., Burkett, C., & Chauncey Strain, A. (2014, September). *Why is it so difficult to train learners to self-regulate their learning of science with hypermedia? Evidence from product and processes data*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Istanbul, Turkey.

[*] Azevedo, R., Mudrick, N., Taub, M., Feyzi-Behnagh, R., & Bouchet, F. (2014, September). *Are pedagogical agents effective in scaffolding metacognitive processes during learning with MetaTutor?* Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Istanbul, Turkey.

[*] Azevedo, R., Taub, M., Mudrick, N., Feyzi-Behnagh, R., & Bouchet, F. (2014, September). *The impact of pedagogical agents' scaffolding of metacognitive self-regulatory processes during learning with MetaTutor*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Istanbul, Turkey.

* Bannert, M., & Azevedo, R. (2014, September). *Scaffolding self-regulated learning with pedagogical agents: A conceptual framework*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Istanbul, Turkey.

* Mudrick, N., Azevedo, R., Taub, M., & Bouchet, F. (2014, September). *How do pedagogical agents' SRL-prompts impact students' affect as they interact with intelligent tutoring systems?* Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Istanbul, Turkey.

* Taub, M., Azevedo, R., Mudrick, N., & Bouchet, F. (2014, September). *Sub-goal sequence matters: Determining the effects of sub-goal sequence on emotions during learning with hypermedia-learning environments*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Istanbul, Turkey.

* Jaques, N., Conati, C., Harley, J., & Azevedo, R. (2014, June). *Predicting affect from gaze data during interaction with an intelligent tutoring system*. Paper presented at the 12th International Conference on Intelligent Tutoring Systems (ITS 2014), Honolulu, HI.

+ Mudrick, N., Azevedo, R., & Taub, M. (2014, June). *Considering the role of pedagogical agents in computer based learning environments*. Paper presented at the Social, Motivation, and Affect Dimensions of Learning through Social Interaction Workshop at the 11th International Conference of the Learning Sciences (ICLS 2014), Boulder, CO.

* Mudrick, N., Azevedo, R., Taub, M., Feyzi, R., & Bouchet, F. (2014, June). *A study of subjective emotions, self-regulatory processes, and learning gains: Are pedagogical agents effective in fostering learning?* Paper presented at the 11th International Conference of the Learning Sciences (ICLS 2014), Boulder, CO.

* Taub, M., Azevedo, R., Bouchet, F., Clodfelter, E., & Mudrick, N. (2014, June). *Can scaffolds from pedagogical agents influence effective completion of sub-goals during learning with a multi-agent hypermedia-learning environment?* Paper presented at the 11th International Conference of the Learning Sciences (ICLS 2014), Boulder, CO.

+ Azevedo, R. (2014, June). *Using multimodal data to understand the complex nature of self-regulatory processes*. Invited talk presented at workshop on Using Multimodal Data for Research on Learning and Interaction, Oulu, Finland.

* Duffy, M., Azevedo, R., Meterissian, S., & Bouchet, F. (2014, May-June). *VirtualSelf: A computer-based learning environment for patient education using physiological and trace data*. Paper presented at the Industrial and Systems Engineering Research Conference, Montréal, Canada.

+ Azevedo, R. (2014a, May). *Instrumentation, analysis, and visualization in measuring emotions during learning*. Invited talk presented at the annual meeting of the Learning Environments across Disciplines Workshop on Measuring Emotions in Simulations and Games for Learning: Instrumentation, Analysis, and Visualization, Montréal, Canada.

+ Azevedo, R. (2014b, May). *Transforming education thorough intelligent learning technologies*. Invited talk presented at the annual meeting of the Learning and the Brain Conference: Connecting Educators with Neuroscientists and Researchers, New York, NY.

* Azevedo, R. (2014a, April). *Enhancing classroom assessment by fusing advanced learning technologies and teaching analytics: A theoretically-driven approach*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

+ Azevedo, R. (2014b, April). *Big data and the digital transformation of education: Implications for advanced learning technologies*. Paper presented at the Chancellor's Faculty Excellence Program Symposium: A Celebration of Interdisciplinarity, Raleigh, NC.

* Harley, J. M., Bouchet, F., Hussain, S., Calvo, R., & Azevedo, R. (2014, April). *A multi-componential analysis of emotions during complex learning with an intelligent multi-agent system*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

* Harley, J. M., Bouchet, F., Papaioannou, N., Carter, C., Trevors, G., Feyzi-Behnagh, R., Azevedo, R., & Landis, R. S. (2014, April). *Assessing learning with MetaTutor: A multi-agent hypermedia learning environment*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

* Muis, K. R., Pekrun, R., Sinatra, G., Azevedo, R., Trevors, G., Meier, E., & Heddy, B. (2014, April). *The curious case of climate change: Epistemic emotions mediate relations between epistemic beliefs, learning strategies and learning outcomes*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

* Ranellucci, J., Bouchet, F., Poitras, E., Lajoie, S. P., & Azevedo, R. (2014, April). *An analysis of emotions in educationally relevant tweets*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

+ Azevedo, R. (2013, November). *Adaptive instruction and self-regulated learning*. Paper presented at a Presidential Session of the Association for Educational Communications and Technology, Anaheim, CA.

+ Azevedo, R. (2013a, October). *Metacognition and self-regulated learning in different subject areas*. Invited presentation at the Curriculum Redesign Colloquium on Interdisciplinary, Meta-Cognition and Self-Regulated Learning, Paris, France.

+ Azevedo, R. (2013b, October). *Using interdisciplinary methods for measuring metacognition*. Invited presentation at the Curriculum Redesign Colloquium on Interdisciplinary, Meta-Cognition and Self-Regulated Learning, Paris, France.

+ Azevedo, R. (2013c, October). *Advanced learning technologies to detect, track, model, and foster metacognition*. Invited presentation at the Curriculum Redesign Colloquium on Interdisciplinary, Meta-Cognition and Self-Regulated Learning, Paris, France.

* Azevedo, R., Feyzi-Behnagh, R., Harley, J., & Bouchet, F. (2013, August). *Aligning temporally unfolding self-regulatory processes during learning with multi-agent technologies*. Paper presented at the 18th biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Munich, Germany.

* Azevedo, R., Harley, J., Bouchet, F., Feyzi-Behnagh, R., Taub, M., Trevors, G., & Duffy, M. (2013, August-a). *MetaTutor: An innovative technology environment to study and assess self-regulatory processes*. Paper presented at the 18th biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Munich, Germany.

* Azevedo, R., Harley, J., Bouchet, F., Feyzi-Behnagh, R., Taub, M., Trevors, G., & Duffy, M. (2013, August-b). *Using pedagogical agents to examine the role of self-regulatory processes*

during learning with MetaTutor. Paper presented at the 18th biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Munich, Germany.

* Duffy, M., & Azevedo, R. (2013, August). *Metacognitive processes underlying generative activities during learning with multi-agent systems*. Paper presented at the 18th biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Munich, Germany.

* Duffy, M., Azevedo, R., Wiseman, J., Sun, N., Dhillon, I., Griscom, S., Stead, V., Crelinsten, L., Lachapelle, K., & Maniatis, T. (2013, August). *Co-regulating critical care cases: Examining regulatory processes during team-based medical simulation training*. Paper presented at the 18th biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Munich, Germany.

* Feyzi-Behnagh, R., Trevors, G., Bouchet, F., & Azevedo, R. (2013, August). *Aligning multiple sources of SRL data in MetaTutor: Towards interactive scaffolding in multi-agent systems*. Paper presented at the 18th biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Munich, Germany.

* Meier, E., Pekrun, R., Muis, K., Sinatra, G., & Azevedo, R. (2013, August). *Epistemic emotions and learning strategies*. Paper presented at the 18th biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Munich, Germany.

* Ponzoni, N., & Azevedo, R. (2013, August). *Debilitating performance anxiety in simulation environments: A systematic review*. Paper presented at the 18th biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Munich, Germany.

* Taub, M., & Azevedo, R. (2013, August). *Can prior knowledge adequately predict the use of metacognitive processes during hypermedia learning?* Paper presented at the 18th biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Munich, Germany.

* Trevors, G., Feyzi-Behnagh, R., Saxena, A., Bouchet, F., & Azevedo, R. (2013, August). *Students regulate their learning processes as a function of multimedia coherence: Analyses of eye-gaze behavior*. Paper presented at the 18th biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Munich, Germany.

* Bondareva, D., Conati, C., Feyzi-Behnagh, R., Harley, J., Azevedo, R., & Bouchet, F. (2013, July). *Inferring learning from gaze data during interaction with an environment to support self-regulated learning*. Paper presented at the 16th International Conference on Artificial Intelligence in Education (AI-ED 2013), Memphis, TN.

* Harley, J., Bouchet, F., & Azevedo, R. (2013, July). *Measuring and converging data on learners' emotions experienced with MetaTutor*. Paper presented at the 16th International Conference on Artificial intelligence in Education (AI-ED 2013), Memphis, TN.

+ Azevedo, R. (2013, June). *Using advanced learning technologies to enhance 21st century skills: Promises and pitfalls*. Presentation at the meeting of the Supporting Active Learning and Technological Innovation in Science Education Conference (SALTISE), Montréal, Canada.

* Duffy, M., Azevedo, R., Karabachian, L., & Dhillon, I. (2013, April). *Motivation matters: Interactions between achievement goals and scaffolding for self-regulated learning within a multi-agent intelligent tutoring system*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. **[Recipient of the Graduate**

Student Research Paper Award from the Studying and Self-Regulated Learning Special Interest Group (SIG) of AERA]

* Feyzi-Behnagh, R., Trevors, G., Azevedo, R., Yang, W., Belanger-Cantara, V., Henchey, J., Bouchet, F., Pacampara, N., & Wang, G. (2013, April). *Understanding multimedia learning by converging process and product data*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

* Hall, N. C., Stupnisky, R., Azevedo, R., & Rahimi, S. (2013, April). *Internet-based attributional retraining and self-esteem: Improving academic achievement in at-risk students through writing techniques*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

* Harley, J. M., Carter, C., Papaionnou, N., Bouchet, F., Azevedo, R., & Landis, R. (2013, April). *Examining learners' academic achievement emotions during science learning with an intelligent, hypermedia multi-agent system*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

* Harley, J. M., Taub, M., Bouchet, F., Henchey, J., & Azevedo, R. (2013, April). *Profiling learners' co-regulation patterns with a pedagogical agent in an intelligent tutoring system for learning about human biology*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

* Meier, E., Pekrun, R., Muis, K., Sinatra, G., & Azevedo, R. (2013, April). *The role of epistemic emotions in self-regulated learning*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

* Trevors, G., Feyzi-Behnagh, R., Azevedo, R., Yang, W., Henchey, J., Bélanger-Cantara, V., Bouchet, F., Wang, G., & Pacampara, N. (2013, April). *Eye-movement patterns in science multimedia as a function of epistemic beliefs and learning task conditions*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

* Harley, J. M., Bouchet, F., & Azevedo, R. (2013, March). *Providing adaptive, real-time tutorial feedback in MetaTutor*. Paper presented at the 12th Annual Education Graduate Students' Society (EGSS) Conference: Meeting in the Middle: (de)Constructing Knowledge, McGill University, Montréal, Canada.

* Khosravifar, B., Azevedo, R., Harley, J., Bouchet, F., & Feyzi-Behnagh, R. (2013, March). *Multi-agent system proposal to model and foster self-regulated learning*. Paper presented at the 27th IEEE International Conference on Advanced Information Networking and Applications, Barcelona, Spain.

* Khosravifar, B., Bouchet, F., Feyzi-Behnagh, R., Azevedo, R., & Harley, J. (2013, March). *Using intelligent multi-agent systems to model and foster self-regulated learning: A theoretically-based approach using Markov decision process*. Paper presented at the 27th IEEE International Conference on Advanced Information Networking and Applications, Barcelona, Spain.

* Azevedo, R., Feyzi-Behnagh, R., & Harley, J. (2013, January-February). *Using multi-channel data to analyze the temporal and dynamic nature of self-regulation during learning with an intelligent multi-agent system*. Paper presented at the Workshop on It's About Time: Addressing the Many Challenges of Analyzing Multi-Scale Temporal Data at the annual meeting of the Alpine Rendez-Vous, Villard-de-Lans, Vercors, French Alps.

[+] Azevedo, R., Feyzi-Behnagh, R., Harley, J., Taub, M., & Megill, C. (2012, November). *Using physiological data to analyze the temporal and dynamic nature of self-regulation during learning: Implications for the design of advanced learning technologies*. Paper presented at an invited symposium on Physiological Measures in Instructional Design Technology Research at the annual meeting of the Association for Educational Communications and Technology, Louisville, KY.

[*] Ponzoni, N., & Azevedo, R. (2012, October). *The effect of emotions on clinical reasoning and performance*. Paper presented at the First Montréal International Conference on Clinical Reasoning, Montréal, Canada.

[+] Azevedo, R. (2012, September). *Examining metacognitive processes using process data collected during learning with computerized environments*. Paper presented at a Workshop held during the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Milan, Italy.

[*] Azevedo, R., Bouchet, F., Feyzi-Behnagh, R., Harley, J., Trevors, G., Duffy, M., Taub, M., & Landis, R. S. (2012, September). *Using artificial intelligent pedagogical agents to examine the role of metacognitive processes during learning with MetaTutor*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Milan, Italy.

[*] Feyzi-Behnagh, R., Trevors, G., & Azevedo, R. (2012, September). *Metacognition in multimedia: A micro-analysis of process and judgment data*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Milan, Italy.

[*] Trevors, G., Feyzi-Behnagh, R., & Azevedo, R. (2012, September). *Students regulate their learning processes as a function of task complexity and epistemic beliefs: Analyses of trace data*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Milan, Italy.

[*] Azevedo, R., Bouchet, F., Harley, J., Feyzi-Behnagh, R., Trevors, G., Duffy, M., Taub, M., Pacampara, N., Agnew, L., Griscom, S., Mudrick, N., Stead, V., & Yang, W. (2012, June). *MetaTutor: An intelligent multi-agent tutoring system designed to detect, track, model, and foster self-regulated learning*. Paper presented at the 11th International Conference on Intelligent Tutoring Systems, Crete, Greece.

[*] Azevedo, R. (2012, July). *Fostering self-regulation using advanced learning technologies*. Paper presented at the 34th International School Psychology Association, Montréal, Canada.

[*] Azevedo, R., Landis, R. S., Feyzi-Behnagh, R., Duffy, M., Trevors, G., Harley, J., Bouchet, F., Burlison, J., Taub, M., Pacampara, N., Yeasin, M., Rahman, A. K. M. M., Tanveer, M. I., & Hossain, G. (2012, June). *The effectiveness of pedagogical agents' prompting and feedback in facilitating co-adapted learning with MetaTutor*. Paper presented at the 11th International Conference on Intelligent Tutoring Systems, Crete, Greece.

[*] Bouchet, F., Kinnebrew, J., Biswas, G., & Azevedo, R. (2012, June). *Identifying students' characteristic learning behaviors in an intelligent tutoring system fostering self-regulated learning*. Paper presented at the 5th International Conference on Educational Data Mining, Crete, Greece.

[*] Chauncey-Strain, A., Azevedo, R., & D'Mello, S. D. (2012, June). *Exploring relationships between learners' affective states, metacognitive processes, and learning outcomes*. Paper

presented at the 11th International Conference on Intelligent Tutoring Systems, Crete, Greece.

* Harley, J., Bouchet, F., & Azevedo, R. (2012, June). *Measuring learners' co-occurring emotional responses during their interaction with a pedagogical agent in MetaTutor*. Paper presented at the 11th International Conference on Intelligent Tutoring Systems, Crete, Greece.

* Harley, J., Taub, M., Bouchet, F., & Azevedo, R. (2012, June). *A framework to understand the nature of co-regulated learning in human-pedagogical agent interactions*. Paper presented at the 11th International Conference on Intelligent Tutoring Systems, Crete, Greece.

* Duffy, M., Muis, K., & Azevedo, R. (2012, May). *Beliefs and motives behind the paper: Examining relations between epistemic beliefs, achievement goals, and writing strategies*. Paper presented at the Canadian Society for the Study of Education (CSSE), Waterloo, Canada.

* Ranellucci, J., Poitras, E., Bouchet, F., Lajoie, S. P., & Azevedo, R. (2012, May). *Using social networking to guide research on emotions in education*. Paper presented at the Canadian Society for the Study of Education (CSSE), Waterloo, Canada.

* Azevedo, R. (2012, May). *Detecting, tracking, and modeling cognitive, metacognitive, and affective processes with intelligent systems*. Paper presented at the International Scientific Conference on ICT and Education: Past, Current, and Future Trends, Montréal, Canada.

+ Azevedo, R. (2012, April). *The role of affect during complex learning with intelligent systems*. Paper presented at the Instructional Technology SIG meeting at the annual meeting of the American Educational Research Association, Vancouver, Canada.

* Azevedo, R., Bouchet, F., Feyzi-Behnagh, R., Harley, J., Duffy, M., & Trevors, G. (2012, April). *MetaTutor as an innovative technology environment to assess students' self-regulatory processes*. Paper presented at the Symposium on Knowing What Students Know and Feel: Innovative Technology Rich Assessments at the annual meeting of the American Educational Research Association, Vancouver, Canada.

* Azevedo, R., Feyzi-Behnagh, R., Harley, J., Bouchet, F., & Taub, M. (2012, April). *Co-regulated learning between human and artificial pedagogical agents in the content of a multi-agent adaptive hypermedia environment*. Paper presented at the Symposium on Innovations in Researching Regulation of Learning in Solo and Collaborative Tasks at the annual meeting of the American Educational Research Association, Vancouver, Canada.

* Azevedo, R., Feyzi-Behnagh, R., Harley, J., Bouchet, F., Trevors, G., Duffy, M., & Sabagh, Z. (2012, April). *Measuring self-regulated learning with a multi-agent hypermedia environment*. Paper presented at the Symposium on Measuring Self-Regulated Learning with Multi-Agent Learning Environments at the annual meeting of the American Educational Research Association, Vancouver, Canada.

* Azevedo, R., Harley, J., Feyzi-Behnagh, R., & Bouchet, F. (2012, April). *Using on-line measures to understand self-regulated learning with advanced learning technologies*. Paper presented at the Symposium on Integrating Different Approaches to Investigating Self-Regulated Learning at the annual meeting of the American Educational Research Association, Vancouver, Canada.

* Harley, J., Bouchet, F., & Azevedo, R. (2012, April). *Measuring learners' unfolding, discrete emotional responses to different pedagogical agents scaffolding strategies*. Paper presented

at the annual meeting of the American Educational Research Association, Vancouver, Canada.

* Trevors, G., Duffy, M., & Azevedo, R. (2012, April). *How does a multi-agent adaptive hypermedia environment interact with learner characteristics on note-taking and learning?* Paper presented at the annual meeting of the American Educational Research Association, Vancouver, Canada. [**Recipient of the Graduate Student Research Award from the Studying and Self-Regulated Learning Special Interest Group (SIG) of AERA**]

* Harley, J., Bouchet, F., & Azevedo, R. (2012, March). *Co-occurring emotions: Building an understanding of parallel-emotional processing and its applications to learning and education with intelligent tutoring systems*. Paper presented at the 11th Annual (e)Merging Knowledges: Classroom, Community, Culture Conference, Montréal, Canada.

+ Azevedo, R. (2011, December). *Multi-agent learning systems as facilitators of self-regulated learning*. Talk presented at the Knowledge Media Research Center at the University of Tübingen, Tübingen, Germany.

+ Azevedo, R. (2011, November). *Using artificial pedagogical agents to scaffold self-regulated processes during complex problem solving*. Paper presented at an invited symposium at the annual meeting of the Association for Educational Communications and Technology, Jacksonville, FL.

* Kay, J., Kummerfeld, B., Barua, D., Kleitman, S., Azevedo, R., & Paris, C. (2011, November). *Personal goals and metacognitive scaffolding as a unifying framework for personal health informatics*. Paper presented at the OzCHI 2011 Design, Culture, and Interaction Conference, Canberra, Australia.

+ Azevedo, R. (2011, November). *Using advanced learning technologies to enhance complex learning in science*. Talk presented to Science Faculty at Vanier College, Montréal, Canada.

+ Azevedo, R. (2011, November). *Scaffolding complex learning using multi-agent learning systems*. Talk presented at the Research Institute of Child Development and Education of the University of Amsterdam, Amsterdam, The Netherlands.

+ Azevedo, R. (2011, October). *Detecting, tracking, and modeling cognitive, affective, and metacognitive regulatory processes to optimize learning with MetaTutor*. Talk presented at the annual meeting of the National Science Foundation REESE Principal Investigators Meeting, Arlington, VA.

+ Azevedo, R. (2011, September). *Can we design artificial pedagogical agents to be intelligent enough to detect, model, and foster regulatory learning processes?* Keynote paper presented at the XII International Conference of the Italian Association for Artificial Intelligence, Palermo, Italy.

* Azevedo, R., Johnson, A., Burkett, C., Behnagh, R., Khezri, Z., Moral, M., Gebre, E., Stern, M., & Harley, J. (2011, August). *Metacognitive prompts in fostering science understanding in MetaTutor*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Exeter, England.

* Azevedo, R. (2011, August). *Self-regulated learning with multi-agent technology-enhanced learning environments: Issues, challenges, and future directions*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Exeter, England.

* Feyzi-Behnagh, R., Khezri, Z., & Azevedo, R. (2011, July). *An investigation of accuracy of metacognitive judgments during learning with an intelligent multi-agent hypermedia environment*. Paper presented at the 33rd Annual Meeting of the Cognitive Science Society, Boston, MA.

* Duffy, M., Trevors, G., & Azevedo, R. (2011, May). *Care to elaborate? A preliminary analysis of note-taking behavior during hypermedia learning with an intelligent, multi-agent tutoring system*. Paper presented at the National Interdisciplinary Graduate Symposium 2011, Montréal, Canada.

* Azevedo, R., Johnson, A., Burkett, C., Chauncey, A., Gebre, E., Behnagh, R., Stern, M., Moral, M., Harley, J., Duffy, M., & Trevors, G. (2011, April). *The effectiveness of pedagogical agents' prompting and feedback in facilitating self-regulated learning with MetaTutor*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

*Azevedo, R., & Behnagh, R. F. (2010, November). *Dysregulated learning with advanced learning technologies*. Paper presented at the Fall 2010 Symposium of the Association for the Advancement of Artificial Intelligence (AAAI), Arlington, VA.

* Azevedo, R., Johnson, A. M., Burkett, C., Chauncey, A. D., & Fike, A. (2010, November). *The role of prompting and feedback in facilitating students' learning about science with MetaTutor*. Paper presented at the Fall 2010 Symposium of the Association for the Advancement of Artificial Intelligence (AAAI), Arlington, VA.

*Azevedo, R. (2010, October). *Using MetaTutor to scaffold and foster self-regulated learning and science understanding*. Paper presented at the TACONET Stellar Network of Excellence Meeting, Barcelona, Spain.

* Johnson, A. M., Azevedo, R., & Hoff, A. (2010, August). *A comparison of three forms of facilitation in hypermedia learning with text and diagrams*. Paper presented at the biennial meeting the European Association for Research on Learning and Instruction, Tübingen, Germany.

* Chauncey, A., & Azevedo, R. (2010, June). *Emotions and motivation during multimedia learning: How do I feel and why do I care?* Paper presented at the 10th International Conference on Intelligent Tutoring Systems, Pittsburgh, PA.

* Rus, V., Lintean, M., & Azevedo, R. (2010, May). *Computational aspects of the intelligent tutoring system MetaTutor*. Paper presented at the 23rd International Florida Artificial Intelligence Research Society Conference, Daytona Beach, FL.

* Chauncey, A., Witherspoon, A., Burkett, C., Fike, A., & Azevedo, R. (2010, May). *Examining the effectiveness of SRL training on learners' metacognitive knowledge and deployment of SRL processes during hypermedia learning*. Paper presented at the 4th Biennial Meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Münster, Germany.

* Witherspoon, A. M., Azevedo, R., Cai, Z., Chauncey, A., & Burkett, C. (2010, May). *Exploring the relationship between navigational patterns and self-regulated learning*. Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.

* Witherspoon, A. M., Burkett, C., Fike, A., Chauncey, A., & Azevedo, R. (2010, May). *The impact of computer-delivered self-regulated learning training on learner-generated external*

representations. Paper presented at the 4th Biennial Meeting of the EARLI SIG Metacognition, Münster, Germany.

* Chauncey, A., Azevedo, R., & Witherspoon, A. (2010, April). *Do high-performing and low-performing students use SRL differently during hypermedia learning?* Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.

+ Azevedo, R., Moos, D., Witherspoon, A., & Chauncey, A. (2009, November). *Issues in the measurement of cognitive and metacognitive regulatory processes used during hypermedia learning*. Paper presented at the annual meeting of the American Association for Artificial Intelligence, Symposium on Metacognitive and Cognitive Educational Systems, Washington, DC.

+ Azevedo, R., Witherspoon, A., Chauncey, A., Burkett, C., & Fike, A. (2009, November). *MetaTutor: A MetaCognitive tool for enhancing self-regulated learning*. Paper presented at the annual meeting of the American Association for Artificial Intelligence, Symposium on Metacognitive and Cognitive Educational Systems, Washington, DC.

+ Azevedo, R. (2009, August). *Measuring and modeling metacognitive processes using on-line methods: Theoretical and methodological issues*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Amsterdam, The Netherlands.

+ Azevedo, R., & Witherspoon, A. M. (2009, August). *Analyzing the complex nature of self-regulated learning with hypermedia: A critical analysis of multi-method approaches*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Amsterdam, The Netherlands.

* Azevedo, R., Witherspoon, A. M., Siler, E., Cox, M., Chauncey, A., Graesser, A., McNamara, D., Lintean, M., Cai, Z., & Rus, V. (2009, August). *The effectiveness of MetaTutor in training college students to deploy key self-regulatory processes during learning*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Amsterdam, The Netherlands.

* Cromley, J. G., & Azevedo, R. (2009, August). *Measuring strategy use in context with multiple choice items*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Amsterdam, The Netherlands.

+ Witherspoon, A. M., & Azevedo, R. (2009, August). *The impact of computerized self-regulated learning training on learners' hypermedia learning*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Amsterdam, The Netherlands.

* Azevedo, R., Witherspoon, A. M., Graesser, A., McNamara, D., Chauncey, A., Siler, E., Cai, Z., Rus, V., & Lintean, M. (2009, July). *MetaTutor: Analyzing self-regulated learning in a tutoring system for biology*. Paper presented at the biennial meeting on Artificial Intelligence and Education, Brighton, England.

* Lintean, M., Witherspoon, A. M., Cai, Z., & Azevedo, R. (2009, July). *MetaTutor: An interactive event*. Paper presented at the biennial meeting on Artificial Intelligence and Education, Brighton, England.

* Witherspoon, A. M., Azevedo, R., Cai, Z., Rus, V., & Lintean, M. (2009, July). *Learners' exploratory behavior within MetaTutor*. Paper presented at the biennial meeting on Artificial Intelligence and Education, Brighton, England.

* Rus, V., Lintean, M., & Azevedo, R. (2009, July). *Automatic detection of student mental models during prior knowledge activation in MetaTutor*. Paper presented at the Second International Conference on Educational Data Mining, Cordoba, Spain.

+ Azevedo, R., Chauncey, A., & Witherspoon, A. (2009, April). *The role of animated pedagogical agents in scaffolding self-regulated learning with MetaTutor*. Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.

+ Azevedo, R., Witherspoon, A., Chauncey, A., & Burkett, C. (2009, April). *Self-regulation of complex learning with MetaTutor*. Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.

+ Azevedo, R., Witherspoon, A., Chauncey, A., & Burkett, C. (2009, April). *The dynamics of self-regulation during complex learning with MetaTutor*. Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.

+ Azevedo, R., & Witherspoon, A. (2009, April). *Capturing, identifying, and classifying the deployment of self-regulatory processes during learning with MetaCognitive tools*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

+ Azevedo, R., & Witherspoon, A. (2009, April). *The effectiveness of pedagogical agents in orienting learners to deploy key cognitive and metacognitive processes during hypermedia learning*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

+ Azevedo, R., Witherspoon, A., Graesser, A., McNamara, D., Rus, V., Cai, Z., & Lintean, M. (2008, November). *MetaTutor: An adaptive hypermedia system for training and fostering self-regulated learning about complex science topics*. Paper presented at the annual meeting of the Society for Computers in Psychology, Chicago, IL.

+ Azevedo, R., & Witherspoon, A. M. (2008, November). *Detecting, tracking, and modeling self-regulatory processes during complex learning with hypermedia*. Paper presented at the annual meeting of the American Association for Artificial Intelligence, Symposium on Biologically-Inspired Cognitive Architectures, Washington, DC.

* Witherspoon, A., & Azevedo, R. (2008, August). *The role of integration scaffolding during multimedia learning with text and diagrams*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Text and Graphics SIG, Tilburg, The Netherlands.

* Azevedo, R., Lewis, G., Klatzky, R., & Siler, E. (2008, July). *The effects of disease category on diagnostic problem solving in mammography*. Paper presented at the 30th Annual Meeting of the Cognitive Science Society, Washington, DC.

* Jeon, M., & Azevedo, R. (2008, June). *Automatic analyses of cohesion and coherence in human tutorial dialogues during hypermedia learning: A comparison among mental model jumpers*. Paper presented at the 9th International Conference on Intelligent Tutoring Systems, Montréal, Canada.

* Witherspoon, A., Azevedo, R., & D'Mello, S. (2008, June). *The dynamics of self-regulatory processes within self- and externally-regulated learning episodes*. Paper presented at the 9th International Conference on Intelligent Tutoring Systems, Montréal, Canada.

* Azevedo, R., Moos, D., & Greene, J. (2008, May). *Metacognitive processes during self-regulated learning with hypermedia: A developmental comparison*. Paper presented at the

biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Ioannina, Greece.

* Azevedo, R. (2008, March). *Intelligent multi-layered regulatory learning environments for fostering complex learning*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

* Azevedo, R., Witherspoon, A., Smith, S., & Lewis, G. (2008, March). *Hypermedia as a metacognitive tool for enhancing learning about complex science topics*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

* Greene, J. A., & Azevedo, R. (2008, March). *The epistemic and ontologic cognitive development model: Formulation and testing*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

* Moos, D. C., & Azevedo, R. (2008, March-a). *Metacognition and learning with hypermedia: To what extent do prior domain knowledge and self-efficacy matter?* Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

* Moos, D. C., & Azevedo, R. (2008, March-b). *Predicting differences in self-regulated learning with hypermedia: Cognitive and motivational variables*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

* Azevedo, R., Faremo, S., & Lajoie, S. P. (2007, August). *Expert-novice differences in mammogram interpretation*. Paper presented at the 29th Meeting of the Cognitive Science Society, Nashville, TN.

* Azevedo, R., Moos, D. C., & Greene, J. A. (2007, August). *External regulating agents' adaptive content and process scaffolding: The key to fostering mental model development during hypermedia learning*. Paper presented at the 29th Meeting of the Cognitive Science Society, Nashville, TN.

* Azevedo, R., & Witherspoon, A. (2007, August). *Does external regulation by a human tutor facilitate all learning with hypermedia?* Paper presented at an invited symposium at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Budapest, Hungary.

+ Azevedo, R., Witherspoon, A., Sullins, J., & Baker, S. (2007, August). *Assessing the use of on-line trace methodologies for analyzing the deployment of metacognitive processes during learning with hypermedia*. Paper presented at an invited symposium at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI), Budapest, Hungary.

* Azevedo, R., & Jeon, M. (2007, July). *Analyzing the coherence and cohesion in human tutorial dialogues when learning with hypermedia*. Paper presented at the 13th International Conference on Artificial Intelligence in Education, Los Angeles, CA.

* Sullins, J., Azevedo, R., Trousdale, A., & Scott, J. (2007, July). *The influence of self-regulation on student-generated questions during hypermedia learning*. Paper presented at the 13th International Conference on Artificial Intelligence in Education, Los Angeles, CA.

* Witherspoon, A., Azevedo, R., Greene, J. A., Moos, D. C., & Baker, S. (2007, July). *The dynamic nature of self-regulatory behavior in self-regulated learning and externally-regulated learning episodes*. Paper presented at the 13th International Conference on Artificial Intelligence in Education, Los Angeles, CA.

* Witherspoon, A., Azevedo, R., & Baker, S. (2007, July). *Learners' use of various types of representations during self-regulated learning and externally-regulated learning episodes.* Paper presented at the workshop on Metacognition and Self-Regulated Learning at the 13th International Conference on Artificial Intelligence in Education, Los Angeles, CA.

* Azevedo, R., Moos, D. C., & Greene, J. A. (2007, April). *Can adolescents benefit from all adaptive scaffolding methods designed to facilitate self-regulated learning with hypermedia?* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

* Azevedo, R., Winters, F. I., Moos, D. C., & Greene, J. A. (2007, April). *The role of developmental differences and metacognitive monitoring during learning with hypermedia.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

* Greene, J. A., & Azevedo, R. (2007, April). *A macro-level analysis of SRL processes and their relations to the development of sophisticated mental models.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

* Moos, D. C., & Azevedo, R. (2007, April-a). *Learning with hypermedia: The role of cognitive, motivational, and contextual factors.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

* Moos, D. C., & Azevedo, R. (2007, April-b). *Students' monitoring, planning, and self-efficacy during learning with hypermedia: The impact of conceptual scaffolds.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

* Vick, J. E., Azevedo, R., & Hofman, N. (2007, April). *Teaching with technology: Does teaching experience matter?* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

* Azevedo, R., Greene, J. A., Moos, D. C., Winters, F. I., Cromley, J. G., & Godbole-Chaudhuri, P. (2006, June). *Is externally-regulated learning by a human tutor always effective in facilitating learning with hypermedia?* Paper presented at the 7th International Conference of the Learning Sciences, Bloomington, IN.

+ Azevedo, R., & Hmelo-Silver, C. (2006, June). *Core challenges in understanding complex systems.* Symposium paper presented at the 7th International Conference of the Learning Sciences, Bloomington, IN.

* Cromley, J. G., & Azevedo, R. (2006, June). *Is there more than one way to be a poor reader?* Paper presented at the annual meeting of the Society for the Scientific Study of Reading, Vancouver, Canada.

* Greene, J. A., & Azevedo, R. (2006, June). *Adolescents' use of self-regulatory processes and their relation to qualitative mental model shifts while using hypermedia.* Paper presented at the 7th International Conference of the Learning Sciences, Bloomington, IN.

* Greene, J. A., Moos, D. C., Azevedo, R., & Winters, F. I. (2006, June). *Exploring differences between gifted and grade-level students' use of self-regulatory learning processes with hypermedia.* Paper presented at the 7th International Conference of the Learning Sciences, Bloomington, IN.

* Moos, D. C., & Azevedo, R. (2006, June). *Examining the fluctuation of strategy use during learning with hypermedia.* Paper presented at the 7th International Conference of the Learning Sciences, Bloomington, IN.

[+] Azevedo, R. (2006, April). *Using hypermedia as a metacognitive tool for enhancing student learning? The role of self-regulated learning*. Paper presented at a symposium at the annual meeting of the American Educational Research Association, San Francisco, CA.

[*] Azevedo, R., Greene, J. A., Moos, D. C., Winters, F. I., & Cromley, J. G. (2006, April). *Comparing the effectiveness of self-regulated learning against externally-regulated learning*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

[*] Cromley, J. G., & Azevedo, R. (2006, April). *Use of self-regulated learning with multiple representations in a hypermedia encyclopedia*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

[*] Greene, J. A., Azevedo, R., & Hancock, G. R. (2006, April). *Embedding personal epistemology research with academic self-efficacy and academic performance*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

[+] Hmelo-Silver, C., & Azevedo, R. (2006, April). *Understanding complex systems: Some core challenges*. Paper presented at a symposium at the annual meeting of the American Educational Research Association, San Francisco, CA.

[*] Moos, D. C., & Azevedo, R. (2006, April). *Exploring the fluctuation of motivation and use of self-regulatory processes during learning with hypermedia*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

[*] Winne, P. H., Jamieson-Noel, D., Nesbit, J., Hadwin, A., Azevedo, R., MacAllister, K., Bennet, N., & Zhou, M. (2005, August). *New tools, approaches, and issues in researching self-regulated learning in authentic settings*. Paper presented at the annual meeting of the American Psychological Association, Washington, DC.

[*] Azevedo, R., Moos, D. C., Winters, F. I., Greene, J. A., Cromley, J. G., Olson, E. D., & Chaudhuri, P. G. (2005, July). *Why is externally-regulated learning more effective than self-regulated learning with hypermedia?* Paper presented at the 12th International Conference on Artificial Intelligence in Education, Amsterdam, The Netherlands.

[*] Cromley, J. G., Azevedo, R., & Olson, E. D. (2005, July). *Self-regulation of learning with multiple representations in hypermedia*. Paper presented at the 12th International Conference on Artificial Intelligence in Education, Amsterdam, The Netherlands.

[*] Greene, J. A., & Azevedo, R. (2005, July). *Adolescents' use of SRL behaviors and their relation to qualitative mental model shifts while using hypermedia*. Paper presented at the 12th International Conference on Artificial Intelligence in Education, Amsterdam, The Netherlands.

[*] Azevedo, R. (2005, April). *Scaffolding learning with hypermedia: The role of self- and co-regulated learning processes during complex learning*. Paper presented at the annual meeting of the American Educational Research Association, Montréal, Canada.

[*] Azevedo, R., Cromley, J. G., Winters, F. I., Moos, D. C., & Greene, J. A. (2005, April-a). *Adaptive human scaffolding facilitates adolescents' self-regulated learning with hypermedia*. Paper presented at the annual meeting of the American Educational Research Association, Montréal, Canada.

[+] Azevedo, R., Cromley, J. G., Winters, F. I., Moos, D. C., & Greene, J. A. (2005, April-b). *Using computers as MetaCognitive tools to foster students' self-regulated learning*. Paper presented at an invitational session of the Technology, Instructional, Cognition, and

Learning SIG at the annual meeting of the American Educational Research Association, Montréal, Canada.

* Azevedo, R., Cromley, J. G., Winters, F. I., Moos, D. C., Greene, J. A., & Vick, J. (2005, April). *Are all human adaptive scaffolding methods equally effective in facilitating self-regulated learning with hypermedia?* Paper presented at the annual meeting of the American Educational Research Association, Montréal, Canada.

* Azevedo, R., Moos, D. C., Winters, F. I., Greene, J. A., Cromley, J. C., Olson, E. D., & Chaudhuri, P. (2005, April). *Why is externally-regulated learning more effective than self-regulated learning with hypermedia?* Paper presented at the annual meeting of the American Educational Research Association, Montréal, Canada.

* Cromley, J. G., & Azevedo, R. (2005, April-a). *Testing the fit of four variations of the DIME model*. Paper presented at the annual meeting of the American Educational Research Association, Montréal, Canada.

* Cromley, J. G., & Azevedo, R. (2005, April-b). *Testing the validity of three measures of strategy use in reading*. Paper presented at the annual meeting of the American Educational Research Association, Montréal, Canada.

* Vick, J. E., Azevedo, R., & Hofman, N. S. (2005, April). *Expert-novice differences in the understanding and detection of self-regulated learning with hypermedia*. Paper presented at the annual meeting of the American Educational Research Association, Montréal, Canada.

* Azevedo, R., Winters, F. I., & Moos, D. C. (2004, June). *Can students collaboratively use hypermedia to learn about science? The dynamics of self- and other-regulatory processes in the classroom*. Paper presented at the 6th International Conference of the Learning Sciences, Santa Monica, CA.

* Cromley, J. C., Azevedo, R., Moos, D. C., & Fried, D. (2004, June). *Developmental patterns in searching for information in hypermedia*. Paper presented at the 11th Annual Meeting of the Society for the Scientific Study of Reading, Amsterdam, The Netherlands.

* Azevedo, R., Cromley, J. G., Winters, F. I., & Moos, D. C. (2004, April). *Designing adaptive scaffolds in hypermedia to facilitate students' self-regulated learning*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

* Levin, D. M., Azevedo, R., Winters, F. I., & Cromley, J. G. (2004, April). *How does a teacher scaffold students' self-regulated learning during a collaborative science inquiry investigation in GenScope?* Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

* Azevedo, R., Cromley, J. G., Winters, F. I., Xu, L., & Iny, D. (2003, July). *Is strategy instruction effective in facilitating students' ability to regulate their learning with hypermedia?* Paper presented at the 11th International Conference on Artificial Intelligence in Education, Sydney, Australia.

* Azevedo, R., & Cromley, J. G. (2003, April). *The role of self-regulated learning in fostering students' understanding of complex systems with hypermedia*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

* Azevedo, R., Cromley, J. G., Seibert, D., & Tron, M. (2003, April). *The role of co-regulated learning during students' understanding of complex systems with hypermedia*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

* Azevedo, R., Cromley, J. G., Thomas, L., Seibert, D., & Tron, M. (2003, April). *Online process scaffolding and students' self-regulated learning with hypermedia*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

+ Azevedo, R., Ragan, S., Cromley, J. G., Pritchett, S., & Verona, M. E. (2002, November). *Do different conceptual scaffolding conditions facilitate students' ability to regulate their learning of complex science topics with RiverWeb?* Paper presented at the 15th Annual Supercomputing Conference, Baltimore, MD.

+ Azevedo, R. (2002, May). *The role of self-regulated learning in students' understanding of science with hypermedia*. Presentation at McGill University's Department of Educational and Counseling Psychology, Montréal, Canada.

* Azevedo, R., Ragan, S., Cromley, J. G., & Pritchett, S. (2002, April). *Do different goal-setting conditions facilitate students' ability to regulate their learning of complex science topics with RiverWeb?* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

* Azevedo, R., Seibert, D., Guthrie, J. T., Cromley, J. G., Wang, H., & Tron, M. (2002, April). *How do students regulate their learning of complex systems with hypermedia?* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

* Azevedo, R. (2001, May). *Using hypermedia to learn about complex systems: A self-regulation model*. Paper presented at the workshop on Help Provision and Help Seeking in Interactive Learning Environments at the 10th International Conference on Artificial Intelligence in Education, San Antonio, TX.

* Azevedo, R., Verona, M. E., & Cromley, J. G. (2001, May). *Fostering students' collaborative problem solving with RiverWeb*. Paper presented at the 10th International Conference on Artificial Intelligence in Education, San Antonio, TX.

* Azevedo, R., Faremo, S. L., Lajoie, S. P., & Fleiszer, D. M. (2001, April). *Understanding the cognitive factors underlying medical expertise*. Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.

* Azevedo, R., Guthrie, J. T., Wang, H., & Mulhern, J. (2001, April). *Do different instructional interventions facilitate students' ability to shift to more sophisticated mental models of complex systems?* Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.

+ Azevedo, R. (2000, November). *Using computers as MetaCognitive tools: A theoretically-based and empirically-based approach*. Address at the Concordia University Educational Technology Conference, Montréal, Canada.

+ Azevedo, R. (2000, October-a). *Educational research and the science classroom*. Invited talk to the Maryland State Science Teachers of the Maryland Virtual High School, Silver Spring, MD.

+ Azevedo, R. (2000, October-b). *The role of computer-based modeling and visualization tools to enhance scientific reasoning*. Interactive presentation at an NSF and U.S. Dept. of Education's Workshop to Integrate Computer-Based Modeling and Scientific Visualization into Teacher Educational Programs, Arlington, VA.

[+] Azevedo, R., & Verona, M. E. (2000, October). *Using RiverWeb to foster learners' scientific reasoning: Preliminary analysis*. Paper presented at the annual meeting of the Center for Innovative Learning Technologies, McLean, VA.

[*] Azevedo, R. (1999, July). *Novice-expert differences in radiology: Implications for the computerized knowledge-based training*. Paper presented at a workshop on Medical Image Tutoring at AI-ED99—The 9th International Conference on Artificial Intelligence in Education, Le Mans, France.

[*] Azevedo, R., & Faremo, S. (1999, July). *Novice-expert differences in radiology: Extending the RadTutor to foster medical students' diagnostic skills*. Paper presented at AI-ED99—The 9th International Conference on Artificial Intelligence in Education, Le Mans, France.

[*] Azevedo, R., & Lajoie, S. P. (1998, August). *The cognitive basis for the design of a mammography interpretation tutor*. Paper presented at the annual meeting of the Cognitive Science Society, Madison, WI.

[*] Azevedo, R. (1998, June). *Expert problem solving in mammogram interpretation: A visual cognitive task*. Paper presented at the annual meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Ottawa, Canada.

[*] Azevedo, R., Lajoie, S. P., Desaulniers, M., Fleiszer, D., & Bret, P. M. (1997, August). *RadTutor: The theoretical and empirical basis for the design of a mammography interpretation tutor*. Paper presented at AI-ED 97—The 8th World Conference on Artificial Intelligence and Education, Kobe, Japan.

[*] Lajoie, S. P., Azevedo, R., & Fleiszer, D. (1997, March). *Assessing learning within a high information flow environment*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

[*] Azevedo, R., & Lajoie, S. P. (1996, August). *Complex clinical decision making in an ill-structured task*. Paper presented at the 26th International Congress of Psychology, Montréal, Canada.

[*] Rahilly, T. J., Saroyan, A., Greer, J., Lajoie, S. P., Breuleux, A., Azevedo, R., & Fleiszer, D. (1996, July). *The InforMed professor: Clinical instruction of breast disease diagnosis and management*. Paper presented at the Third International Conference on Computer Aided Learning and Instruction in Science and Engineering (CALISE), Donostia - San Sebastian, Spain.

[*] Azevedo, R., Lajoie, S. P., & Fleiszer, D. M. (1996, June). *A computerized training environment to facilitate complex clinical decision-making*. Paper presented at the First International Conference on Telemedicine, Medicine 2001, Montréal, Canada.

[*] Azevedo, R., Lajoie, S. P., O'Donovan, & Bret, P. M. (1996, June). *RadTutor: The theoretical and empirical basis for the design of a chest x-ray computerized training environment*. Paper presented at the First International Conference on Telemedicine, Medicine 2001, Montréal, Canada.

[*] Azevedo, R., Lajoie, S. P., Breuleux, A., & Bret, P. M. (1995, June). *Radiological expertise and computer-based learning environments: Research and implementation issues*. Paper presented at the annual meeting of the Canadian Society for the Study of Education, Université du Québec à Montréal, Canada.

[*] Azevedo, R. (1995, April). *Multimedia research: Learning, design and development issues*. Paper presented at the annual meeting of the Société pour la Promotion de

l'Enseignement de l'Anglais (Langue seconde) au Québec, Collège de Bois-de-Boulogne, Montréal, Canada.

* Azevedo, R., Shaw, S. G., & Bret, P. M. (1995, April). *The effectiveness of computer-based hypermedia teaching modules for radiology residents*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (ERIC Document Reproduction Service No. ED 385 187)

* Azevedo, R., Breuleux, A., & Lajoie, S. P. (1994, July). *The study of radiological expertise and its implications for the design of computer-based radiology teaching environments*. Paper presented at the annual symposium of the Educational Technology Conference, Montréal, Canada.

* Azevedo, R., & Bernard, R. (1994, June). *The effects of computer-presented feedback on learning from computer-based instruction*. Paper presented at the annual meeting of the Association for Media and Technology in Education in Canada, University of Lethbridge, Canada.

* Azevedo, R., Breuleux, A., & Bret, P. (1994, May). *L'approche cognitive pour le dévelopment d'un environnement d'enseignement en radiologie*. Paper presented at the Colloque du CIPTE dans le cadre du 62e congres de l'ACFAS, Université de Montréal, Canada.

* Azevedo, R., Breuleux, A., & Bret, P. (1994, April). *Le développement d'un environnement multimedia pour l'enseignement en radiologie*. Paper presented at the Colloque sur les Applications Pédagogiques de l'ordinateur dans l'enseignement supérieur, Université Laval, Canada.

* Shaw, S. G., & Azevedo, R. (1993, June). *A report on the development and evaluation of computer-based multimedia training for radiology*. Paper presented at the annual meeting of the Association for Media and Technology in Education in Canada, Windsor, Canada.

* Shaw, S. G., Azevedo, R., Dubreuil, B., & Bret, P. (1993, June). *Multimedia modules for radiology with some preliminary findings*. Paper presented at the World Conference on Educational Multimedia and Hypermedia, Orlando, FL.

* Azevedo, R., & Bernard, R. M. (1992, May). *A review of the literature on the effects of feedback on learning in computer-based instruction*. Paper presented at the Seventh Canadian Symposium on Instructional Technology, Montréal, Canada.

* Azevedo, R., Shaw, S. G., Mulema, D., Poirier, A., & Wells, D. (1992, May). *Design and development considerations in producing courseware with TenCORE Authoring Language*. Paper presented at the Seventh Canadian Symposium on Instructional Technology, Montréal, Canada.

Poster Presentations

* Dever, D. A., Cloude, E. B., & Azevedo, R. (2020, August). *Does prior knowledge influence learners' cognitive and metacognitive strategies over time during game-based learning?* Poster to be presented at the annual meeting of the Cognitive Science Society, Toronto, Canada.

* Cloude, E. B., Azevedo, R., & Wortha, F. (2020, April). *Emotions Change Over Time: Metacognitive and Cognitive Processes and Learning With Intelligent Tutoring Systems*. Structured Poster to be presented at the annual meeting of the American Educational Research Association (AERA), San Francisco, US.

* Cloude, E. B., Wiedbusch, M., Wortha, F., Azevedo, R., & Lester, J. (2020, April). *Do Scientific-reasoning Processes Predict Motivation during Game-based Learning using Multichannel Data?* Poster to be presented at the annual meeting of the American Educational Research Association (AERA), San Francisco, US

* Dever, D. A., Lester, J., & Azevedo, R. (2020, April). *Game mechanics and metacognitive monitoring use within game-based learning environments*. Roundtable to be presented at the annual meeting of the American Educational Research Association (AERA), San Francisco, CA.

* Dever, D. A., Lester, J., & Azevedo, R. (2020, April). *The influence of autonomy on learners' affective states during reading within a game-based learning environment*. Poster to be presented at the annual meeting of the American Educational Research Association (AERA), San Francisco, CA.

* Wiedbusch, M., Dever, D., & Azevedo, R. (2020, April). *Can multimedia environments support emerging self-regulatory skills by examining eye-tracking and performance measures over time?* Paper submitted to the annual meeting of the American Educational Research Association (AERA), San Francisco, California, USA.

* Cloude, E. B., Taub, M., Lester, J., & Azevedo. R. (2019, June). *The role of achievement goal orientation on metacognitive process use in game-based learning*. Poster presented at the annual meeting of International Artificial Intelligence in Education Society, Chicago, IL.

* Dever, D., Wiedbusch, M., & Azevedo. R. (2019, June). *Learners' gaze behaviors and metacognitive judgments with an agent-based multimedia environment*. Poster presented at the annual meeting of International Artificial Intelligence in Education Society, Chicago, IL.

* Cloude, E., Taub, M., Price, M., Lester, J., Mudrick, V., & Azevedo, R., (2019, April). *Can eye-gaze behaviors predict self-reported intrinsic motivation scores during game-based learning?* Paper presented at the annual meeting of the American Educational Research Association, Toronto, Ontario, Canada.

* Azevedo. R., Mudrick, N. V., Taub, M., Lester, J., Taylor, R., Sawyer, R., Culberston, K., & Roberts, C. (2018, June). *MetaMentor: A system designed to study, teach, train, and foster self-regulated learning for students and experts using their multimodal data visualizations*. Poster presented at the 14th International Conference on Intelligent Tutoring Systems (ITS 2018), Montréal, Quebec, Canada.

[**Winner of the Best Conference Poster Award**]

* Harley, J., Bouchet, F., & Azevedo, R. (2018, June). *Examining how students' typical studying emotions relate to those experienced while studying with an ITS*. Poster to be presented at the 14th International Conference on Intelligent Tutoring Systems (ITS 2018), Montréal, Quebec, Canada.

* Sawyer, R., Mudrick, N. V., Azevedo, R., & Lester, J. (June, 2018). *Impact of learner-centered affective dynamics on metacognitive judgements and performance in adaptive learning environments*. Poster presented at the 19th biennial meeting of the International Conference on Artificial Intelligence and Education, London, UK.

* Bradbury, A. E., Taub, M., & Azevedo, R. (2017, July). *The effects of autonomy on emotions and learning in game-based learning environments*. Poster presented at the 39th Annual Meeting of the Cognitive Science Society, London, UK.

[*] Mudrick, N. V., Taub, M., & Azevedo, R. (2017, July). *Do accurate metacognitive judgments predict successful multimedia learning?* Poster presented at the 39th Annual Meeting of the Cognitive Science Society, London, UK.

[*] Bannert, M., Järvelä, S., Azevedo, R., Molenaar, I., & Gašević, D. (2017, March). Relevance of learning analytics to measure and support students' learning in adaptive educational technologies. Poster presented at the annual meeting of 7th International Conference on Learning Analytics & Knowledge Conference, Vancouver, BC, Canada.

[*] Tudela, C. A., Azevedo, R., & Grafsgaard, J. F. (2016, November). *Utilizing heart rate variability to assess the link between student learning and intelligent tutoring systems*. Poster presented at the annual meeting of the State of North Carolina Undergraduate Research and Creativity Symposium, Raleigh, NC.

[*] Kielstra, J., Taub, M., Azevedo, R., & Molenaar, I. (2016, August). *Socially shared regulated learning with MetaTutor*. Poster to be presented at the biennial meeting of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Nijmegen, The Netherlands.

[*] Taub, M., & Azevedo, R. (2016, June). *Using multi-channel data to assess, understand, and support affect and metacognition with intelligent tutoring systems?* Poster presented at the 13th International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia.

[*] Papaionnou, N., Landis, R. S., Carter, C., Azevedo, R., Bouchet, F., & Harley, J. (2016, June). *Computer-based learning environments in organizational training: Impact of learning environment and personality*. Poster presented at the annual meeting of the Association for Psychological Science, Chicago, IL.

* Azevedo, R., Johnson, A., & Burkett, C. (2015, July). *Does training of cognitive and metacognitive regulatory processes enhance learning and deployment of cognitive and metacognitive processes with hypermedia?* Poster presented at the 37th Annual Meeting of the Cognitive Science Society, Pasadena, CA.

* Mudrick, M., Azevedo, R., Taub, M., & Bouchet, F. (2015, July). *Does the frequency of pedagogical agent intervention relate to learners' self-reported boredom while using multiagent intelligent tutoring systems?* Poster presented at the 37th Annual Meeting of the Cognitive Science Society, Pasadena, CA.

* Taub, M., Farnsworth, J., & Azevedo, R. (2015, July). *Does prior knowledge reveal cognitive and metacognitive processes during learning with a hypermedia-learning system based on eye-tracking data?* Poster presented at the 37th Annual Meeting of the Cognitive Science Society, Pasadena, CA.

* Yang, W., & Azevedo, R. (2014). *Gender differences and the impact of scaffolding on learning with a multi-agent intelligent system*. Poster presented at the 24th Annual Meeting of Canadian Society for Brain, Behaviour, and Cognitive Science, Toronto, Canada.

[*] Harley, J., & Azevedo, R. (2014, June). *Understanding students' experience of adaptive vs. non-adaptive emotions during interactions with advanced agent-based learning environments*. Poster presented at the 12th International Conference on Intelligent Tutoring Systems (ITS 2014), Honolulu, HI.

[*] Meier, E., Pekrun, R., Sinatra, G., & Azevedo, R. (2013, August). *Epistemic emotions and learning strategies*. Poster presented at the 18th Biennial Meeting of the European Association for Research on Learning and Instruction (EARLI), Munich, Germany.

* Khosravifar, B., Azevedo, R., Feyzi-Behnagh, R., Bouchet, F., Harley, J., Duffy, M., Trevors, G., & Taub, M. (2013, April). *Using intelligent multi-agent systems to model and foster self-regulated learning: A theoretically-based approach using Markov decision process*. Poster presented at the annual meeting of the American Educational Research Association, San Francisco, CA. [**Recipient of the Best Poster Award from the Studying and Self-Regulated Learning Special Interest Group (SIG) of AERA**]

* Maymon, R., Hubbard, K., Rahimi, S., Hall, N. C., & Azevedo, R. (2013, April). *When technology fails: Efects of computer-related attributions and emotions on academic achievement*. Poster presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

* Maymon, R., Sverdlik, A., Bieg, M., Hall, N. C., & Azevedo, R. (2013, April). *Academic computing and gender: Differential effects on attributions and emotions in college students*. Poster presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

* Duffy, M., Muis, K., & Azevedo, R. (2012, June). *There's more to a great paper than a great idea: Examining relations between epistemic beliefs, achievement goals, and writing strategies*. Poster presented at the Canadian Psychological Association Convention, Halifax, Canada.

* Feyzi-Behnagh, R., & Azevedo, R. (2012, June). *The effectiveness of a pedagogical agent's immediate feedback on learners' metacognitive judgments during learning with and adaptive hypermedia system*. Poster presented at the 11th International Conference on Intelligent Tutoring Systems, Crete, Greece.

* Poitras, E., Duffy, M., Azevedo, R., & Lajoie, S. (2012, May). Issues and challenges in the measurement of self-regulatory processes across disciplines in the context of advanced learning technologies. Poster presented at the Canadian Society for the Study of Education Annual Conference, Waterloo, Canada.

* Feyzi-Behnagh, R., & Azevedo, R. (2012, April). *The role of immediate feedback on the accuracy of metacognitive judgments in an intelligent multi-agent hypermedia learning environment*. Poster presented at the annual meeting of the American Educational Research Association, Vancouver, Canada.

* Harley, J. M., Bouchet, F. M., & Azevedo, R. (2011, September). *They can talk, but can they teach? Examining learners' emotional responses to virtual agents' tutoring strategies*. Poster presented at 11th International Conference on Intelligent Virtual Agents (IVA 2011), Reykjavik, Iceland.

* Trevors, G., Duffy, M., & Azevedo, R. (2011, September). *Are intelligent pedagogical agents effective in fostering students' note-taking while learning with a multi-agent adaptive hypermedia environment?* Poster presented at the 11th International Conference on Intelligent Virtual Agents (IVA 2011), Reykjavik, Iceland.

* Burkett, C., & Azevedo, R. (2011, July). *Metacognitive judgments, study-time allocation and inferences: The effects of multimedia discrepancies*. Poster presented at the annual meeting of the Cognitive Science Society, Boston, MA.

* Chauncey, A., & Azevedo, R. (2010, May). *Knowing what you feel and feeling what you know: Can emotions affect metacognition, behavior, and performance during learning of complex science?* Poster presented at the annual meeting of the Association for Psychological Science, Boston, MA.

* Azevedo, R., Witherspoon, A., Lewis, G., & Siler, E. (2008, July). *The role of prior knowledge and system structure on self-regulated learning with hypermedia*. Poster presented at the 30th Annual Meeting of the Cognitive Science Society, Washington, DC.

* Witherspoon, A., & Azevedo, R. (2008, July). *The role of integration scaffolding in learners' self-regulated learning with multiple representations*. Poster presented at the 30th Annual Meeting of the Cognitive Science Society, Washington, DC.

* Witherspoon, A., Azevedo, R., & Lewis, G. (2008, July). *Adolescents' use of multiple representations of information in self-regulated and externally-regulated learning with hypermedia*. Poster presented at the 30th Annual Meeting of the Cognitive Science Society, Washington, DC.

* Jeon, M., & Azevedo, R. (2007, August). *Analyzing human tutorial dialogues for cohesion and coherence during hypermedia learning of a complex science topic*. Poster presented at the 29th Meeting of the Cognitive Science Society, Nashville, TN.

* Sullins, J., & Azevedo, R. (2007, August). *Developmental differences in self-regulated learning and question asking during learning with hypermedia*. Poster presented at the 29th Meeting of the Cognitive Science Society, Nashville, TN.

* Witherspoon, A., & Azevedo, R. (2007, August). *The effectiveness of modeling learners' motivation and self-regulated learning of science with hypermedia*. Poster presented at the 29th Meeting of the Cognitive Science Society, Nashville, TN.

* Azevedo, R., Witherspoon, A., Graesser, A., McNamara, D., Chauncey, A., Siler, E., Cai, Z., Rus, V., & Lintean, M. (2007, July). *MetaTutor: Analyzing self-regulated learning in a tutoring system for biology*. Poster presented at the 14th International Conference on Artificial Intelligence in Education, Brighton, England.

* Azevedo, R., Witherspoon, A., Baker, S., Greene, J. A., Moos, D. C., Sullins, J., Trousdale, A., & Scott, J. (2007, July). *Do various self-regulatory processes predict different learning outcomes with hypermedia?* Poster presented at the 13th International Conference on Artificial Intelligence in Education, Los Angeles, CA.

* Godbole-Chaudhuri, P., Winters, F. I., Azevedo, R., & Hofman, N. (2006, June). *Help-seeking behavior and learning with hypermedia*. Poster presented at the 7th International Conference of the Learning Sciences, Bloomington, IN.

* Moos, D. C., & Azevedo, R. (2006, April). *Self-regulated learning with hypermedia: The role of prior knowledge*. Poster presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

* Azevedo, R. (2004, June). *How does adaptive scaffolding facilitate high school students' ability to regulate their learning with hypermedia?* Poster presented at the 6th International Conference of the Learning Sciences, Santa Monica, CA.

* Azevedo, R., Cromley, J. G., Winters, F. I., Moos, D. C., Levin, D. M., & Fried, D. (2004, April). *Adaptive scaffolding and self-regulated learning from hypermedia: A developmental study*. Poster presented at the annual meeting of the American Educational Research Association, San Diego, CA.

* Cromley, J. G., & Azevedo, R. (2004, April-a). *Testing the fit of three models of reading comprehension with a sample of 9th grade students*. Poster presented at the annual meeting of the American Educational Research Association, San Diego, CA.

* Cromley, J. G., & Azevedo, R. (2004, April-b). *Using think-aloud data to illuminate a model of high school reading comprehension*. Poster presented at the annual meeting of the American Educational Research Association, San Diego, CA.

* Winters, F. I., Azevedo, R., & Levin, D. M. (2004, April). *How do high-school students regulate their learning when using a computer-based environment to collaboratively engage in inquiry?* Poster presented at the annual meeting of the American Educational Research Association, San Diego, CA.

* Azevedo, R. (1999, April). *Expertise in radiology: Accounting for the evidence and implications for instruction*. Poster presented at the annual meeting of the American Educational Research Association, Montréal, Canada. (ERIC Document Reproduction Service No. ED 432 183)

* Azevedo, R. (1998, August). *Expert problem solving in a visual medical domain*. Poster presented at the annual meeting of the Cognitive Science Society, Madison, WI.

* Azevedo, R., Lajoie, S. P., Desaulniers, M., & Fleiszer, D. (1997, August). *Radiological expertise and the effects of perceptual scaffolding on the diagnosis of mammograms*. Poster presented at the annual meeting of the Cognitive Science Society, San Francisco, CA.

* Azevedo, R., Lajoie, S. P., & Bret, P. M. (1996, August-a). *Instructional scaffolding during medical decision making*. Poster presented at the 26th International Congress of Psychology, Montréal, Canada.

* Azevedo, R., Lajoie, S. P., & Bret, P. M. (1996, August-b). *Tutoring complex visual concepts in radiology*. Poster presented at the 26th International Congress of Psychology, Montréal, Canada.

* Azevedo, R., & Bernard, R. (1995, April). *The effects of computer-presented feedback on learning from computer-based instruction: A meta-analysis*. Poster presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (ERIC Document Reproduction Service No. ED 385 235)

Design, Development, and Testing of Advanced Learning Technologies (ALTs)

2019–present **Future Worlds**
Interdisciplinary project (PI: James Lester; Co-PI: Roger Azevedo) is prototype game-based learning environment about environmental sustainability for middle-school science. Learners solve environmental problem scenarios and explore the impacts of alternate environmental decisions as they learn to engage in complex problem solving and reflection. Funded by the National Science Foundation (NSF).

2018–present **MetaMentor: Interactive System to Study Multimodal Human Data**
Interdisciplinary project (PI: Roger Azevedo; Co-PI: James Lester) involving the design, development, and evaluation of an interactive system designed to study, teach, train, and foster self-regulated learning (SRL) for students and domain experts using their multimodal data visualizations while they solve complex science problems using multimedia materials. Funded by the National Science Foundation (NSF).

2017–present **Crystal Island: REFLECT**
Interdisciplinary project (PI: James Lester; Co- PI: Roger Azevedo) involving the design, development, and evaluation of an serious game for middle school students that emphasizes the role of reflection prompt to enhance students' self-regulated learning during STEM learning. Funded by the National Science Foundation (NSF).

2017–present **MetaDash: Intelligent Teacher Dashboard for Self-Regulated Learning**
Interdisciplinary project (PI: Roger Azevedo; Co-PIs: Min Chi and Soonhye Park) involving the design, development, and evaluation of an intelligent teacher dashboard to model, trigger, and support the instructional decision-making in the classroom. Funded by the National Science Foundation (NSF).

2017–2018 **Virtual Reality System for Photosynthesis**
Interdisciplinary project (PI: Roger Azevedo) with educational (Cary Academy, Raleigh, NC) and industry partners (LUCID DREAM, Durham, NC) involving the design, development, and evaluation of a virtual reality-based system to teach 9th grade students about photosynthesis. Funded by the Center for Curriculum Redesign (CCR).

2014–2018 **MetaTutor: Intelligent Virtual Humans**
Interdisciplinary project (PI: Roger Azevedo; Co-PI: James Lester) involving the design, development, and evaluation of an intelligent adaptive hypermedia system using intelligent virtual humans to model, trigger, and support the deployment of the key cognitive, metacognitive, and affective self-regulatory enhance STEM learning on college student. Funded by the National Science Foundation (NSF).

2014–present **Crystal Island: A Serious Game for Self-Regulation during STEM Learning**
Interdisciplinary project (PI: Roger Azevedo; Co- PI: James Lester) involving the design, development, and evaluation of an serious game for college students that emphasizes the role of self-regulated learning and scientific reasoning during STEM learning. Funded by the Social Sciences and Humanities Research Council of Canada (SSHRC).

2012–2015 **SimSelf**
Interdisciplinary project (PI: Dr. Gautam Biswas, Vanderbilt University) involving the design, development, and evaluation of an intelligent, multiagent system to model, scaffold, and foster middle-school students' complex problem solving in science. Funded by the Institute of Education Sciences (IES).

2009–2013 **SlideTutor**
Interdisciplinary project (PI: Dr. Rebecca Crowley, University of Pittsburgh) involving the design, development, and evaluation of an intelligent tutoring system designed to train pathology residents to improve their diagnostic accuracy by training them to deploy key cognitive and metacognitive processes during problem solving. Funded by the National Institutes of Health (NIH).

2006–present **MetaTutor**
Interdisciplinary project (PI: Roger Azevedo) involving the design, development, and evaluation of a web-based intelligent adaptive hypermedia system to (1) model key self-regulatory processes to foster students' understanding of science

and (2) provide adaptive scaffolding during learning about complex science topics. Funded by the National Science Foundation (NSF), the Social Sciences and Humanities Research Council of Canada (SSHRC), and the Natural Sciences and Engineering Research Council of Canada (NSERC).

2002–2006 **CircSysWeb**
Interdisciplinary project (PI: Roger Azevedo) involving the design, development, and evaluation of a web-based research tool and learning environment to study and foster students' self-regulated learning about the circulatory system. Funded by the National Science Foundation (NSF).

1999–2001 **Building Learning with Technology (BLT)**
Web-based learning environment to train pre-service and in-service teachers, and graduate students how to use computers as cognitive tools to enhance students' learning.

1997–1999 **RadTutor I and II**
Prototype intelligent tutoring system to train radiology residents to interpret mammograms.

1996–1997 **SICUN (Intelligent Tutoring System for a Surgical Intensive Care Unit)**
Member of an interdisciplinary team responsible for the design and development of an intelligent tutoring system to train nurses in a surgical intensive care unit to diagnose critical care patients.

1993–1995 **Hypermedia Radiology Teaching Modules**
Member of an interdisciplinary team responsible for the design and development of a series of hypermedia modules to train radiology residents.

Grants and Contracts

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under review Principal Investigator, *Empathy training for clinicians using immersive virtual reality to reduce health disparities while caring for acutely ill children of Spanish-speaking minorities*—**National Institutes of Health**. Co-PIs Ryan McMahan and Desiree Diaz (University of Central Florida) and Co-PIs Madelyn Kahana and Shiva Kalidindi (Nemours Children's Hospital). $2,208,601.

under review Co-Principal Investigator, *Collaborative Research: Advancing Quantum Education and Workforce Development through "In the Wild" Virtual Reality*—**National Science Foundation**. PI Ryan McMahan (University of Central Florida) and Co-PI Michael Kolodrubetz (University Texas, Dallas). $642,166.

under review Principal Investigator, *Augmenting Health care Professionals' Training, Expertise Development, and Diagnostic Reasoning with AI-based Immersive Technologies in Telehelath*—**National Science Foundation**. Co-PIs (Varadraj Gurupur, Mark Neider, Mindy Shoss, and Dario Torre (University of Central Florida). $150,000.

under review Principal Investigator, *Immersive Virtual Empathy Training of Physicians, Patients, and Their Families with Intelligent Immersive Technologies*—**National Science Foundation**. Co-PIs (Mindi Anderson, Beborah Beidel, Ivan Garibay, and Ryan McMahan (University of Central Florida). $150,000.

under review Co-Principal Investigator, *Investigating the reduction of risk factors and caregiver burden using assistive smart technologies for caregivers of patients suffering from dementia*—**National Science Foundation**. PI Varadraj Gurupur (University of Central Florida) and Co-PIs Adam Golden, Christian King, and Tracy Wharton (University of Central Florida). $150,000.

under review Principal Investigator, *AI Institute: Developing Future Human-Machine Collaboration in Extended Reality*—**National Science Foundation**. Co-PIs Mayank Goel (Carnegie Mellon University), James Gross (Stanford University), Mary Helen Immordino-Yang (University of Southern California), and Benjamin Lok (University of Florida). $20,000,000.

under review Principal Investigator, *Using Teachers' and Virtual Students' Multimodal Self-Regulatory Data to Augment their Self-Regulatory Competencies in an Immersive and Intelligent Virtual System*—**National Science Foundation**. Co-PIs Sarah Bush, Lisa Dieker, and Charles Hughes (University of Central Florida). $1,475,720

under review Co-Principal Investigator, *Collaborative Research: Transforming Manufacturing Education with Artificial Intelligence*—**National Science Foundation**. PI Dazhong Wu (University of Central Florida) and Co-PIs (Yuebin Guo (Rutgers University) and Binil Starly (North Carolina State University). $1,194,997

under review Co-Principal Investigator, *Collaborative Research: Developing Self-Regulated Learners with Narrative-Driven Pedagogical Agents*—**National Science Foundation**. PI (James Lester) and Co-PIs (Michelle Taub (University of Central Florida) and Jonathan Rowe (North Carolina State University). $1,220,000.

under review Principal Investigator, Collaborative Research: Scaffolding Metacognition using Open Learning Models during Game-Based Learning in Science—**National Science Foundation**. Co-PIs (James Lester) (North Carolina State University), (Michelle Taub (University of Central Florida) and Jonathan Rowe (North Carolina State University). $780,000.

under review Principal Investigator, *Collaborative Research: Scaffolding Students' Self-Regulated Learning in Marine Science Using Virtual Reality*—**National Science Foundation**. Co-PIs Kristy Lewis (University of Central Florida), Gautam Biswas and Robert Bodenheimer (Vanderbilt University). $992,337.

under review Principal Investigator, *Augmenting Human Learning with Intelligent Virtual Humans Capable of Embodied Scaffolding using Real-Time Multimodal Data during Complex Problem Solving*—**National Science Foundation**. Co-PIs Ryan McMahan, Christopher Randles, and Michelle Taub, (University of Central Florida). $1,501,373.

2020-present Principal Investigator, *STEM Teachers' Capacity to Teach Self-Regulated Learning: Effectiveness of Extended Reality*—**European Association for Research on Learning and Instruction**. Co-PIs Sanna Järvelä (University of Oulu), Tova Michalsky (Bar-Ilan University), Engin Ader (Bogazici University), and Alexander Gröschner (Friedrich Schiller University of Jena). $25,000 Euros.

2020-present Principal Investigator, *Symbiosis: The Center for Augmented Intelligent Human-Machine Symbiosis for Solving Societal Grand Challenges*—**University of Central Florida**. Co-PIs Damla Turgut, Peter Hancock, Mubarak Shah, and Joseph LaViola. $40,000.

2020-present Co-Principal Investigator, *The Science of Learning and Augmented Intelligence in Consumer Decision Making!*—**University of Central Florida**. PI is David Luna (University of Central Florida). $15,000.

2019-present Co-Principal Investigator, *Retraining Built Environment Retrofitting Problem Solving Skills with Augmented Reality*—**National Science Foundation**. PI Joseph Kider (University of Central Florida) and co-PIs Joseph LaViola and Lori Walters (University of Central Florida). $749,998.

2019 Principal Investigator, *MetaLearn: Augmenting Humans' and Machines' Ability to Understand and Reason with Real-Time Multimodal Multichannel Human Learning Data*—**National Science Foundation**.

2019-present Principal Investigator, *Tangible Landscapes for Augmenting Self-Regulated Learning in STEM*—**University of Central Florida**. $38,000.

2019-present Co-Principal Investigator, *The Role of Self-Regulatory processes in medical Students' Diagnostic Accuracy and Performance with eCResME*—**University of Central Florida, Faculty of Medicine, Department of Internal Medicine**. PI Caridad Hernandez and Co-PIs Analia Castiglioni, Jeffrey LaRochelle, and Anya Andrews (University of Central Florida). $19,985.

2018-present Co-Principal Investigator, *Supporting Student Planning with Open Learner Models in Middle Grades Science*—**National Science Foundation**. PI James Lester (NCSU). $1,499,183.

2018-present Co-Principal Investigator, *The Role of Emotions in Technology-Rich Environments in the STEM Fields*—Social Sciences and Humanities Research Council of Canada. Pi (Susanne P. Lajoie, McGill University) and co-PI (Reinhard Pekrun, University of Munich). $23,440.

2017-present Co-Principal Investigator, *Diagnostic Inventories of Cognition in Education*—**Institute of Education Sciences (Goal 5)**. PI Laine Bradshaw (University of Georgia) and Co-PI Holylynne Lee (NCSU), Jessica Masters and Lisa Famularo (Research Matters) $1,399,999.

2017-prsent Principal Investigator, *Using Real-Time Multichannel Self-Regulated Learning Data to Enhance Student Learning and Teachers' Decision-Making with MetaDash*—**National Science Foundation**. Co-PIs Min Chi and Soonhye Park (North Carolina State University). $1,499,792.

2017-present Co-Principal Investigator, *REFLECT: Improving Science Problem Solving with Adaptive Game-Based Reflection Tools*—**National Science Foundation**. PI James Lester (North Carolina State University). $1,499,498.

2017-2020 Principal Investigator, *Convergence HTF: Collaborative: Workshop on Interdisciplinary Research about Multimodal Human Learning Data during Human-Machine Interactions*—**National Science Foundation**. Co-PI Gautam Biswas (Vanderbilt University). $100,000.

2017-2018 Principal Investigator, *Measuring Metacognition in Computational Thinking Problems across STEM and non-STEM disciplines using virtual reality*—**Center for Curriculum Redesign (CCR)**. Collaborators Cary Academy and Lucid Dream. $50,000.

2015-2020 Collaborator, *L2eLearn—Learning to eLearn*—**European Union Program for Lifelong Learning**. PI Jose Carlos Nunez-Perez (University of Oviedo, Spain) and

collaborators Mathias Gruenke (University of Cologne, Germany), Ioannis Agaliotis (University of Macedonia, Greece), Pedro Rosario (University of Minho, Portugal), and Daijela Milosevic (University of Kragujevac, Serbia). 505,001 €.

2014–2019 Principal Investigator, *CORE: The Effectiveness of Intelligent Virtual Humans in Facilitating Self-Regulated Learning in STEM with MetaTutor*—**National Science Foundation**. Co-PI James Lester (North Carolina State University). $1,350,535.

2013–2020 Co-Principal Investigator, *NeuroLab*—**Canadian Foundation for Innovation**. PI is Julien Mercier (Universite de Montréal) and Co-PIs are Patrick Charland, Dave Saint-Amour, Philip Abrami, Armando Bertone, Isabelle Gauvin, Roland Grabner, Catherine Herba, Susanne Lajoie, Line Laplante, Pierre-Majorique Léger, Françoise Maheu, Steve Masson, Hélène Poissant, Patrice Potvin, Martin Riopel, Rushen Shi, Isabelle Soulières, and Sylvain Sénécal. $830,308.

2013–2019 Principal Investigator, *Transforming Teacher Training and Improving Students' Academic Achievement with Advanced Digital Technologies*—**Partnership Development Grant—Social Sciences and Humanities Research Council of Canada (SSHRC)**. Co-PIs Susanne Lajoie and Anila Asghar (McGill University), Vivek Venkatesh (Concordia University), and collaborators Elizabeth Charles (Dawson College), Françoys Labonté, and Claude Chapdelaine (Centre de recherche informatique de Montréal), Renne Marqui (EXO U), Philip Winne (Simon Fraser University), and Thérèse Laferrière (Université de Laval). $190,123.

2013–2014 Principal Investigator, *Affectively-Responsive Multi-Agent Adaptive Learning Environments*—**Individual Discovery Grant—Natural Sciences and Engineering Research Council of Canada (NSERC)**. $150,000.

2013–2014 Principal Investigator, *The Impact of Intelligent Virtual Humans'Emotional Expressions in Fostering Learners' Self-Regulation with Multi-Agent Technology Systems*—**McGill Internal Social Sciences and Humanities Development Grant**. $2,000.

2012–2014 Principal Investigator, *The Impact of Emotions on Medical Decision-Making in a Dynamic Multi-Agent Training Simulation Environment*—**McGill Internal Collaborative Research Development Fund**. Co-PIs are Jeffrey Wiseman, Kevin Lachapelle, Linda Crelinsten, Ronald Gottesman, and Farhan Bhanji (McGill University and MUHC). $15,000.

2012–2016 Co-Principal Investigator, *SimSelf: A Simulation Environment Designed to Model and Scaffold Learners' Self-Regulatory Skills to Optimize Complex Science Learning*—**Institute of Education Sciences (Goal 2)**. PI Gautam Biswas (Vanderbilt University). $1,218,424.

2012–present Co-Principal Investigator, *Learning Environments across Disciplines (LEADS): Supporting Technology Rich Learning across Disciplines*—**Partnership Grants Program—Social Sciences and Humanities Research Council of Canada (SSHRC)**. PI is Susanne Lajoie (McGill University) and Co-PIs Kevin Kee (Brock University), Valerie Shute (Florida State University), Reinhard Pekrun (University of Munich), Krista Muis (McGill University), Jeffrey Wiseman (McGill University), James Lester (North Carolina State University), Kevin Lachapelle (McGill University), Cindy Hmelo-Silver (Indiana University), Claude Frasson (University of Montreal), Jacqueline Leighton (University of Alberta), Robert Stupnisky (University

of North Dakota), Rafael Calvo (University of Sydney), and Eunice Jang (University of Toronto). $2,499,950.

2012–2013 Principal Investigator, *The Role of Emotions on Medical Decision-Making in a Dynamic Multi-Agent Simulation Environment*—**McGill Internal SSHRC to CIHR Grant**. $14,600.

2011–2013 Principal Investigator, *Senior Canada Research Chair (Tier 1)*—**Canada Research Chairs and the Social Science and Humanities Research Council of Canada—Laboratory for the Study of Metacognition and Advanced Learning Technologies**. $1,400,000.

2011–2013 Co-Applicant, *L'appel à la technologie et à l'innovation pour parfaire l'enseignement des sciences*—**Programme de collaboration universitiés-collèges**—Team includes Robert Bracewell (McGill University), Elizabeth S. Charles (College Dawson), Nathaniel Lasry (College John Abbott), and Kevin Lenton (College Vanier). $389,200.

2011–2013 Principal Investigator, *Canada Research Chair (Tier 1) and CFI Leaders Opportunity Fund*—**McGill Center for Metacognition and Advanced Learning Technologies**. $446,938.

2011–2014 Principal Investigator, *Examining the Impact of Pedagogical Agents' Scaffolding on Students' Affect During Learning with Digital Media*—**Insight Development Grant—Social Sciences and Humanities Research Council of Canada (SSHRC)**. Co-PIs are Susanne Lajoie and Alenoush Saroyan (McGill University), and Cristina Conati (University of British Columbia). $75,000.

2011–2014 Co-Principal Investigator, *The Meta-Prof: A self-regulated learning approach to teaching development in higher education*—**Insight Development Grant—Social Sciences and Humanities Research Council of Canada (SSHRC)**. PI is Alenoush Saroyan (McGill University) and Co-PIs are Roger Azevedo and Susanne Lajoie (McGill University). $69,885.

2011–2014 Co-Principal Investigator, *Epistemic Beliefs and Emotions: Examining Their Roles in Self-Regulated Learning and Epistemic Change*—**Social Sciences and Humanities Research Council of Canada (SSHRC)**. PI is Krista Muis (McGill University) and Co-PIs are Reinhard Pekrun (University of Munich) and Gale Sinatra (University of Southern California). $185,000.

2011–2013 Co-Principal Investigator, *"I still haven't found what I'm looking for … ": Exploring the role of learner metacognition and academic self-regulation in the development of indexing tools for online learning environments*—**Concordia University Research Program**. PI is Vivek Venkatesh and Kamran Shaikh (Concordia University), Manu Kapur (Nanyang Technological University), and Rafaella Negretti (University of Stockholm). $15,000.

2010–2014 Principal Investigator, *Emerging Research—Empirical Research—Detecting, Tracking, and Modeling Cognitive, Affective, and Metacognitive Regulatory Processes to Optimize Learning with MetaTutor*—**National Science Foundation (REESE)**. Co-PIs are Ronald Landis (Illinois Institute of Technology) and Mohammed Yeasin (University of Memphis). $1,278,409.

2009–2012 Co-Principal Investigator, *NIH: RE: Computational Methods for Personalized and Adaptive Cognitive Training*—**National Institutes of Health.** PI is Rebecca Crowley (University of Pittsburgh Medical Center). $1,000,000.

2009–2010 Principal Investigator, *IIS: HCC: Student Support for the AIED 2009 Artificial Intelligence and Education Conference*—**National Science Foundation.** Co-PI is Arthur Graesser (University of Memphis). $21,600.

2008–2010 Principal Investigator, *SGER (Small Grant for Exploratory Research): Detecting, Identifying, and Analyzing Cognitive, Affective, Metacognitive, and Motivational (CAMM) States during Self-Regulated Learning with Hypermedia*—**National Science Foundation.** $69,996.

2007–2008 Principal Investigator, *CISE: Student Support for the Artificial Intelligence and Education Conference*—**National Science Foundation.** Co-PI is Arthur Graesser (University of Memphis). $24,500.

2006–2011 Principal Investigator, *Effectiveness of Pedagogical Agents in Regulating Students' Understanding of Science*—**National Science Foundation (REESE).** Co-PIs are Arthur Graesser (University of Memphis), Danielle McNamara (Arizona State University), and Vasile Rus (University of Memphis). $904,581.

2003–2007 Co-Principal Investigator, *The Learning Kit—Theory and Cognitive Tools to Enhance Learning Skills and Support Life-Long Learning*—**Social Sciences and Humanities Research Council of Canada (SSHRC).** PI is Phillip Winne (Simon Fraser University); other Co-PIs are Allyson Hadwin (University of Victoria), Vive Kumar (Simon Fraser University), Susanne Lajoie (McGill University), John Nesbit (Simon Fraser University), and Nancy Perry (University of British Columbia). $2,998,983 CAN, approx. $2,239,884 US.

2002–2008 Principal Investigator, *The Role of Self-Regulated Learning in Students' Understanding of Science with Hypermedia*—**National Science Foundation Early Career Award and Grant.** $615,663.

2002 Principal Investigator, *The Role of Self-Regulated Learning in Students' Learning of Complex Science Topics*—**University of Maryland, Office of Research and Graduate Studies.** $8,750.

2001–2004 Co-Principal Investigator, *A Curriculum in Networked Control Systems*—**National Science Foundation.** Principal Investigator is Dimitrios Hristu (University of Maryland, College Park); other Co-PI is William Levine (University of Maryland, College Park). $399,533.

2000–2001 Principal Investigator, *Using Computers as Cognitive Tools for Enhancing Student Learning*—Funded by a PT3 CATALYST grant from the **U.S. Department of Education.** Co-PI is Stan Bennett (University of Maryland). $65,301.

1998–1999 Principal Investigator, *Expert-Novice Differences in Mammography Interpretation*—**Social Science and Humanities Research Council of Canada Postdoctoral Fellowship Award.** $56,000.

1997–1998 Principal Investigator, Designed and developed the RadTutor (Version 1)—Funded by **McGill University's Medical Informatics Group** and **Faculty of Medicine.** $29,000.

Fellowships, Prizes, and Awards

2021	UCF Researchers in Top 2% of Their Field (see journal *PLOS Biology*)
2018	*Barry J. Zimmerman Award* for Outstanding Contributions to the fields of Studying and Self-Regulated Learning Research, from the American Educational Research Association's (AERA) Studying and Self-Regulated Learning (SSRL) Special Interest Group (SIG)
2017	2017 Outstanding International Research Collaboration Award sponsored by the Technology, Instruction, Cognition, and Learning SIG of the American Educational Research Association (AERA)
2017	*Best Short Paper Award*, 7th International Conference on Learning Analytics & Knowledge (LAK 2017), Vancouver, Canada
2016	*Best Paper Award*, 16th International Conference on Intelligent Virtual Agents (IVA 2016), Los Angeles, CA
2016	*Best Paper Award*, 13th International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia
2015	*Outstanding Researcher Award*, College of Humanities and Social Sciences, North Carolina State University
2011	*Endowed Senior Canada Research Chair (Tier 1)*, Canada Research Chairs Program
2009	*Fellow, American Psychological Association (Division 15)*
2008	*Outstanding Article of the Year,* Association for Educational Communications and Technology
2002–2008	*Early Career Award*, National Science Foundation
1998–2000	*Postdoctoral Fellowship*, Social Sciences and Humanities Research Council of Canada
1998	*Dean's Honor List for Outstanding Dissertation*—McGill University
1996–1997	*Doctoral Fellowship*, Social Sciences and Humanities Research Council of Canada
1994–1997	*Doctoral Fellowship*, Québec Ministry of Education, Industry, Science and Technology
1993–1996	*Doctoral Fellowship*, Québec Ministry for the Training of Young Researchers (FCAR)

Editorships, Editorial Boards, and Reviewing Activities

2021-present	Editorial Board, *Applied Cognitive Psychology*
2021-present	Ad-Hoc Reviewer, *Journal of Cognitive Psychology*
2020-present	Ad-Hoc Reviewer, *Journal of the Learning Sciences*
2020-present	Ad-Hoc Reviewer, *Behaviour & Information Technology*
2019-present	Editorial Board, *Metacognition and Learning*

2019-present Ad-Hoc Reviewer, *American Psychologist*
2019-present Ad-Hoc Reviewer, *British Journal of Educational Technology*
2017-present Editorial Board, *European Journal of Psychological Assessment*
2016-present Ad-Hoc Reviewer, *IEEE Transactions on Human-Machine Systems*
2016-present Ad-Hoc Reviewer, Interacting with Computers: The Interdisciplinary Journal of Human-Computer Interaction
2016-present Ad-Hoc Reviewer, *PLOS ONE*
2016-present Ad-Hoc Reviewer, *Psychology Learning and Teaching*
2016-present Ad-Hoc Reviewer, *The Spanish Journal of Psychology*
2016-present Ad-Hoc Reviewer, *American Educational Research Journal*
2016-present Ad-Hoc Reviewer, *Australian Journal of Education*
2015–present Editorial Board, *International Journal of Artificial Intelligence in Education*
2014–present Ad-Hoc Reviewer, *Computers in Human Behavior*
2014–present Ad-Hoc Reviewer, *Journal of Educational Data Mining*
2014–present Ad-Hoc Reviewer, *BCM Medical Education*
2012–2019 Editor-in-Chief, *Metacognition and Learning*
2012–2014 Editorial Board, *Educational Technology Research & Development (ETR&D)*
2012–present Ad-Hoc Reviewer, *IEEE Transactions on Learning Technologies*
2012–present Ad-Hoc Reviewer, *Technology, Instruction, Cognition and Learning (TICL)*
2011–present Editorial Board, *Psicothema*
2011–present Editorial Board, *Distance Education*
2011–present Ad-Hoc Reviewer, *Applied Cognitive Psychology*
2011–present Ad-Hoc Reviewer, *IEEE Transactions on Affective Computing*
2011–present Ad-Hoc Reviewer, *Journal of Ambient Intelligence and Humanized Computing*
2011 Associate Editor, *Metacognition and Learning*
2010–present Ad-Hoc Reviewer, *Cognitive Development*
2010–present Editorial Board, *Frontiers in Educational Psychology*
2010–2011 Editorial Board, *Journal of Educational Psychology*
2009–present Ad-Hoc Reviewer, *Cognitive Science*
2009–present Editorial Board, *Educational Psychology Review*
2009–present Ad-Hoc Reviewer, *IEEE Learning Technologies*
2008–2011 Editorial Board, *Metacognition and Learning*
2008–2010 Associate Editor, *Journal of Educational Psychology*
2008–2009 Ad-Hoc Reviewer, *Educational Psychology Review*
2007–present Editorial Board, *Educational Psychologist*
2007–present Ad-Hoc Reviewer, *Learning and Individual Differences*
2007–present Ad-Hoc Reviewer, *IEEE Intelligent Systems*
2006–present Ad-Hoc Reviewer, *Journal of Cognition and Development*
2006–present Ad-Hoc Reviewer, *Journal of Computer Assisted Learning*
2006–present Editorial Board, *Instructional Science*
2006–present Ad-Hoc Reviewer, *American Educational Research Journal*
2006–present Ad-Hoc Reviewer, *Discourse Processes*
2006–2009 Editorial Board, *Journal of Research in Science Teaching*
2006–2009 Editorial Board, *Journal of the Learning Sciences*
2004–2008 Editorial Board, *Contemporary Educational Psychology*
2004–present Ad-Hoc Reviewer, *Learning and Instruction: The Journal of the European Association for Research on Learning and Instruction*
2003–present Ad-Hoc Reviewer, *British Journal of Educational Psychology*
2003–present Ad-Hoc Reviewer, *Child Development*

2003–present Ad-Hoc Reviewer, *Cognition and Instruction*
2002–2007 Ad-Hoc Reviewer, *Educational Psychologist*
2001–2008 Ad-Hoc Reviewer, *Journal of Educational Psychology*
2001–2004 Ad-Hoc Reviewer, *Contemporary Educational Psychology*
2000–present Ad-Hoc Reviewer, *International Journal of Artificial Intelligence in Education*
2000–2005 Ad-Hoc Reviewer, *Instructional Science*
1995–present Ad-Hoc Reviewer, *Journal of Educational Computing Research*

Teaching, Mentoring, and Advising

Courses Taught at the University of Central Florida (2018-present)	**Semester**	**Enrollment**
EME 7980 Dissertation	Summer 2021	1
IDS 7919 Doctoral Research	Summer 2021	2
IDS 7500 Seminar In Education Research	Summer 2021	1
IDS 4906 Independent Study	Summer 2021	1
EME 6938 Special Topics: Theoretical Foundations of the Learning Sciences	Spring 2021	8
IDS 7500 Seminar In Education Research	Spring 2021	3
IDS 7500 Seminar In Education Research	Fall 2020	3
EME 6940 - CW62 Theory into Practice in Educational Technology	Summer 2020	3
IDS 6938 Special Topics: Metacognition	Spring 2020	6
EME 6908 Independent Study	Spring 2020	3
IDS 7501 Issues & Research in Education	Fall 2019	38
EME 6908 Independent Study	Fall 2019	3
EME 6908 Independent Study	Summer 2019	3
EME 6938 Special Topics: Theoretical Foundations of the Learning Sciences	Spring 2019	10
EME 6908 Independent Study	Spring 2019	4
EME 6908 Independent Study	Fall 2018	4

Courses Taught at North Carolina State University (2013–2018)	**Semester**	**Enrollment**
PSY 893 Dissertation Supervised Research	Spring 2018	4
PSY 499 Individual Study in Psychology	Spring 2018	2
PSY 420 Cognitive Processes	Spring 2018	48
PSY 893 Dissertation Supervised Research	Fall 2017	3
PSY 704 Learning and Motivation	Fall 2017	12
PSY 499 Individual Study in Psychology	Fall 2017	1
PSY 895 Directed Dissertation Research	Spring 2017	2
PSY 893 Dissertation Supervised Research	Spring 2017	2
PSY 499 Individual Study in Psychology	Spring 2017	5
PSY 420 Cognitive Processes	Spring 2017	47
PSY 895 Directed Dissertation Research	Fall 2016	2
PSY 893 Dissertation Supervised Research	Fall 2015	2
PSY 710 Special Topics in Psychology: Metacognition	Fall 2016	8
PSY 499 Individual Study in Psychology	Fall 2016	4

PSY 895 Directed Dissertation Research	Spring 2016	2
PSY 893 Dissertation Supervised Research	Spring 2016	1
PSY 499 Individual Study in Psychology	Spring 2016	2
PSY 420 Cognitive Processes	Spring 2016	20
PSY 895 Directed Dissertation Research	Fall 2015	1
PSY 893 Dissertation Supervised Research	Fall 2015	1
PSY 710 Special Topics in Psychology: Cognition and Learning Technologies	Fall 2015	7
PSY 680 Directed Study in Psychology	Fall 2015	2
PSY 499 Individual Study in Psychology	Fall 2015	2
PSY 893 Supervised Research	Spring 2015	1
PSY 695 Master's Thesis	Spring 2015	1
PSY 680 Directed Study in Psychology	Spring 2015	3
PSY 499 Individual Study in Psychology	Spring 2015	5
PSY 420 Cognitive Processes	Spring 2015	19
PSY 880 Directed Study in Psychology	Fall 2014	1
PSY 710 Special Topics in Psychology: Cognition and Learning Technologies	Fall 2014	16
PSY 680 Directed Study in Psychology	Fall 2014	4
PSY 499 Individual Study in Psychology	Fall 2014	3
PSY 499 Individual Study in Psychology	Summer 2014	2
PSY 880 Directed Study in Psychology	Spring 2014	1
PSY 693 Master's Supervised Research	Spring 2014	1
PSY 499 Individual Study in Psychology	Spring 2014	3
PSY 420 Cognitive Processes	Spring 2014	35
PSY 680 Directed Study in Psychology	Fall 2013	1
PSY 880 Directed Study in Psychology	Fall 2013	1

Courses Taught at the McGill University (2010–2013)	**Semester**	**Enrollment**
EDPE 705-707 Advanced Doctoral Seminar	Winter 2013	6
EDPD664 Expertise, Reasoning, and Problem Solving	Winter 2012	10
EDPE655 Learning Sciences Research Seminar	Fall 2011	8
EDPE 605 Research Methods	Winter 2011	13

Courses Taught at the University of Memphis (2006–2010)	**Semester**	**Enrollment**
PSYC 8620 Major Area Paper	Spring 2010	1
PSYC 7996 Thesis	Spring 2010	1
PSYC 7603 Research Practice in Experimental Psychology	Spring 2010	1
PSYC 4504 Directed Research (Honor's Thesis)	Spring 2010	2
PSYC 4503 Special Problems in Psychology	Spring 2010	1
PSYC 7996 Thesis	Fall 2009	1
PSYC 7603 Research Practice in Experimental Psychology	Fall 2009	1
PSYC 7207/8207 Developmental Psychology	Fall 2009	20
PSYC 7514/8514 COMP 7514/8514 Cognitive Science Seminar	Fall 2009	20
PSYC 4504 Directed Research (Honor's Thesis)	Fall 2009	1
PSYC 4503 Special Problems in Psychology	Fall 2009	1
PSYC 3010 Research and Statistics I	Fall 2009	30
PSYC 7603 Research Practice in Experimental Psychology	Spring 2009	1
PSYC 8620 Major Area Paper	Spring 2009	1

PSYC 3000 Introduction to Psychological Research	Spring 2009	28
PSYC 7207/8207 Developmental Psychology	Fall 2008	18
PSYC 7603 Research Practice in Experimental Psychology	Fall 2008	1
PSYC 7996 Thesis	Fall 2008	1
PSYC 3000 Introduction to Psychological Research	Fall 2008	25
PSYC 4503 Special Problems in Psychology	Fall 2008	1
PSYC 3000 Introduction to Psychological Research	Spring 2008	28
PSYC 4503 Special Problems in Psychology	Spring 2008	2
PSYC 7207/8207 Developmental Psychology	Spring 2008	7
PSYC 7603 Research Practice in Experimental Psychology	Spring 2008	2
PSYC 7618 Research Practice in Cognitive Psychology/Science	Spring 2008	2
PSYC 7996 Thesis	Spring 2008	2
PYSC 4503 Special Problems in Psychology	Fall 2007	2
PSYC 4305 Mind, Brain, and Intelligence	Fall 2007	13
PSYC 7312/8312 Qualitative Research in Psychology	Fall 2007	6
PSYC 7996 Thesis	Fall 2007	2
PYSC 4503 Special Problems in Psychology	Summer 2007	2
PSYC 3000 Introduction to Psychological Research	Spring 2007	24
COMP/PSYC 7514/8514 Cognitive Science Seminar	Spring 2007	9
PSYC 7603 Research Practice in Experimental Psychology	Spring 2007	2
PSYC 8603 Research Practice in Experimental Psychology	Spring 2007	1
PYSC 4503 Special Problems in Psychology	Fall 2006	2
PSYC 7603 Research Practice in Experimental Psychology	Fall 2006	2
PSYC 8603 Research Practice in Experimental Psychology	Fall 2006	1

Courses Taught at the University of Maryland (1999–2006)	**Semester**	**Enrollment**
EDHD899 Doctoral Dissertation Research	Fall 2006	3
EDHD692 Cognitive Basis of Instruction	Spring 2006	8
EDHD779B Self-Regulated Learning	Spring 2006	2
EDHD799 Master's Thesis Research	Spring 2006	1
EDHD888 Independent Study—Apprenticeship	Spring 2006	2
EDHD899 Doctoral Dissertation Research	Spring 2006	1
EDHD721 Cognitive Development and Learning: An Introduction	Fall 2005	21
EDHD285 Designing Multimedia Computer Environments for Learners	Fall 2005	21
EDHD888 Independent Study—Apprenticeship	Fall 2005	3
EDHD899 Doctoral Dissertation Research	Fall 2005	1
EDHD721 Cognitive Development and Learning: An Introduction	Spring 2005	19
EDHD779B Self-Regulated Learning	Spring 2005	12
EDHD888 Independent Study—Apprenticeship	Spring 2005	5
EDHD899 Doctoral Dissertation Research	Spring 2005	1
EDHD721 Cognitive Development and Learning: An Introduction	Fall 2004	22
EDHD888 Independent Study—Apprenticeship	Fall 2004	3
EDHD899 Doctoral Dissertation Research	Fall 2004	1
EDHD721 Learning Theory and the Educative Process	Spring 2004	18
EDHD779A Theoretical and Empirical Issues in the Design, Development and Evaluation of Adaptive Learning Technologies (Off-campus)	Spring 2004	15
EDHD888 Independent Study—Apprenticeship	Spring 2004	1

EDHD899 Doctoral Dissertation Research	Spring 2004	1
EDHD721 Learning Theory and the Educative Process	Fall 2003	22
EDHD779B Special Topics in Human Development: Self-Regulated Learning	Fall 2003	8
EDHD888 Independent Study—Apprenticeship	Fall 2003	1
EDHD899 Doctoral Dissertation Research	Fall 2003	1
EDHD721 Learning Theory and the Educative Process	Spring 2003	19
EDHD779A Theoretical and Empirical Issues in the Design, Development and Evaluation of Adaptive Learning Technologies (Off-campus)	Spring 2003	16
EDHD888 Independent Study—Apprenticeship	Spring 2003	4
EDHD899 Doctoral Dissertation Research	Spring 2003	1
EDHD420 Cognitive Development and Learning	Fall 2002	5
EDHD721 Learning Theory and the Educative Process	Fall 2002	18
EDHD888 Independent Study—Apprenticeship	Fall 2002	1
EDHD721 Learning Theory and the Educative Process	Spring 2002	15
EDHD779A Theoretical and Empirical Issues in the Design, Development and Evaluation of Adaptive Learning Technologies (Off-campus)	Spring 2002	19
EDHD888 Independent Study—Apprenticeship	Spring 2002	1
EDHD420 Cognitive Development and Learning	Fall 2001	11
EDHD721 Learning Theory and the Educative Process	Fall 2001	9
EDHD888 Independent Study—Apprenticeship	Fall 2001	1
EDHD460 Educational Psychology	Spring 2001	20
EDHD779A Theoretical and Empirical Issues in the Design, Development and Evaluation of Adaptive Learning Technologies (On-campus)	Spring 2001	2
EDHD888 Independent Study—Apprenticeship	Spring 2001	1
EDHD721 Learning Theory and the Educative Process	Fall 2000	10
EDHD798 Independent Research Study	Fall 2000	1
EDHD460 Educational Psychology	Spring 2000	23
EDHD779A Theoretical and Empirical Issues in the Design, Development and Evaluation of Adaptive Learning Technologies (On-campus)	Spring 2000	5
EDHD721 Learning Theory and the Educative Process	Fall 1999	9

Other Graduate and Undergraduate Courses Taught

1999 Carnegie Mellon University—Department of Psychology
PSYC85-211 Cognitive Psychology (100 students, undergraduate course)

1997 Universidad Nacional Autónoma de México—Department of Psychology
Cognition and Educational Computing (29 students, graduate course)

1996–1997 McGill University—Department of Educational Psychology
Research in Educational Computing (1 student, graduate course)
Educational Computer Applications (49 students, undergraduate course)

1995–1997 Concordia University—Department of Education
Introduction to Educational Computing (29 students, graduate course)
Cognition and Learning (10 students, graduate course)

Educational Psychology (49 students, undergraduate course)

Advising Activities

Doctoral Advisees (University of Central Florida)
Daryn Dever, Learning Sciences (2020-present)
Elizabeth Cloude, Learning Sciences (2020-present)
Megan Wiedbusch, Learning Sciences (2020-present)
Norman Juene, Learning Sciences (2020-present)

Master's Advisees (University of Central Florida)
Daryn Dever, Instructional Design & Technology (2018-2020)
Elizabeth Cloude, Instructional Design & Technology (2018-2020)
Megan Wiedbusch, Instructional Design & Technology (2018-2020)
Megan J. Price, Instructional Design & Technology (2018-2019)

Undergraduate Research Assistants (University of Central Florida—SMART Laboratory)
Ethan Ratliff, Psychology (2021-present)
Jeremy Bensusan, Philosophy & Cognitive Science (2021-present)
Nikki Ballelos, Biomedical Sciences (2019-present)
Michael Brown, Computer Science (2019-2020)
Hans Doderlein, Biomedical Sciences (2019-2020)

Dissertation Committee Service (University of Central Florida)
Eileen Glavey-Labedz, Exceptional Education (2019-present)
Uday Nair, Methodology, Measurement & Analysis (2020-present)
Ecem Olcum, Department of Psychology, (2020-present)
Ziana Bagot, Learning Sciences & Educational Research (2021-present)
Amanda Bond, School of Modeling Simulation, and Training (2020-present)

Graduate Committee Service (outside of University of Central Florida)
Rebekah Freed, Learning Sciences and Psychological Studies, University of North Carolina, Chapel Hill (2016-present)
Nikki Glover Lobczowski, Learning Sciences and Psychological Studies, University of North Carolina, Chapel Hill (2016-2019)
Dana Copeland, Curriculum and Instruction, University of North Carolina, Chapel Hill (2017-2020)
Matthew Moreno, Applied Psychology and Human Development, University of Toronto, (2019-2020)
Guojing Zhou, Computer Science, North Carolina State University (2019-2020)

Visiting Scholars (University of Central Florida)
Ana Cecília De Medeiros Maciel, [Fulbright Scholar] University of Campinas, Brazil (2018-2019)
Franz Wortha, University of Tubingen Germany (2019)
Marta Sobocinski, University of Oulu, Finland (2021; virtual)

Postdoctoral Fellows (North Carolina State University)
Joseph Grafsgaard (2015–2016)
Michelle Taub (2017-2018)

Doctoral Advisees (North Carolina State University)

Michelle Taub, Human Factors and Applied Cognition (2013–2017)
Nicholas V. Mudrick, Human Factors and Applied Cognition (2013–2018)
Jesse J. Farnsworth, Human Factors and Applied Cognition (2014–2015)
Seth A. Martin, Human Factors and Applied Cognition (2015–2016)
Stephen Cauffman, Human Factors and Applied Cognition (2015)
Garrett C. Millar, Human Factors and Applied Cognition (2016-2017)
Amanda E. Bradbury, Human Factors and Applied Cognition (2016-2017)
Megan J. Price, Human Factors and Applied Cognition (2017-2018) *moved to UCF 2018
Elizabeth Cloude, Human Factors and Applied Cognition (2017-2018) * moved to UCF 2018

Undergraduate Research Assistants (North Carolina State University—SMART Laboratory)

Erika Clodfelter, Psychology (2013)
Andrew Reed, Psychology (2013–2014)
Sydney Shekelford, Psychology (2013–2014)
Gina Kabat, Psychology (2014–2015)
Sadie Lisk, Psychology (2014–2015)
Seth Martin, Psychology (2014–2015)
Tristan Smith, Psychology (2014–2016)
Haleigh Meffert, Psychology (2015)
Jeffery Matthews, Psychology (2015–2016)
Garrett Millar, Psychology (2015–2016)
Loni Prizzia, Psychology (2015–2016)
Elizabeth Beard, Biology (2015)
Jessica Eaton, Biology (2015)
Megan Price, Psychology (2016-2017)
Herath Denuwara, Psychology (2016-2017)
Carina Tudela, Biology (2016-2017)
Daniel Baucom, Psychology (2016-2016)
Mitchell Moravev, Psychology (2016-2017)
Alex Haikonen, Psychology (2016-2017)
Pooja Ganatra, Psychology (2016-2017)
Sarah Augustine, Psychology (2016-2017
Dennis Hernandez, Psychology (2017-2018)
Emma Merchant, Psychology (2017)
Kimani Hoffman, Psychology (2017-2018)
Rosangela Almanzar, Psychology (2018-2018)
Lahari Revuri, Psychology (2018)

Graduate Research Assistants (North Carolina State University)

Patrick Cash, Department of Computer Science (2014-2015)
Payam Tabrizian, College of Natural Resources (2016-2017)
Andrea Kunze, College of Education (2017-2018)

Visiting Scholars (North Carolina State University)

Franz Wortha, University of Dresden, Germany (2014-2015)

Jolique Kielstra, Radboud University Nijmegen, The Netherlands (2015)
Dr. Rebeca Menezdez Cerzo, University of Oviedo, Spain (2016)
Maria Esteban, University of Oviedo, Spain (2017)
Marta Sobocinski, University of Oulu, Finland (2018)

Graduate Committee Service (North Carolina State University)

Sheila Tampos, Department of Sociology and Anthropology (2013-2015)
Behrooz Mostafavi, Department of Computer Science (2014-2017)
Drew Hicks, Department of Computer Science (2014-2017)
Jessica Lancaster, Department of Educational Psychology (2014-2018)
Pinar Ceyhan, College of Design, (2014-present)
Thomason Price, Department of Computer Science (2016-2018)
Idris Jeelani, Department of Civil, Construction, and Environmental Engineering (2016-present)
Chen Lin, Department of Computer Science (2017-present)
Guojing Zhou, Department of Computer Science (2018-present)

Graduate Committee Service (outside of North Carolina State University)

Nikki Glover Lobczowski, Learning Sciences and Psychological Studies Program, University of North Carolina, Chapel Hill (2016-present)

Postdoctoral Fellows (McGill University)

François M. Bouchet (2011–2013)
Babak Khosravifar (2012–2014)
- Fonds de recherche du Québec - Nature et technologies (FQRNT) postdoctoral Fellowship

Doctoral Advisees (McGill University)

Reza Feyzi-Behnagh, Learning Sciences (co-supervisor with Dr. Lajoie; 2010–2014)
- Graduate Research Enhancement and Travel (GREAT) Award
- Wolfe Fellowship in Scientific and Technological Literacy
- Robert J. Glushko and Pamela Samuelson Foundation Student Travel Grant
- Principal's Fellowship
- Provost's Fellowship

Melissa Duffy, Learning Sciences (co-supervisor with Dr. Lajoie; 2012–2014)
- Fonds Québécois de la recherche sur la Société et la culture (FQRSC) doctoral Fellowship
- Henry R. Shibata Fellowship—The Cedars Cancer Institute
- AERA 2012 Graduate Student Research Award (Studying and SRL SIG)
- Principal's Fellowship
- Provost's Fellowship

Gregory Trevors, Learning Sciences (co-supervisor with Dr. Muis; 2012–2014)
- Social Sciences and Humanities Research Council of Canada (SSHRC) doctoral Fellowship
- Richard H. Tomlinson Fellowship
- Fonds Québécois de la recherche sur la Société et la culture (FQRSC) doctoral Fellowship
- AERA 2012 Graduate Student Research Award (Studying and SRL SIG)

- Principal's Fellowship
- Provost's Fellowship

Norma Ponzoni, Learning Sciences (co-supervisor with Dr. Lajoie; 2011–2014)

Master's Advisees (McGill University)

Melissa Duffy, Learning Sciences (co-supervisor with Dr. Muis; graduated 2011)
Jason Matthew Harley, Learning Sciences (graduated 2011)
Michelle Taub, Learning Sciences (graduated 2013)

Visiting Scholars (McGill University)

Dr. Rebeca Cerezo Menezdez, University of Oviedo, Spain (2012)
Yves Karlen, University of Zurich, Switzerland (2012)
Silke Schiffhauer, Ruhr Universität Bochum, Germany (2012)
Dr. Maria Bannert, Universität Würzburg, Germany (2013)

Undergraduate Research Assistants (McGill University—SMART Laboratory)

Lauren Agnew, Psychology (2012–2013)
Kelsey Anderson, Phramacology (2012–2013)
Valérie Bélanger-Cantara, Psychology (2012–2013)
Dwijesh Bhageerutty, Computer Science (2013–2013)
Inderpal Dhillon, Psychology (2012–2013)
Sofie Griscom, Psychology (2012–2013)
Lana Karabachian (Concordia University), Psychology (2012–2013)
Faiz Khan, Computer Science (2012–2013)
Nicholas Mudrick, Psychology (2012–2013)
Nicole Pacampara, Psychology (2011–2013)
Alejandra Segura, Psychology (2012–2013)
Victoria Stead, Psychology (2012–2013)
John Tokarz, Psychology (2013–2013)
Grace Wang, Psychology (2012–2013)
Hai Tao Wu, Computer Science (2012–2013)
Wook Yang, Psychology (2012–2013)

Comprehensive Exam Committee Service (McGill University)

Ilian Cruz-Panesso, Learning Sciences (2012)
Ahmed Ibrahim, Learning Sciences (2012)
Eric Poitras, Learning Sciences (2012)

Doctoral Committee Service (McGill University)

Rafa Absar, School of Information Studies (2012)
Gina Franco, Learning Sciences (2012)
Eric Poitras, Learning Sciences (2013)

Doctoral Co-Advisees (Concordia University)

Sylvain Payen, Special Individualized Program (2011-present; Dr. Lynn Hughes Major advisor)

External Reviewer on Dissertations and Theses

Eric Poitras (Master's in Educational Psychology, McGill University, Montréal, Canada, 2010)
Juan Carlos Sanchez (Ph.D. in Educational Technology, Concordia University, Montréal, Canada, 2010)
Inge Molenaar (Ph.D. in Educational Sciences, University of Amsterdam, The Netherlands, 2011)
Caroline Hart (Ph.D. in Counseling, Educational Psychology and Research, University of Memphis, TN, 2013)
Jonna Malmberg (Ph.D. in Educational Sciences, University of Oulu, Finland, 2014)
Franz Wortha, (Ph.D. in Psychology of Leaning and Instruction, Technische Universität Dresden, Germany, 2016)

Doctoral Committee Service (Full graduate faculty status at the University of Memphis)

Moongee Jeon, Experimental Psychology (graduated 2008)
Michael Rowe, Experimental Psychology (graduated 2008)
Kenneth Adlum, Experimental Psychology (graduated 2009)
Amy Johnson, Experimental Psychology (graduated 2011)

Master's Committee Service (University of Memphis)

Courtney Bell, M.S. PSYC (graduated 2007)
Jeremiah Sullins, M.S. PSYC (graduated 2007)
Bina Solanki, Computer Science (M Sc. in CS Project) (graduated 2008)
Amy Witherspoon, M.S. PSYC (graduated 2008)
Shira Bennett, M.S. PSYC (graduated 2009)
Amber Chauncey, M.S. PSYC (graduated 2009)
Emily Mathis, M.S. PSYC (graduated 2009)
Michel Donofrio, M.S. PSYC (graduated 2010)

MAP Committee Service (University of Memphis)

Kenneth Adlum, Experimental Psychology (completed 2007)
Kyle Dempsey, Experimental Psychology (completed 2008)
Amy Witherspoon, Experimental Psychology (completed 2010)

Undergraduate Psychology Honor's Students Advised (University of Memphis)

Candice Burkett (graduated 2011)

Doctoral Committee Service (Full graduate faculty status at University of Maryland, College Park)

Diane Seibert, Department of Human Development (graduated 2002)
Betty Lou Smith, Department of Curriculum and Instruction (graduated 2002)
Jinsoo Chung, College of Library and Information Sciences (graduated 2003)
Chun-Wei (Kevin) Huang, Department of Measurement and Statistics (graduated 2003)
Susan Savage-Stevens, Department of Human Development (graduated 2003)
Ana Taboada, Department of Human Development (graduated 2003)
Deep Sran, Department of Human Development (graduated 2004)
Ty Boyer, Department of Psychology (graduated 2005)
Cynthia Edwards, Department of Special Education (graduated 2005)

Jane Hammond, Department of Psychology (graduated 2005)
Lisa Murphy, Department of Psychology (graduated 2005)

Master's Committee Service (Full graduate faculty status at University of Maryland, College Park)

Daniel C. Moos, EDHD (graduated 2004)
Myriah Koledin, EDHD (graduated 2005)

Master's Comprehensive Examination Committees (University of Maryland, College Park)
Daniel C. Moos, Department of Human Development (2004)
Myriah Koledin, Department of Human Development (2005)
Pragati G. Chaudhuri, Department of Human Development (2006)
Janet Gallagher, Department of Curriculum and Instruction (2006)

Advising Student Groups and Other Professionals—Grant and Research Projects

IES SimSelf Goal 2 Grant (2012–present)

- Michelle Taub (NCSU), Nicholas Mudrick (NCSU), Reza Feyzi-Behnagh (McGill University) (2013–present)
- Babak Khosravifar, Reza Feyzi-Behnagh, Michelle Taub, Grace Wang (McGill University) (2012–2013)

NSF REESE Grant (2010–present)

- François Bouchet, Reza Feyzi-Behnagh, Jason Matthew Harley, Melissa Duffy, Gregory Trevors, Melissa Stern, Zaynab Sabagh, Michelle Taub, Nicole Pacampara, Sofia Griscom, Lauren Agnew, Victoria Stead, Wook Yang, Nicholas Mudrick, Emily Macgregor, Zohreh Khezri, Marooful Moral, Ahmed Ibrahim, Diana Ashrafhosseini, Engida Gebre (McGill University)

NSF SGER Grant (2008–2010)

- Amber Chauncey (University of Memphis)

NSF REESE Grant (2006–2010)

- Amy Witherspoon, Mihai Lintean, Jeremiah Sullins, Shanna Baker, Gwyneth Lewis, Emily Siler, Stacie West, Michael Cox, Amber Chauncey, Ashley Fike, Lauren Byrd, Candice Burkett, Rachel Anderson, Heather Skinner, David Bouldin, Jonathan Wood, Erik Brooks, Amanda Jeffreys, Andrew Hoff (University of Memphis)

The Learning Kit Grant

- Shanna Baker (University of Memphis) (2006–2008)
- Jeffrey A. Greene, Dr. Marcy Fallon-Marinelli (University of Maryland-College Park) (2003–2006)

NSF Early Career Grant

- Amy Witherspoon, Jeremiah Sullins, Moongee Jeon, Jennifer Scott, Andrew Trousdale, Emily Siler, Evangeline Poulos, Sarah Leonard (University of Memphis) (2006–2007)
- Jennifer G. Cromley, Fielding I. Winters, Liqun Xu, Myriam Tron, Leslie Thomas, Joe Carioti, Travis Crooks, Dr. Diane Seibert, Debby Iny, Danielle Fried, Susan Ragan, Mary Ellen Verona, Stacy Pritchett, Daniel Levin, Theodore Antonakos, Laura Hagy, Rachel Howell, Wendell Hall, Phillip Johnson, Marcy Jacobson, Lucia Buie, Daniel C. Moos, Megan Clark, Angela Lucier, Jessica Vick, Ingrid Ulander, Jonathan Merritt, Neil

Hofman, Mira Brancu, Evan D. Olson, Pragati G. Chaudhuri, Sonia Denis, Messay Bekele (University of Maryland-College Park) (2002–2006)

NSF CRCD Engineering Grant (2001–2005)

- Liqun (Lynne) Xu, Laura Smith (University of Maryland-College Park)

PT3 CATALYST Grant (2001–2002)

- Gaurav Bagaria, Judy Wang (University of Maryland-College Park)

Building Learning with Technology (BLT) Project (2000–2002)

- Gaurav Bagaria, Morning Johnson, Travis Crooks, Steven Tonks, Jennifer G. Cromley (University of Maryland-College Park)

Hypermedia Project (2000–2006)

- Dr. Diane Seibert, Judy Wang, Jennifer G. Cromley, Nitesh Batra, Travis Crooks, Joe Carioti (University of Maryland-College Park)

RiverWeb Project (2000–2006)

- Mary Ellen Verona, Susan Ragan, Stacy Pritchett, Isabel Barnes, Marylyn Leung, Wendell Hall, Phillip Johnson (Montgomery Blair High School)

RadTutor II Project (1998–1999)

- John Arroyo (Carnegie Mellon University and University of Pittsburgh)

RadTutor Project (1996–1998)

- Dr. David Fleiszer, Dr. Monique Desaulniers, Xiaoyan Zhao, Wei Gu (McGill University)

SICUN-SAFARI project (1995–1998)

- Wei Gu, Xiaoyan Zhao, Robert Bouchard, Julie Kinnon, Dr. David Fleiszer (McGill University)

Doctoral Students Advised (University of Memphis)

Amy Johnson (Witherspoon), Experimental Psychology (graduated 2011)

- Roland L. Frye Achievement Award

Doctoral Students Advised (University of Maryland)

Jennifer G. Cromley, Department of Human Development (graduated 2005)

- University of Maryland Doctoral Fellowship
- AERA/Spencer Pre-Dissertation Fellowship
- Spencer Dissertation Fellowship
- American Association of University Women Educational Foundation Dissertation Fellowship
- AERA—Division C Graduate Student Research Excellence Award
- International Reading Association Award (2006) Dissertation of the Year Award Finalist

Daniel C. Moos, Department of Human Development (graduated 2007)

- University of Maryland, College of Education Outstanding Master's Student Award
- University of Maryland Doctoral Fellowship
- AERA 2007 Graduate Student Research Award (Studying and SRL SIG)

Jeffrey A. Greene, Department of Human Development (graduated 2007)

- AERA 2007 Graduate Student Research Award (Studying and SRL SIG)

Master's Students Advised

Pragati Godbole-Chaudhuri, University of Maryland-College Park (graduated 2006)
Amy M. Witherspoon, University of Memphis (graduated 2008)
Amber Chauncey, University of Memphis (graduated 2010)
Michael Donofrio, University of Memphis (graduated 2010)

Service Activities

Professional

2021	Executive Committee Member, Society for Learning Analytics Research (SOLAR)
2021	Senior Program Committee Member, 13th International Conference on Educational Data Mining and Science (EDM 2021), Paris, France
2021	Senior Program Committee Member, 17th International Conference on Intelligent Tutoring Systems (ITS 2021), Athens, Greece
2021	Program Committee Member, The 11th Learning Analytics and Knowledge Conference (LAK 2021), virtual meeting
2020	Member, Review Panel, National Science Foundation (NSF), AI Research Institutes program
2020	Member, Review Panel, National Science Foundation (NSF), Cyberlearning for Work at the Human-Technology Frontier program
2020-present	Member, Review Panel, Spencer Foundation Small Grant program
2020-present	Chair, Outstanding Poster Award Committee, American Educational Research Association (AERA), SSRL SIG
2020	Program Committee Member, The 28th ACM Conference on User Modelling, Adaptation and Personalization (UMAP 2020), virtual meeting
2020	Senior Program Committee Member, 16th International Conference on Intelligent Tutoring Systems (ITS 2020), virtual meeting
2020	Senior Program Committee Member, 12th International Conference on Educational Data Mining and Science (EDM 2020), virtual meeting
2019	Program Committee Member, The 27th ACM Conference on User Modelling, Adaptation and Personalization (UMAP 2019), Lanarca, Cyprus
2019	Senior Program Committee Member, 15th International Conference on Intelligent Tutoring Systems (ITS 2019), Kingston, Jamaica
2019	Senior Program Committee Member, 11th International Conference on Educational Data Mining and Science (EDM 2019), Montréal, Canada
2018-present	Advisory Board Member, Center for Excellence for Deep Learning: Teaching with the Heart and Mind, Bar-Ilan University, Tel Aviv, Israel

2018	Program Chair, 14th International Conference on Intelligent Tutoring Systems (ITS 2018), Montreal, Quebec, Canada
2018	Senior Program Committee Member, 10th International Conference on Educational Data Mining and Science (EDM 2018), Buffalo, NY
2018	Senior Program Committee Member, 19th International Conference on Artificial Intelligence in Education (AI-ED 2018), London, UK
2018	Panel Co-Chair, 19th International Conference on Artificial Intelligence in Education (AI-ED 2018), London, UK
2018	Program Committee Member, 8th International Learning Analytics and Knowledge Conference (LAK 2017), Sydney, Australia
2018	Reviewer, 13th International Conference of the International Society of the Learning Sciences (ICLS 2018), London, UK
2018	Member, Review Panel, National Science Foundation (NSF), Principles for the Design of Digital Science program
2017-2020	Principal Member, Institute of Education Sciences' (IES) STEM Scientific Review Panel
2017	Program Committee Member, National Science Foundation's (NSF) ECR Principal Investigators' annual meeting on Fundamental Research in STEM Education: Progress, Issues, & the Future Alexandria, VA
2017	Member, Review Panel, National Science Foundation (NSF), STEM+C program
2017	Senior Program Committee Member, 18th International Conference on Artificial Intelligence in Education (AI-ED 2017), Wuhan, China
2017	Program Committee Member, 10th International Conference on Educational Data Mining and Science (EDM 2016), Wuhan, China
2017	Program Committee Member, 7th International Learning Analytics and Knowledge Conference (LAK 2017), Vancouver, Canada
2017	Program Committee Member, 10th International and Interdisciplinary Conference on Modeling and Using Context (CONTEXT 2017), Paris, France
2017	Member, Review Panel, Institute of Education Sciences (IES) Math and Science Program
2017-present	Mentor, American Educational Research Association's SIG on Studying and Self-Regulated Learning Graduate Student Mentoring Program
2016-2019	Chair, Graduate Student Research Award, American Educational Research Association (AERA), SSRL SIG
2016	Reviewer, Canada Researcher Chairs (CRC) Program
2016	Reviewer, Netherlands Organization for Scientific Research (NWO)

2016 Committee Member, Early Career Award, European Association for Research on Learning and Instruction (EARLI), Metacognition Special Interest Group

2016 Reviewer, 38th Annual Meeting of the Cognitive Science Society, Philadelphia, PA

2016 Member, Review Panel, National Science Foundation (NSF), CHS Small Panel in the Information & Intelligent Systems Division (IIS)

2016 Program Committee Member, 2nd International Workshop on Affect, Meta-Affect, Data and Learning (AMADL 2016), International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia

2016 Program Committee Member, Workshop on Supporting Dynamic Cognitive, Affective, and Metacognitive (SD-CAM) Processes, International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia

2016 Program Committee Member, The 1st Biennial Conference of the European Association for Research on Learning and Instruction (EARLI)—On-line Measures of Learning Processes Special Interest Group, Oulu, Finland

2016 Program Committee Member, The 9th International Conference on Educational Data Mining and Science (EDM 2016), Raleigh, NC

2016 Program Committee Member, The 13th International Conference on Intelligent Tutoring Systems (ITS 2016), Zagreb, Croatia

2016 Chair and Organizer, Workshop on Using Data Visualizations to Understand and Reason about Self-Regulated Learning, The 7th Biennial Conference of the European Association for Research on Learning and Instruction (EARLI)—Metacognition Special Interest Group, Nijmegen, The Netherlands

2016 Program Committee Member, The 7th Biennial Conference of the European Association for Research on Learning and Instruction (EARLI)—Metacognition Special Interest Group, Nijmegen, The Netherlands

2015 Senior Program Committee Member, The 17th International Conference on Artificial Intelligence in Education (AI-ED 2015), Madrid, Spain

2015 Reviewer, 37th Annual Meeting of the Cognitive Science Society, Pasadena, CA

2015 Reviewer, Israeli Science Foundation (ISF)

2014 Member, Review Panel, National Science Foundation (NSF), Cyberlearning and Future Learning Technologies Program

2014 Program Committee Member, 2014 International Conference on Computers and Education (ICCE 2014) on AIED/ITS & Adaptive Learning of the International Conference on Computers in Education (ICCE 2014), Nara, Japan

2014 Organizing Committee Member, 2014 Conference on Educational Psychology and Applied Social Psychology (EPASP 2014), Suzhou, China

2014 Senior Program Committee Member, The 12th International Conference on Intelligent Tutoring Systems (ITS 2014), Honolulu, HI

2014	Co-Chair, Workshops and Tutorials, The 12th International Conference on Intelligent Tutoring Systems (ITS 2014), Honolulu, HI
2014	Scientific Program Committee Member, The 6th Biennial Conference of the European Association for Research on Learning and Instruction (EARLI)—Metacognition Special Interest Group, Istanbul, Turkey
2014	Reviewer, Human Factors and Ergonomics Society, Chicago, IL
2014	Reviewer, The 6th Biennial Conference of the European Association for Research on Learning and Instruction (EARLI)—Metacognition Special Interest Group, Istanbul, Turkey
2014	Reviewer, The 6th Biennial Conference of the European Association for Research on Learning and Instruction (EARLI)—Instructional Design and Learning and Instruction with Computers Special Interest Groups, Rotterdam, The Netherlands
2013	Senior Program Committee Member, The 16th International Conference on AI-ED, Memphis, TN
2013	Scientific Program Committee Member, The 4th Annual International Conference on Biologically Inspired Cognitive Architectures (BICA), Kiev, Ukraine
2013	Scientific Program Committee Member, The 9th International Conference on Autonomic and Autonomous Systems, Lisbon, Portugal
2013	Program Committee Member, IADIS Multi Conference on Computer Science and Information Systems (MCCSIS 2013), Prague, Czech Republic
2013	Member, Review Panel, Institute of Education Sciences (IES) Math and Science Program
2012–present	Committee Member, Richard E. Snow Award for Early Career Contribution Committee, APA Division 15 (Educational Psychology)
2012–present	Reviewer, Social Science and Humanities Research Council of Canada (SSHRC)
2012–2014	Secretary, American Educational Research Association (AERA), Division C
2012	Scientific Program Committee Member, The 5th Biennial Conference of the European Association for Research on Learning and Instruction (EARLI)—Metacognition Special Interest Group, Milan, Italy
2012	Program Committee Member, The 11th International Conference on Intelligent Tutoring Systems (ITS 2012), Crete, Greece
2012	Co-Chair, Young Researchers Track, The 11th International Conference on Intelligent Tutoring Systems (ITS 2012), Crete, Greece
2012	Program Committee Member, The 6th International Conference on Complex, Intelligent, and Software Intensive Systems (CISIS-2012), Palermo, Italy
2012	Scientific Reviewer, European Association for the Research on Learning and Instruction (EARLI)—Motivation and Emotions SIG meeting, Frankfurt, Germany

2012	Reviewer, U.S. National Research Council Report on Deep Learning and 21st Century Skills
2012	Reviewer, Croatian Science Foundation
2011–present	Reviewer, Natural Sciences and Engineering Council of Canada (NSERC)
2011	Discussant, European Association for Research on Learning and Instruction (EARLI) Biennial Meeting, Exeter, England
2011	Reviewer, U.S. National Research Council Report on Learning Sciences: Foundations and Applications to Adolescent and Adult Literacy
2011	Program Committee Member, The 14th International Conference on AI-ED, Christchurch, New Zealand
2010	Panel Member, NSF, Faculty Early Career Development (CAREER) Program
2010	Panel Member, NSF, Informal Science Education (ISE) Panel
2010	Program Committee Member, The International Conference on Intelligent Tutoring Systems, Pittsburgh, PA
2010	Program Committee Member, The Third International Conference on Digital Game and Intelligent Toy Enhanced Learning (DIGITEL 2010), Kaoshiung, Taiwan
2009	Reviewer, Annual Meeting of the International Conference of the Learning Sciences (ICLS), Chicago, IL
2009	Reviewer, British Council in Israel
2009	Reviewer, Israeli Science Foundation
2009	Discussant, European Association for Research on Learning and Instruction (EARLI) Biennial Meeting, Amsterdam, The Netherlands
2009	Program Committee Member, International Conference on Computer Supported Education (CSEDU), Lisbon, Portugal
2009	Chair, Artificial Intelligence in Education (AI-ED) 2009 Sponsorship
2009	Chair, American Educational Research Association (AERA) Division C: Section 5 (Learning Environments), San Diego, CA
2008–present	Advisory Board Member, NSF Pittsburgh Science of Learning Center (PSLC)
2008–2011	Principal Member, IES Math and Science Review Panel
2008	Discussant, EARLI Metacognition SIG Meeting, Ioannina, Greece
2008	Co-Chair, Workshops for the Conference on Intelligent Tutoring Systems (ITS 2008), Montréal, Canada
2007–2008	Member, Review Panel, IES Mathematics and Science Program
2007–2008	Member, Review Panel, NSF Advanced Learning Technology (ALT) Program
2007–2008	Member, Site Visit Team, NSF's evaluation of the Pittsburgh Science of Learning Center (PSLC)

2007	Program Committee Member, 29th Annual Meeting of the Cognitive Science Society, Nashville, TN
2007	Program Committee Member, 13th World Conference on AI-ED, Marina Del Rey, CA
2007	Co-Chair, Tutorials, 13th World Conference on AI-ED, Marina Del Rey, CA
2007	Program Committee Member, First IEEE International Workshop on Digital Game and Intelligent Toy Enhanced Learning (DIGITEL, 2007), National Central University, Jhongli, Taiwan
2006	Member, American Psychological Association (APA) Coalition for Psychology in the Schools and Education (Div. 15 Representative)
2006	Reviewer, Biennial Meeting of the International Conference on Computer-Supported Collaborative Learning (CSCL, 2007)
2006	Member, Review Panel, NSF ALT Program
2006	Reviewer, Annual Meeting of the International Conference of the Learning Sciences (ICLS)
2005	Member, Site Visit Team, NSF Science of Learning Center (SLC) Program
2005	Program Committee Member, 12th World Conference on AI-ED, Amsterdam, The Netherlands
2005	Member, Review Panel, Social Sciences and Humanities Research Council of Canada (SSHRC), Ottawa, Canada
2004	Member, Review Panel, NSF Interagency Education Research Initiative (IERI) Program
2003–2004	Member, AERA Sylvia Scribner Award Committee
2002–present	Discussant, AERA Annual Meeting, Division C—Learning and Instruction
2002	Member, Review Panel, NSF Math and Science Partnership (MSP) Program
2002	Reviewer, Annual APA Conference
2001–present	Chair of several sessions at the Annual AERA Conference (Division C)
2001	Program Co-Chair, Division 15 (Educational Psychology), 109th Annual Convention of the APA
2000	Member, Review Panel, NSF Elementary, Secondary, and Informal Education Program
1999	Program Committee Member, 9th World Conference on AI-ED, Le Mans, France
1998–2010	Reviewer, Annual Meeting of the Cognitive Science Society
1998	Chair of a session at the Annual Cognitive Science Conference
1996–present	Reviewer, International Conference on Intelligent Tutoring Systems (ITS)
1996	Organizing Committee Member, Intelligent Tutoring Systems (ITS'96) Conference

1996 Book Reviewer, Lawrence Erlbaum Associates

1995–present Reviewer, AERA Annual Meetings

1995–present Reviewer, International Conference on AI-ED

International

2019 Fulbright Scholar to the University of South Australia, Adelaide, Australia

2019 Co-organizer and Co-chair (with Dr. Michelle Taub), *Symposium on Multimodal Data During Learning with Advanced Learning Technologies: What Does Evidence Reveal About Self-Regulated Learning?* at the annual meeting of the American Educational Research Association (AERA), Toronto, Ontario, Canada

2019 Co-organizer and Co-chair (with Dr. Joerg Zumbach), *Symposium on* Scaffolding Self-Regulated Learning Across Different Contexts at the annual meeting of the American Educational Research Association (AERA), Toronto, Ontario, Canada

2018 Co-organizer and Co-chair (with Dr. Inge Molenaar), *Symposium on What can Multimodal Data Streams Reveal about Students' Self-Regulated Learning* annual meeting of the American Educational Research Association (AERA), New York, NY

2016 Co-organizer and Co-chair (with Dr. Maria Bannert), *Symposium on Advances in Scaffolding Metacognition with Advanced Learning Technologies*, Biennial Meeting of the European Association for Research on Learning and Instruction's (EARLI) Metacognition SIG meeting, Nijmegen, The Netherlands

2015 Co-organizer and Co-chair (with Dr. Sanna Järvelä), *Symposium on Methodological and Analytical Issues in the use of Multi-Modal SRL Data*, Biennial Meeting of the European Association for Research on Learning and Instruction's (EARLI), Limassol, Cyprus

2014 Co-organizer and Co-chair (with Dr. Maria Bannert), *Symposium on Scaffolding Self-Regulated Learning with Artificial Pedagogical Agents*, Biennial Meeting of the European Association for Research on Learning and Instruction's (EARLI) Metacognition SIG meeting, Istanbul, Turkey

2013 Co-organizer and Co-chair (with Drs. Gautam Biswas, Valerie Shute, and Susan Bull), *Workshop on Scaffolding in Open-Ended Learning Environments*, 16th International Conference on Artificial Intelligence in Education (AI-ED 2013), Memphis, TN

2013 Co-organizer and Co-chair (with Drs. Elizabeth Charles, Susanne Lajoie, Allyson Hadwin, and Mariel Miller), *Workshop on Designing for Distributed Regulatory Processes in Computer Supported Collaborative Learning (CSCL)*, 10th International Conference on Computer Supported Collaborative Learning (CSCL), Madison, WI

2012 Co-organizer and Co-chair (with Drs. Ido Roll, Amali Weerasinghe, and Ben Du Boulay), *4th Workshop on Self-Regulated Learning in Educational Technologies (SLR@ET): Modeling, Evaluating, Supporting, and Fostering*

Metacognition with Computer-Based Learning Environments, 11th International Conference on Intelligent Tutoring Systems (ITS), Crete, Greece

2012 Co-organizer and Co-chair (with Dr. Maria Bannert), *Symposium on Examining Metacognitive Processes using Process Data during Learning with Computerized Environments*, Biennial Meeting of the European Association for Research on Learning and Instruction's (EARLI) Metacognition SIG meeting, Milan, Italy

2011 Co-organizer and Co-chair (with Drs. Gautam Biswas, Roberto Pirrone, and Ido Roll), *Workshop on Analyzing, Modeling, Evaluating, and Fostering Metacognition with Intelligent Learning Environments* at the IA*AI 2011 Conference—12th International Conference of the Italian Association for Artificial Intelligence, Palermo, Italy

2011 Co-organizer and Co-chair (with Dr. Ido Roll and Amali Weerasinghe), *4th Workshop on Meta-Cognition and Self-Regulated Learning in Educational Technologies*, AI-ED2011—15th International Conference on Artificial Intelligence in Education, Christchurch, New Zealand

2009–2011 Co-coordinator, European Association of Research on Learning and Instruction (EARLI) Metacognition Special Interest Group (SIG-16)

2008 Co-organizer and Co-chair (with Dr. Bracha Kramarski), *Symposium on the Effectiveness of Computer-Based Learning Environments as Metacognitive Tools*, Biennial Meeting of the European Association for Research on Learning and Instruction (EARLI), Metacognition SIG, Ioannina, Greece

2007 Member, Program Committee, *Conference Workshop on Metacognition and Self-Regulated Learning in Intelligent Tutoring Systems*, AI-ED2007—The 13th International Conference on Artificial Intelligence in Education, Los Angeles, CA

2007 Member, Program Committee, *Conference Workshop on Modeling and Scaffolding Affective Experiences to Impact Learning*, AI-ED2007—The 13th International Conference on Artificial Intelligence in Education, Los Angeles, CA

2007 Organizer and Chair, Plenary Panel, *Methodologies for Analyzing Group Interactions*, 2007 Computer-Supported Collaborative Learning (CSCL) Conference, Rutgers University, New Brunswick, NJ

2007 Co-organizer and Co-chair (with Dr. Peter Gerjets), *Symposium on Cognitive, Metacognitive, and Instructional Issues in Learning with Hypermedia*, 2007 Conference of the European Association for Research on Learning and Instruction (EARLI), Budapest, Hungary

2003 Chair and Organizer, *Conference Workshop on Metacognition and Self-Regulated Learning in Using Computers as MetaCognitive Tools*, AI-ED2003—The 11th International Conference on Artificial Intelligence in Education, Sydney, Australia

Department

2017 Committee Member, Post-Tenure Review Committee

2017	Committee Member, Annual Faculty Review Committee
2016-2018	Committee Member, Building, Equipment, Safety, and Space Committee
2014–2016	Faculty Search Committee for School Psychology, North Carolina State University
2014–2017	Awards Committee, North Carolina State University
2012–2013	Advisory Search Committee for the Chair of the Educational and Counselling Psychology, McGill University
2011–2012	Advisory Committee to the Chair of Educational and Counselling Psychology, McGill University
2007–2009	Department Chair Search Committee, University of Memphis
2006–2007	Faculty Search Committee for Learning Technologies Instructor/Coordinator, University of Memphis
2005–2006	Appointment, Promotion, and Tenure Committee, University of Maryland-College Park
2004–2005	Faculty Secretary and Member of the Coordinating Committee, University of Maryland-College Park
2003–2004	Merit Review Committee, UMCP
2002–2003	Department Brochure Committee, University of Maryland-College Park
2001–2003	Graduate Admissions Committee, University of Maryland-College Park
2001–2003	Salary Review Committee, University of Maryland-College Park
2001–2002	Faculty Search Committee, University of Maryland-College Park
2000–2002	Institutional Review Board, University of Maryland-College Park
2000–2001	Departmental Transitional Team Committee, University of Maryland-College Park
1999–2006	Doctoral Comprehensive Examinations Committee, University of Maryland-College Park
1999–2000	Salary Review Committee, University of Maryland-College Park

College

2019-present	Promotion and Tenure Committee, University of Central Florida
2004–2006	Faculty Development Advisory Committee, University of Maryland-College Park
2004–2005	College of Education Faculty Curriculum Transformation Technology Committee, University of Maryland-College Park
2002–2006	Graduate Student Research Conference Committee, University of Maryland-College Park
2000–2003	Faculty Technology Committee, University of Maryland-College Park
2000–2001	College Senate Planning Committee, University of Maryland-College Park
1999–2001	College Senate, University of Maryland-College Park

1999–2000 College Senate Steering Committee, University of Maryland-College Park

University

2013 Committee Member, University Internal Social Sciences and Humanities Research Council of Canada (SSHRC) Development Program, McGill University

2012 Selection Committee Member, Tomlinson Chair in Science Education in the Faculty of Science, McGill University

2011 Member, Strategic Research Plan (SRP) Advisory Committee, McGill University

2003–2006 Chair, EDHD Institutional Review Board (IRB), University of Maryland-College Park

National

2012 Organizer and Chair, *Symposium on Measuring Self-Regulated Learning with Multi-Agent Learning Environments*, Annual Meeting of the American Educational Research Association (AERA), Vancouver, BC, Canada (Division C, Section 5: Learning Environments)

2012 Faculty mentor, AERA's Annual Graduate Student Research Seminar (Division C, Learning & Instruction)

2010 Co-organizer and Co-chair (with Drs. Roberto Pirrone and Gautam Biswas), *American Association for Artificial Intelligence (AAAI) 2010 Fall Symposium on Cognitive and Metacognitive Educational Systems*, Fairfax, VA

2009 Co-organizer and Co-chair (with Drs. Roberto Pirrone and Gautam Biswas), *American Association for Artificial Intelligence (AAAI) 2009 Fall Symposium on Cognitive and Metacognitive Educational Systems*, Fairfax, VA

2009 Co-organizer and Co-chair (with Dr. Philip Winne), *Symposium on Understanding the Complex Nature of Self-Regulatory Processes during Learning with Computer-Based Learning Environments*, Annual Meeting of the American Educational Research Association (AERA), San Diego, CA (Division C, Section 5: Learning Environments)

2008 Co-organizer and Co-chair (with Dr. Bracha Kramarski), *Symposium on Computers and Metacognitive Tools: The Role of Self-Regulatory Processes for Enhancing Learning*, Annual Meeting of the AERA, New York, NY (Division C, Section 7: Technology Research)

2006 Organizer and Chair, *Symposium on Computers as Metacognitive Tools for Enhancing Learning*, 2006 AERA Annual Meeting (Division C, Section 5: Learning Environments)

2005 Co-organizer and Co-chair (with Dr. Cindy Hmelo-Silver), *Symposium on Contextualizing Learning about Complex Systems: Theoretical, Empirical, and Educational Issues for Learning Environments*, 2005 AERA Annual Meeting (Division C, Section 4: Science)

2005 Co-organizer and Co-chair (with Dr. Michael J. Jacobson), *Symposium on Scaffolding Learning with Hypermedia: An Exploration of the Theoretical, Empirical, and Design Issues*, 2005 AERA Annual Meeting (Division C, Section 7: Technology Research)

2004 Co-organizer and Co-chair (with Dr. Allyson F. Hadwin), *Symposium on Scaffolding Self-Regulated Learning and Metacognition: Implications for the Design of Computer-*

Based Scaffolds, 2004 AERA Annual Meeting (Division C, Section 7: Technology Research)

2003 Organizer, AERA Division 5 (Counseling and Human Development) Graduate Student Mentoring Program

2003 Co-organizer and Co-chair (with Dr. Cindy Hmelo-Silver), *Symposium on Understanding Complex Systems for Learning Science with Computer-Based Learning Environments: An Exploration of the Theoretical, Empirical, and Design Issues*, 2003 AERA Annual Meeting (Division C, Section 4: Science)

2000 Workshop presenter, Educational Research and Educational Technology, Maryland State science teachers and members of the EdGrid group (Maryland Virtual High School)

1998 Faculty mentor, AERA's Third Annual Graduate Student Research Seminar (Division C, Learning & Instruction)

Professional Associations/Affiliations

American Educational Research Association (AERA)
American Psychological Association (APA)
American Society of Civil Engineers (ASCE)
Association for the Advancement of Affective Computing (AACA)
Association for Psychological Science (APS)
Cognitive Science Society
European Association for Research on Learning and Instruction (EARLI)
International Artificial Intelligence in Education Society (AI-ED)
Society for Learning Analytics Research (SOLAR)

Keynote Invited Talks and Lectures

International Conference of IEEE Computer Society on Learning Technologies, Goa, India, December 2019

University of Lisbon, Faculty of Psychology, Lisbon, Portugal, October 2019

International Conference on Open and Innovative Education (ICOIE 2019), Hong Kong, July 2019

University of Luxembourg, Cognitive Science & Assessment, Luxembourg, March 2019

McGill University, Educational and Counselling Psychology, Montréal, Canada, December 2018

University of Tübingen, Knowledge Media Research Center, Tübingen, Germany, October 2018

University of Dresden, Department of Psychology, Dresden, Germany, October 2018

University of Central Florida, Annual TeachLivE Conference, Orlando, FL, May 2018

University of Central Florida, Learning Sciences Cluster, Orlando, FL, December 2017

European Association for Psychological Assessment (ECPA14), Lisbon, Portugal, July 2017

2nd International Seminar on Social Cognitive Theory, Rio Claro, Brazil, June 2017

East Coast Games Conference (ECGC), Raleigh, NC, USA, April 2017

Cyberlearning 2017 Conference of the National Science Foundation (NSF), April 2017

Biennial International Conference of the European Association for Research on Learning and Instruction (EARLI) Online Measures of Learning Processes SIG, Oulu, Finland, November 2016

Third International Conference on Coexistence in Psychological, Educational, and Health Contexts, Almeria, Spain, November 2016

Cognitive Science Summer School, Université de Québec à Montréal, Montreal, Quebec, Canada, June-July 2016

American Educational Research Association (AERA), Studying and Self-Regulated Learning SIG, Chicago, IL, April 2015

First International Conference on Self-Regulated Learning, Bar-Ilan University, Tel Aviv, March 2015

International Convention of Psychological Science, Amsterdam, The Netherlands, March, 2015

Biennial International Conference of the European Association for Research on Learning and Instruction (EARLI) Metacognition SIG, Istanbul, Turkey, September 2014

University of Oulu, Learning and Educational Technology Research Unit, Oulu, Finland, June 2014

Learning and the Brain Conference: Connecting Educators with Neuroscientists and Researchers, New York, NY, May 2014

Learning Environments across Disciplines Workshop on Measuring Emotions in Simulations and Games for Learning: Instrumentation, Analysis, and Visualization, Montréal, Canada, May 2014

Association for Educational Communications and Technology (AECT 2013) Conference, Anaheim, CA, November 2013

Center for Curriculum Redesign Colloquium on Interdisciplinary, Meta-Cognition and Self-Regulated Learning, Paris, France, October 2013

Institute for Education and Information Sciences, Antwerp University, Belgium, March 2013

Association for Educational Communications and Technology (AECT 2012) Conference, Louisville, KY, November 2012

International School Psychology Association 2012 Conference, Montréal, Quebec, July 2012

University of Tübingen, Knowledge Media Research Center, Tübingen, Germany, December 2011

University of Amsterdam, Department of Psychology, Amsterdam, The Netherlands, November 2011

Association for Educational Communications and Technology (AECT 2011) Conference, Jacksonville, FL, November 2011

Vanier CEGEP, Physics Science Group, Montréal, Canada, November 2011

National Science Foundation 2011 REESE Annual Principal Investigators (PI) Meeting, Arlington, VA, October 2011

Italian Association for Artificial Intelligence 2011 Conference, Palermo, Sicily, September 2011

Universidade do Minho, Department of Psychology, Minho, Portugal, June 2011

The University of Tennessee Health Science Center, Memphis, TN, April 2010

International Conference of the European Association for Research on Learning and Instruction (EARLI), Amsterdam, The Netherlands, August 2009

Carnegie Mellon University, Department of Psychology, Pittsburgh, PA, December 2008

Society for Computers in Psychology, Chicago, IL, November 2008

Fall Symposium of the American Association for Artificial Intelligence (AAAI), Arlington, VA, November 2008

University of Memphis, Bioinformatics Research Group, Memphis, TN, October 2007

International Conference of the EARLI, Budapest, Hungary, September 2007

AI-ED 2007, 13th World Conference on Artificial Intelligence in Education, Los Angeles, CA, July 2007

University of Pittsburgh Medical Center (UPMC), Pathology Informatics, Pittsburgh, PA, June 2006

American Educational Research Association (AERA), Studying and Self-Regulated Learning SIG, San Francisco, CA, April 2006

University of Maryland, Counseling Center, College Park, MD, March 2006

Faculty of Behavioral Sciences, University of Twente, The Netherlands, July 2005

Mid-Atlantic Center for Mathematics Teaching and Learning, University of Maryland, College Park, October 2004

Maryland Literacy Research Center, University of Maryland, College Park, September 2003

University of Maryland, Department of Physics, Physics Education Research Group, College Park, MD, January 2003

National Super Computing Conference 2002, Baltimore, MD, November 2002

McGill University, Department of Educational and Counselling Psychology, Montréal, Canada, May 2002

Building Learning with Technology Winter Design Institute, University of Maryland, College Park, January 2002

University of Maryland, Center for Children, Relationships, and Culture, College Park, MD, November 2001

Johns Hopkins University, Department of Psychology, Baltimore, MD, August 2001

Building Learning with Technology Summer Design Institute, University of Maryland, College Park, July 2001

Maryland Literacy Research Center, University of Maryland, College Park, April 2001

Canadian Educational Technology Conference, Concordia University, Montréal, Canada, November 2000

CILT 2000, Center of Innovative Learning Technologies Conference, Fairfax, VA, October 2000

Maryland Virtual High School, Montgomery Blair High School, Silver Spring, MD, October 2000

University of Maryland, College of Library & Information Services, College Park, MD, April 2000

AI-ED99—9th World Conference on Artificial Intelligence in Education, Lemans, France, July 1999

University of Pittsburgh Medical Center, Department of Radiology, Pittsburgh, PA, April 1999

Carnegie Mellon University, Center for Innovation in Learning, Pittsburgh, PA, March 1999

Carnegie Mellon University, John Heinz School of Public Policy & Management, Pittsburgh, PA, October 1998

University of Pittsburgh, Center for Biomedical Informatics, Pittsburgh, PA, May 1998

California Polytechnic State University, Department of Computer Science, San Luis Obispo, CA, April 1998