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## BIOGRAPHICAL SKETCH

**NAME:** Brian F. Goldiez

**POSITION TITLE:** Deputy Director, IST

### RESEARCH AND PROFESSIONAL EXPERIENCE:

#### Education

University of Central Florida, Ph.D. ( Modeling and Simulation), 2006

University of Central Florida, M.S. (Computer Engineering) 1979

University of Kansas, B.S. (Aerospace Engineering) 1973

Brian Goldiez is the Deputy Director at the University of Central Florida's Institute for Simulation and Training. In this role, Dr. Goldiez advises IST's Director and facilitates new multi-discipline or large research initiatives. He has twice served IST's Interim Director. During these one-year periods he facilitated closer interactions between IST and academic departments and recruited faculty with appointments in an academic department and IST.

Dr. Goldiez is active in a diverse range of M&S-oriented research. Research interests lie in improving simulations through creating a better understanding of the methods needed to measure and understand the development activities and usage of real time simulators. The range of topics investigated have included the creation of modular software algorithms for flight simulators, distributed simulation interoperability techniques, computer graphics measurement and optimization, standards, and systems design and testing methods. More recently, He pursued research in human performance aspects of simulation, completing doctoral research in human performance aspects of navigation when using augmented reality.

Currently, Dr. Goldiez is involved in research in wearable computers and emerging technologies, such as Radio Frequency Identification, for modeling and simulation; mathematical processes to better understand simulations and accompanying system behaviors, and organizing multi-discipline research activities. He has extensive experience in this latter area with work for industry (A-6/F-14D flight simulators), government (synthetic flight training systems programs), and academe (large distributed simulation integration and experimentation and a multi-discipline augmented reality program for the Office of Naval Research).

Dr. Goldiez's government experience was with what are now NAVAIR Orlando-Training Systems Division and the Army's PEO-STRI/STTC. His work for these agencies was principally in the area of flight simulation and involved simulator testing, software and math model development, and advanced design engineering. Goldiez also managed and participated in research while with the government that resulted in demonstrating the feasibility of using higher order programming languages in simulators, advanced display systems, and the first instance of texture in computer graphics. Goldiez began his career at Sikorsky aircraft designing control systems and worked in the simulator industry as the lead systems engineer for a multi-company flight simulator development program.

Goldiez has published extensively, taught portions of college and professional development courses, conducted briefings and seminars, and consulted. Areas of teaching have been in modeling dynamic systems, distributed simulation, and various aspects of virtual and augmented reality. Briefings and seminars have been given to a wide range of decision makers in government, industry, and academe. Goldiez has recently consulted as an expert witness for simulation related matters and on the viability of several new simulation technologies.

Dr. Goldiez is among the first to become a Certified Modeling and Simulation Professional.

## A. Publications:

1. Goldiez, B.F., Ahmad, A.M., & Hancock, P.A. (2005, accepted for publication). Effects of augmented reality display settings on human wayfinding performance. *IEEE Transactions on Systems, Man, and Cybernetics: Part C: Applications and Reviews*.
2. Aedunuthula, P. and Goldiez, B. (2006, submitted for publication). Experimenting with Subjective Presence Questionnaires in Augmented Reality. *Presence: Teleoperators & Virtual Environments*.
3. Goldiez, B., Livingston, M., Dawson, J., Brown, D. & Hancock, P. (2004, November). Advancing human centered augmented reality research. *Army Science Conference*. Orlando, FL.
4. Walton, G., Goldiez, B., Hofer, R., & Kaup, D. (2003, April). Mathematical foundations for modeling and simulation. *SPIE Intersense Conference*. Orlando, FL.
5. Goldiez, B., Schmorrow, D., Hofer, R., Harvey, E., & Shumaker, R. (2002, July). Integrating infrastructures and approaches for using simulation to support product development. *Society for Computer Simulation Summer Conference*. San Diego, CA.
6. Jones, D., & Goldiez, B. (2004, December). The use of interactive map based displays for teleportation in virtual environments. *Interservice/Industry Training Systems and Education Conference*. Orlando, FL.
7. Goldiez, B. & Dawson, J. (2004, October). Is Presence Present in Augmented Reality? *Presence 2004 Conference*. Valencia, Spain.
8. Goldiez, B. (2004, March). Model pedigree: A requirement for composability. *Simulation Interoperability Standards Organization. Simulation Interoperability Workshop*. Washington, D.C
9. Goldiez B., Rogers, R. & Woodard, P. (1999, January/February). Real-time visual simulation on PC's. *IEEE Computer Graphics & Applications*, Los Alamitos, CA. pp.11-15.
10. Goldiez, B. (1998). Chapter 12: Integrating and executing simulations. In D. Cloud & L. Rainey (Eds.), *Applied Modeling and Simulation* (pp. 411-440). New York, NY: McGraw Hill.

## B. Collaborations

Ratan Guha, UCF	Charles Hughes, UCF	Blair MacIntyre, Ga Tech
Mansoor Mollaghasemi, UCF	Michael Moshell, UCF	Robin Murphy, USF
Mikel Petty, UAH	Jannick Rolland, UCF	John Sokolowski, ODU
Randall Shumaker, UCF	Kay Stanney, UCF	Michael Zyda, USC

**C. Graduate and Post Graduate Advisees**

Dustin Chertoff – Doctoral Student (Advisee)

Ali Ahmad – Doctoral Student

James Whitmire – Doctoral Student

Radhey Shah – Former Masters Student (Graduated)

Catherine Williams - Former Masters Student (Graduated)

Daniel Andersson - Former Masters Student (Graduated)

Danashree Gadkari - Former Masters Student (Graduated)

Priya Krishnamachary - Former Masters Student (Graduated)