New Student Orientation
Fall 2017

Joseph J. LaViola, Jr., Ph.D., Program Director
Sabrina Gordon, Ed.D., Program Coordinator
Agenda

• Welcome and opening remarks
• Cohort Introductions
• Overview of the M&S Graduate Program
  • Administration
  • Curricula
  • Graduate Plan of Study
  • Resources
  • Policies
  • Enrollment
  • Expectations
  • M&S Opportunities for Success: Primer Webcourse + Bootcamps
• Meet the Faculty
• Breakout sessions (Q&A)
  • Tour of IST research labs
  • Focused advising
Welcome and Opening Remarks

Dr. Randall Shumaker, Director, IST
Dr. John Weishampel, Associate Dean, Graduate Studies
Ms. Karla Badillo-Urquiola, MaSK
MODELING AND SIMULATION KNIGHTS (MaSK)

KARLA BADILLO-URQUIOLA, PRESIDENT
TIFFANI MARLOWE, VICE PRESIDENT
JULIAN MONTAQUILA, SECRETARY
ASHLEY REARDON, TREASURER

PRESENTED BY: REBECCA LEIS (FORMER PRESIDENT)
OUR VISION & PURPOSE

To inspire students of all levels to create innovative technology breakthroughs, educate the community about Modeling & Simulation (M&S), and cultivate interdisciplinary research by fostering collaboration and providing mentorship, advising, outreach, lab space, and equipment.

Support:

- Graduate Student Members
- Undergraduate Student Members
BACKGROUND

- UCF chapter of the Society for Modeling and Simulation International (SCS) – scs.org
- Sponsors: Institute for Simulation & Training (IST)
- Advisor: Dr. Brian Goldie\'z
  Deputy Director, IST
2016-2017 ORGANIZATION OFFICERS

Karla Badillo-Urquiola
President

Tiffani Marlowe
Treasurer

Ashley Reardon
Treasurer

Julian Montaquila
Secretary
PREVIOUS & FUTURE ACTION PLANS

- Marketing for the M&S Graduate Program
- Advertising Volunteer Opportunities with the National Center for Simulation (NCS)
- Moderating Student Form for the M&S Graduate Program
Organize MaSK Member Social Events:

- MaSK Member Update Meeting and Social Event at Flippers Pizzeria
- MaSK Social Event at Cloak & Blaster
PREVIOUS & FUTURE ACTION PLANS

- Lab Space (Pll Room 131-J) ★★
  - Acquisition of Lab Space for Use by MaSK Members

- MaSK Game Jam
- Scholarship Fund
- Fundraisers
- Outreach
- Workshops
PAID MEMBERSHIP BENEFITS

- T-Shirt
- Lab Space
- Networking Opportunities
- Access to the MaSK E-mail Listserv
- Voting
- And more!!!
MASK LAB SPACE

- 2 Lab Computers with Dual Monitors
- Extensive Book Library from Solicited Donations
- External Lockbox for MaSK Member Entry
- Full White Board with Dry Erase Markers
- Coming Soon:
  - SPSS Statistical Analysis Software
CONTACT INFORMATION

- **Office:**
  Institute for Simulation & Training  
  M&S Graduate Studies Office Suite  
  3100 Technology Parkway,  
  Partnership II Building, Room 131F

- **Lab Space:**
  Institute for Simulation & Training  
  M&S Graduate Studies Office Suite  
  3100 Technology Parkway,  
  Partnership II Building, Room 131J
CONTACT INFORMATION

- Website: T.B.A.
- Phone: (407) 882-0162
- Email: mask.knights@gmail.com
- Facebook Page: https://www.facebook.com/ucfmask
- Facebook Group: https://www.facebook.com/groups/1MaSK/
- Twitter: https://twitter.com/ucf_mask
WELCOME TO UCF & IST!!
WE HOPE YOU ENJOY YOUR VISIT!!

- We hope you enjoy your time here at UCF, IST, and the Modeling & Simulation Graduate Program!
- Good luck on your new journey. We look forward to seeing you throughout the semester and at our MaSK events!
- Please let us know if you have any questions!
Cohort Introductions

Please state your:
  • Name
  • Past academic degrees
  • Research area of interest
Overview of the M&S Graduate Program
The Pursuit of Graduate Education

• Everyone has their own reasons for attending graduate school and earning an advanced degree

• Whatever your reason...graduate education is quite different from undergraduate education
  • Graduate school demands more of your focus, commitment and a sense of self-motivation

• For many of you, most likely, this will be your first major research experience

• We are VERY glad that you are here!
Overview of the UCF M&S Program

• A true interdisciplinary program that builds on 20+ years of simulation education at UCF
  • Over 30 faculty and IST researchers at UCF who are considered M&S faculty

• Partners with IST, military simulation agencies and companies, other universities, and professional organizations
  • Most FA-57 Army Officers (simulation specialists) choose UCF for M&S M.S. degree

• M&S students have focused on one or more of the following research areas:
  • Human Systems in M&S
  • Computer Visualization in M&S
  • Quantitative Methods for Simulation, Modeling and Analysis
  • Interactive Simulation and Intelligent Systems
  • Simulation Infrastructure
  • Simulation Management
  • Simulation in Healthcare
  • Behavioral Aspects of Cybersecurity

• Program is becoming more rigorous in terms of modeling, mathematics and engineering
Modeling & Simulation is highly multidisciplinary and active across many research areas at UCF.

M&S graduate students work on projects with faculty in nearly every UCF academic college and research center, and with strong corporate and government partners in the community.

- Game-based training, game performance evaluation, tools for after action review [College of Sciences (COS), IST, U.S. Army]
- Mobile applications for healthcare training and commercialization (CON, College of Med., College of Health & Public Affairs, College of Business Admin., IST)
- Classroom management simulation for teacher training (ENGR, College of Education & Human Performance, IST)
- Motion capture technology (ENGR, IST)
- DRAMA-RAMA [NIH project with College of Nursing (CON), IST]
- STOKES High Performance Computing (ENGR, COS, IST)
- Let's Go To The Fair (NSF STEM project in conjunction with Queens Museum of Art) (College of Arts & Humanities, IST)
- Virtual Family
- Motion capture technology
Modeling and Simulation Graduate Program

Programs Offered
1. Modeling & Simulation Ph.D.
2. Modeling & Simulation M.S.
3. Modeling and Simulation of Technical Systems Graduate Certificate (G.C.)
4. Modeling and Simulation of Behavioral Cybersecurity Graduate Certificate (G.C.)

Graduates
- M.S.: 358
- Ph.D.: 89
- G.C.: 32
Grand Total: 479
Since 2001 through Summer 2017
1st cohort of G.C. enrolled Fall 2012

Active Students
106 Active Students as of 5.26.2017
- Ph.D.: 52%
- M.S.: 39%
- Cyber G.C.: 6%
- Tech Sys G.C.: 3%

Joseph J. LaViola, Jr, Ph.D.
Graduate Program Director
Bruce Caulkins, Ph.D.
Behavioral Cyber Director
Sabrina Gordon, Ed.D.
Graduate Program Coordinator
Administration of the M&S Program
M&S Program Governance

VP & Dean, College of Graduate Studies
Dr. Elizabeth Klonoff
Professor

Director
Dr. Joseph J. LaViola, Jr.
Associate Professor

Certificate Director
Dr. Bruce Caulkins
Assistant Professor

Coordinator
Sabrina Gordon, Ed.D.

Executive Advisory Board¹
(External)

Academic Advisory Board²
(Internal)

Curriculum Committee

Admissions, Standards, & Awards Committee

¹Executive Advisory Board
- Eric Anschuetz – Head, Software Systems Branch, Naval Air Warfare Center Training Systems Division
- Waymon Armstrong – President, Engineering & Computer Simulations
- Thomas L. Baptiste – President/Exec. Dir., National Center for Simulation
- Dr. Edward Degnan – Chief, M&S Found. Div., Air Force Agency for M&S
- Dr. Christopher D. Geiger – Sr. Manager, Universal Orlando Resort
- Cindy Harrison – Chief Software Architect, U.S. Army PEO STRI
- Dr. Roger Smith – Chief Technology Officer, Nicholson Center at FL Hosp.
- Dr. Robert Sottilare – Associate Director of Science & Technology, ARL
- Dr. Randall Shumaker – Director, Institute for Simulation & Training
- Janet Weisenford – Fellow, Inner City Fund International (ICFI)
- Dr. Ken Westerlund – Technical Director, Camber Corp.

²Academic Advisory Committee
Discipline areas represented:
- Industrial Engineering
- Psychology
- Computer Science
- Electrical Engineering
- Math
- Philosophy
- Digital Media
- Medicine
- Institute for Simulation & Training
- Education
The M&S M.S. Degree
M.S. Degree Program

• **M.S. Thesis** Option
  - 24 credit hrs coursework
  - 6 credits of thesis hours

• **M.S. Non-Thesis** Option
  - 30 credit hrs of coursework

- Both options must have 24 hrs of formal coursework
- (can include up to 6 Indep Study hrs)
- Both options must have 50% (i.e., 15+ hrs) of coursework at 6000-level
- Only graduate-level work with a grade of “C-” or higher may be used to satisfy degree requirements

If you are considering pursuing a Ph.D., you should complete a thesis.
M.S. Timeline – Thesis

**Year 1**
- Complete core courses
- Select Thesis advisor
- Submit Graduate Plan of Study
- Network with students and faculty
- Perform independent research and formulate research question(s)/hypothesis(es)
- Form Thesis Advisory Committee, with assistance from Advisor

**Thesis Defense (Oral Examination)**
- If needed, continue coursework
- Complete thesis research
- Participate in professional conferences
- Prepare thesis document, with guidance from advisor
- Announce oral defense of thesis to UCF community, with approval of advisor
- Pass oral defense of thesis

If you are considering pursuing a Ph.D. at some time in the near or not-so-near future, it would be in your best interest to complete a M.S. Thesis.
The M&S Ph.D. Degree
Ph.D. Degree Program
Course Requirements w/Incoming Master’s Credit (30 hrs)

• 42+ credit hours
  • 12 hrs of core courses
  • 3 hrs research methods course
  • 3 hrs M&S restricted elective
  • 9+ hrs unrestricted electives
  • 15+ hrs dissertation

✓ Without incoming master’s credit, need 30hrs additional electives

✓ Only graduate-level work with a grade of “C-” or higher may be used to satisfy degree requirements
Choosing an Advisor

Things to consider regarding the Mentoring Process:

• Most successful mentoring experiences involve a TEAM of mentors
  • Career vs. content mentors

• Consider the “match” across at least 3 dimensions:
  • Dissertation topic to faculty’s expertise
  • Interpersonal working patterns
  • Research methodology

• Not all advisors are mentors
  • Unfortunate, but true
  • Establish expectations early on
Ph.D. Timeline

Qualifying Examination
- Complete core courses
- Pass Qualifying Exam
- Select dissertation advisor
- Submit Graduate Plan of Study
- Complete mandatory Academic Integrity/RCR training
- Network with students and faculty
- Begin to explore research problem

Candidacy Examination
- Continue coursework
- Form Dissertation Advisory Committee, with assistance from Advisor
- Perform independent research and formulate research question(s)/hypothesis(es)
- Have manuscript accepted for publication
- Prepare research proposal document, with guidance from advisor
- Pass oral defense of research proposal

Dissertation Defense (Oral Examination)
- Complete dissertation hours requirement
- If needed, continue coursework
- Complete dissertation research
- Participate in professional conferences
- Prepare and submit manuscripts for publication
- Prepare dissertation document, with guidance from advisor
- Announce oral defense of dissertation to UCF community, with approval of advisor
- Pass oral defense of dissertation

Annual Review

Year 1
- Fall
- Spr
- Sum

Year 2
- Fall
- Spr
- Sum

Year 3 and Onward
- Fall
- Spr
- Sum
Qualifying Examination

**Can You Plan to Do Research?**

- QE = Writing and presenting a “mini” research proposal

- **Purpose is to evaluate and give you early feedback about your:**
  - Ability to design sound, scientific research,
  - Writing skills, and
  - Oral presentation skills.

- **What is considered “mini”?**
  - This is subjective and determined by each individual advisor based on the applicable research field and your strengths and weaknesses as a student.

- **Should force you to strengthen one of your weaker skills**
  - If you are loquacious, your advisor may impose **maximum** limits on the length of your paper, presentation, and slides allowed
  - If you are weak at public presentations, your advisor may impose **minimum** requirements on length of paper, presentation, and slides
Qualifying Examination

Procedures

You must first pass the 4 core courses:

- IDS 6147: Perspectives on Modeling and Simulation
- DIG 5876: Quantitative Aspects of Modeling and Simulation
- IDS 6145: Simulation Techniques
- IDS 6148: Human System Integration for Modeling and Simulation
The All-Important Graduate Plan of Study
The Graduate Plan of Study
Forms available online:
http://www.ist.ucf.edu/grad/Forms.html

File by the end of your 2nd term
- Keep the GPS current by updating it when revisions are made
The Graduate Plan of Study

You can always check your progress @ myUCF Student Center:
UCF Training and Resources
Academic Integrity/Responsible Conduct of Research Workshops

• Required only for Ph.D. students; optional for MS students

• Workshop schedule available online: (http://www.students.graduate.ucf.edu/academic_integrity_training/)

• All training must be completed prior to Ph.D. student’s advancement to candidacy

• Should be completed by the end of a student’s second term of enrollment
“NOT ANYMORE” Module

• Required for all new students admitted FA14 or later

• This is a behavioral conduct module to ensure that UCF remains a safe and productive environment for all members of the community

• Mandatory module should be completed online

• Enrollment will be dropped/placed on hold if not completed by the end of this semester
Supplementing Your Graduate Education

• Graduate certificates – must apply & be accepted
  • eLearning Professional Development
  • Instructional Design for Simulations
  • Training Simulation
  • Design for Usability
  • Industrial Ergonomics and Safety
  • Systems Engineering
  • Emergency Management and Homeland Security
  • Modeling and Simulation of Technical Systems
  • M&S of Behavioral Cybersecurity
  • Geographic Information Systems
  • Project Engineering
  • Quality Assurance
  • and, others

• M.S. degree “Along the Way” – request through Sabrina
UCF is organized by colleges which house departments

This is important for understanding who to contact for electives and faculty to support your area(s) of interest.
M&S Website & Resources
www.ist.ucf.edu/grad

Our website is a great place to find:

• Examples of course syllabi,
• Seminars (past recordings and future announcements)
• Forms and procedures,
• Brochures for all of our programs,
• Contact information,
• And MORE!
Presenting Your Research

• It is very important to seize opportunities to present your research.

• Seek out a UCF Graduate Presentation Fellowship to help cover travel costs!
  • In-state ($300)
  • United States (including Puerto Rico, Hawaii, and Alaska), Canada, or Mexico ($500)
  • International ($800)
  • https://funding.graduate.ucf.edu/presentation/
University Facilities, Resources and Support Services

Library
library.ucf.edu

University Writing Center
407-823-2197
www.uwc.ucf.edu

International Services Center
407-823-2337
www.intl.ucf.edu

Campus Bookstore
407-823-2665 (JTWC)
407-882-0364 (B&N)
ucf.bncollege.com

Career Services
407-823-2361
www.career.ucf.edu

Health Services
407-823-2701
hs.sdes.ucf.edu

Student Accessibility Services
407-823-2371
sds.sdes.ucf.edu

Counseling Center
407-823-2811
counseling.sdes.ucf.edu

Recreational & Wellness Center
407-823-2408
rwc.sdes.ucf.edu

UCF Student Union
ucfsu.com
University Facilities, Resources and Support Services

Graduate Student Center
graduate.ucf.edu

Technology Commons
407-823-4357
servicedesk@ucf.edu

Veterans Academic Resource Center
407-823-2707
varc@ucf.edu

STOKES High Performance Computing
help-stokes@ist.ucf.edu
University Facilities, Resources and Support Services

- Where can I go if I have a complaint or concern?
  - This will depend on the unit that is being addressed in your complaint or concern.
  - You can ALWAYS start with our M&S Graduate Program Office.
    - We can ensure confidentiality, and
    - If the issue needs to be routed to another unit, we can help you find the right people to help.
Key Graduate Policies
Understand the University Policies

• The UCF Graduate Catalog is online (www.graduatecatalog.ucf.edu)

• Must be acquainted with **ALL** university policies

• Will now highlight more relevant policies for graduate education
  • Time Limitations
    • 7-Year Rule
  • Enrollment policies
    • Full-Time vs. Part-Time Enrollment
    • Continuous Enrollment
  • Dual Degree Shared Credit Policy
    • Triple Dipping
  • Unsatisfactory grades and academic standing
Time Limitations

• Your graduate degree when granted should be current and up to date in the discipline

• **7-Year Rule:** No courses used in a GPS can be older than 7 years at the time of graduation
  • This is based on when each course is taken – not on admit term
  • For example, the course(s) that you take this Fall 2017 semester will be valid until the end of Fall 2024.

• This is the same for graduate certificates.
7-Year Rule **Exceptions**

- Courses that are part of an **EARNED** Masters degree are **EXEMPT** to this policy, including those earned “along the way” in a doctoral program
Enrollment Policies

Full-Time vs. Part-Time Enrollment

- Fall and Spring terms
  - Full-Time Enrollment ≥ 9 credit hrs
  - Part-Time Enrollment < 9 credit hrs

- Summer terms
  - Full-Time Enrollment ≥ 6 credit hrs
  - Part-Time Enrollment < 6 credit hrs

- Special cases:
  - M.S. thesis-option students enrolled only in Thesis hrs (XXX6971), Full-Time Enrollment ≥ 3 hrs per term, including summer terms
  - Ph.D. candidates enrolled in Dissertation hrs (XXX7980), Full-Time Enrollment ≥ 3 hrs per term, including summer terms
  - If you are receiving financial aid, please be sure to inquire about your funding agency’s definition of full-time and part-time enrollment

- **IMPORTANT:** Once you begin thesis or dissertation credits, you **MUST** continue to take them each semester until you graduate
Enrollment Practices

- **Deadlines**
  - Regular Registration
  - End of Regular RG
  - Classes Begin
  - Late Registration
  - Drop/Swap Deadline
  - Add Deadline

- **Late Enrollment**
  - You must be enrolled in something by the deadline for regular registration; you may then add/drop through those respective deadlines.
  - If you wait to process your first enrollment attempt after classes begin, you will be assessed a $100 late enrollment fee.

- **UCF 1500**
  - This is an administrative course in which anyone can enroll to process first registration during regular registration. Can use add/drop periods to adjust enrollment later.

- **Multiple Term Enrollment**
  - Enrollment opens up in March each year for the next 3 semesters (Summer, Fall, Spring).
  - Students can plan coursework by enrolling in future semesters

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<td>End of Regular RG</td>
<td>Classes Begin</td>
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<td>Drop/Swap Deadline</td>
<td>Add Deadline</td>
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Enrollment Policies

Continuous Enrollment

• Cannot miss 3 consecutive academic terms (Fall/Spring/Summer) to remain ACTIVE student
  • Will automatically become INACTIVE, if you do
  • In the case of an extenuating circumstance, a Special Leave of Absence may be requested by a student to temporarily waive the continuous attendance requirement

• MUST RE-APPLY to program, if you become INACTIVE
  • Readmission is not guaranteed
  • Readmission decisions are based on such factors as space in the program, reasons for the break in graduate education, progress in the degree program, among others
  • MUST follow catalog year of readmission
Enrollment Policies

• Per university policy, students must be enrolled in order to:
  • take exams,
  • conduct research, or
  • use any **university resources** (i.e., library access, faculty and staff member’s time, etc.).
Dual Degree Shared Credit Policy

• No “Triple Dipping”
  • No credit hours may be counted for more than two degree programs
    • i.e., PhD students who come in with 30hrs from earned MS cannot use those same transfer 30hrs towards new M&S MS along the way.

• Excludes Graduate Certificates
  • i.e., same course can be used towards PhD, MS along the way, and GC simultaneously.
Unsatisfactory Grades

• “C” grades (C, C+, C-), as well as D, D+, D-, F, and U grades, are all considered unsatisfactory grades.

• May apply a maximum total of 6 credit hours or 2 courses with “C” grades, whichever is greater, to satisfy degree program requirements.

• Exceeding 6 hrs of unsatisfactory grades may be grounds for dismissal.

• Be aware of +/- grades
  • For example, “B-” is calculated as 2.75 grade points.
Academic Standing

• Regular
  • Students must maintain a Graduate Status GPA of 3.0 or better in order to maintain regular graduate student status, receive financial assistance, and qualify for graduation.

• Probation
  • If GPA < 3.0 (but still higher than 2.0), student will be automatically placed on academic probation

• Dismissal
  • If GPA < 2.0, student will be automatically dismissed from all active programs at UCF
  • Any student who has earned more than two unsatisfactory grades, including C+ or less, U or WF is subject to dismissal from the program
**Core Course Sequence**

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<th>People</th>
<th>Processes</th>
<th>Technology</th>
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<td>IDS 6147</td>
<td>DIG 5876</td>
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<td>Perspectives on M&amp;S</td>
<td>Quant Asp of M&amp;S</td>
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<td>Fall Year 1</td>
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<td>Spring Year 1</td>
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<td>IDS 6148</td>
<td>IDS 6147</td>
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<td>HSI for M&amp;S</td>
<td>Perspectives on M&amp;S</td>
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<td>Fall Year 2</td>
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<td>PhD &amp; MS Thesis:</td>
<td>MS Non-Thesis:</td>
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<td>IDS 6262 Research Design for M&amp;S</td>
<td>IDS 6916 Sim Research Methods &amp; Practicum</td>
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**Legend**
- Pre-requisite
- Pre- or Co-requisite

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# New Student Advising

## MS & PhD Core Courses

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Semester to Enroll</th>
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<tbody>
<tr>
<td><strong>IDS 6147 Perspectives on Modeling and Simulation</strong></td>
<td>Fall 2017 (#19846) or Spring 2018 (#19846)</td>
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<tr>
<td><strong>DIG 5876 Quantitative Aspects of M&amp;S</strong></td>
<td>Fall 2017</td>
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<tr>
<td><strong>IDS 6148 Human Systems Integration for M&amp;S</strong></td>
<td>Spring 2018 (#19534)</td>
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<tr>
<td><strong>IDS 6145 Simulation Techniques</strong></td>
<td>Spring 2018 (#20333)</td>
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</tbody>
</table>

**MS non-thesis option:**

**IDS 6916 Simulation Research Methods and Practicum**

Your last Fall semester

**PhD & MS thesis option:**

**IDS 6262 Research Design for M&S**

Fall 2017 (#20332)
Stay in Contact with Us

• Must use UCF’s student e-mail system (www.knightsmail.ucf.edu)

• University and program information and notices will ONLY be sent here

• You can view your Knights e-mail from other e-mail accounts
Upcoming Events

- **M&S Thesis and Dissertation Defenses**
  - To be announced soon
  - Be sure to attend as many as possible

- **MaSK Meetings**
  - To be announced soon

- **M&S Seminar Series**
  - To be announced soon

- **M&S Food for Thought – Open Lunch Hour**
  - Each month – dates to be announced soon
  - 12:00pm – 1:00pm
  - Partnership II Building, 3rd floor collaboration area
## Stay in Contact with Us

<table>
<thead>
<tr>
<th>Degree Program</th>
<th>Program Director</th>
<th>Support Personnel</th>
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</table>
| Modeling & Simulation Ph.D.                         | Joseph J. LaViola, Jr., Ph.D.  
Associate Professor,  
Computer Science  
M&S Director  
jjl@eecs.ucf.edu  
Partnership II Bldg – 131J | Sabrina Gordon, Ed.D. Coordinator  
(407) 882-1407  
Sabrina.Gordon@ucf.edu  
modsims@ucf.edu  
Partnership II Bldg – 131D |
| Modeling & Simulation M.S.                          |                                                                                 |                                        |
| Modeling & Simulation of Technical Systems G.C.     |                                                                                 |                                        |
| Modeling & Simulation of Behavioral Cybersecurity G.C. | Bruce Caulkins PhD,  
Colonel (Ret), US Army  
bcaulkin@ist.ucf.edu  
(407) 882-2427  
Partnership II Bldg – 319 |                                        |
Stay in Contact with Us

• Join our networks and stay informed!

• Find us on [Facebook] and [LinkedIn]

• Search for “UCF Modeling & Simulation Graduate Program”
Thank You for Your Attention!

Now it’s time to meet the faculty!

Questions? Comments?
M&S Opportunities for Success

Presented by Dr. Joseph Kider
M&S Opportunities for Success

M&S Primer Webcourse

Modules include:
- Programming
- Experimental Design
- Human Factors
- Mathematics
- Physics
- Cybersecurity

Accessible 24/7:
https://webcourses.ucf.edu/courses/1249560/modules

M&S Bootcamp Sessions

Sessions will be held throughout the year on various topics:
- Calculus
- Programming Languages
- Survey Design
- Etc.

Dates will be publicized soon
Meet the Faculty
Patricia Bockelman Morrow, PhD

IDS 6147 Perspectives on Modeling and Simulation

Research Areas:
- Human Performance, Applied Cognition, Virtual and Augmented Reality, Human Factors Psychology, Modeling & Simulation
Bruce Caulkins, PhD, Colonel (Ret), US Army

Research areas: Behavioral Aspects of Cybersecurity, Modeling and Simulation, Anomaly Detection, Data Mining

IDC 5602 Cybersecurity: A Multidisciplinary Approach

IDS 6916 Simulation Research Methods and Practicum (CYBER)

IDC 6600 Emerging Cyber Issues

IDC 6601 Behavioral Aspects of Cybersecurity
Pamela K. Douglas, PhD

IDS 6262 Research Design for Modeling and Simulation

IDS 6938 Modeling Neuronal Systems

Research Areas:
- Neuroengineering, Modeling Neuronal Systems, Machine Learning, Predictive Coding & Gauge Theory
Cali Fidopiastis, PhD

IDS 6916 Simulation Research Methods and Practicum

IDS 6938 Neuroengineering

Research Areas:
- Virtual reality technology, applied neuroscience, human performance and brain function within natural and simulated environments
Neal Finkelstein, PhD

IDS 6149 Modeling and Simulation for Test and Evaluation

Research Areas:
• Military Modeling and Simulation Training Effectiveness, Human Agent Teaming, Virtual & Augmented Reality, Testing Using Modeling and Simulation
Joseph T. Kider, PhD

Research Areas:
- Building / Architectural Simulation,
- Light Transport, Computer Graphics,
- Virtual Reality, Smart Buildings,
- Internet of Things (IoT)

IDS 6938 Building Performance Simulation

IDS 6145 Simulation Techniques
Robert Sottilare, PhD

IDS 6938 Intelligent Tutoring System (ITS) Design

Research Areas:
- Adaptive Instruction, Intelligent Tutoring Systems, Educational Data Mining, Machine Learning, Multi-agent Architectures
R. Paul Wiegand, PhD

DIG 5876 Quantitative Aspects of Modeling and Simulation

IDC 6700 Interdisciplinary Approach to Data Visualization

Research Areas:
- Natural Computation, Coadaptive and Coevolutionary Computation Theory,
  Application of Coadaptive Methods for Multiagent Learning