College of Engineering and Computer Science (CECS) Virtual Graduate Open House: CECS LAC Scholarship

Ali P. Gordon, PhD, F. ASME
Professor and Associate Dean
cecsgrad@ucf.edu
Welcome – Dr. Ali P. Gordon

• PhD in Mechanical Engineering from Georgia Tech
• Joined UCF in 2005
• Fatigue and Fracture
• Over 150 journal and conference publications
• Chaired 9 PhD dissertations
• Associate Dean in 2019
• ASME Fellow in 2021
College of Engineering and Computer Science

Open House Goals

• Learn more about UCF’s College of Engineering and Computer Science
• Learn about the CECS LAC Scholarship
• Connect you to the Office of Graduate Affairs in CECS
• Get answers to your questions and provide answers to questions you might receive

CECS Grad Site
http://grad.cecs.ucf.edu
Dean’s Welcome – Dr. Michael Georgiopoulos

- Appointed as Dean in 2013
- Numerous Research and Teaching Awards
- Joined UCF in 1986
- Pegasus Professor in 2010
- Earned PhD in Electrical Engineering from the University of Connecticut
- BS in Electrical, Electronics, and Communications Engineering from the National Technical University of Athens
Enrollment by Nation of Citizenship: 2023-24 Fall Term

Total Countries (non-USA): 65

1,258 US Graduate Students in CECS
807 International Graduate Students in CECS
CECS Graduate Open House Overview

College Overview

Program Overviews

CECS LAC Scholarship

Closing & Survey

Submit your questions to me at cecsgrad@ucf.edu

Share your questions via chat

Not to scale
The University of Central Florida was founded in 1963 as Florida Technological University, with the mission of supporting the growing United States space program at nearby Kennedy Space Center and Cape Canaveral Air Force Station.
CECS by the numbers

13,544 UG+G
STUDENTS ENROLLED
Fall 2022

41,000+
ALUMNI
Spring 2022

34% of UG
UNDER-REPRESENTED
Fall 2022

31% of UG
PELL GRANT-ELIGIBLE
Fall 2022

1310/4.2
SAT/GPA of STUDENTS
Fall 2022

1466/4.5
SAT/GPA of HONORS
Fall 2022

$54.4M
RESEARCH FUNDING
2021-2022

$50.7M
RESEARCH EXPENDITURES
2021-2022

#1 SUPPLIER OF GRADUATES TO THE U.S
AEROSPACE AND DEFENSE INDUSTRIES

#1 COLLEGIATE CYBERSECURITY AND
COMPUTER VISION TEAMS IN THE US

#10 PRODUCER OF UG DEGREES IN THE US

#2/23 PRODUCER OF UG DEGREES TO UNDER-
REPRESENTED GROUPS AND WOMEN

#2/23 NASA KENNEDY SPACE CENTER
EMPLOYEES ARE UCF GRADS

CECS Virtual Graduate Programs Open House | Fall 2023
College of Engineering and Computer Science

**CECS’s Home**

- Six academic departments
- Numerous Engineering and Computer Science Buildings
- Various Research Buildings
- Nearly 200 Faculty in CECS
- Adjacent Nation’s 7th Largest Research Park (145 Companies nearby)
- Nation’s epicenter for computer modeling simulation and training

Airports: MCO (20), SFB (15), MLB (60), DAB (55), TPA (107)
Rail: Brightline, SunRail, and Amtrak
Interstate: I-95, I-4

[Map of Florida showing locations]

www.cecs.ucf.edu
College of Engineering and Computer Science

Proximity to Industry

[Diagram showing various companies and proximity indicators]
**CECS Internationalization**

1,769
INTL STUDENTS
Fall 2022

117/112/103
BS/MS/PhDs AWARDED
2021-2022

6+
RECRUITING EVENTS
2021-2022

109
COUNTRIES REPRESENTED
Fall 2022

90.3%
1st YEAR RETENTION
Fall 2022

30
ACTIVE INTL AGREEMENTS
Spring 2022

79.2%
4-YEAR SUCCESS
Fall 2022

46
ENGR EXCHANGE PRGMs
Spring 2023

#1/1
ENROLLMENT OF INTERNATIONAL MS/PHD
STUDENTS – COMPUTER SCIENCE (175/101)

#2/3
ENROLLMENT OF INTERNATIONAL PHD
STUDENTS – CIVIL/ELECTRICAL (63/61)

#4
ENROLLMENT OF INTERNATIONAL PHD
STUDENTS – MECHANICAL (50)

#22
PRODUCER OF PHD DEGREES TO
FOREIGN NATIONALS

71%
OF GRAD STUDENTS COME FROM
5 FOREIGN COUNTRIES
College of Engineering and Computer Science

CECS’s Research Highlights

- AI Initiative 18+ Hires
- Energy Initiative 16+ Hires
- Space/AE Initiative 15+ Hires
- Cyber Initiative 5 Hires

Collaborations:
- CECS+CREOL
- CECS+CO:
- CECS+COM
- CECS + CBA
- CECS + SMST

Research Park:
- All DoD Entities
- 100 Companies
- 10,000 Employ.
- Themed Parks
- Disney, Universal

- Learning Sciences Cluster
- AI and Big Data Initiative
- Smart City + FDOT Initiative (Transportation, Water, Mobility)
- Renewable Energy and Chemical Transformation (REACT) Cluster
- Disability, Aging and Technology Cluster
- Advanced Materials Processing and Characterization Center (AMPAC) Nanoscience Technology Center (NSTC) Center
- Interactive Computing Experiences Cluster (AR, VR, XR)

CECS Strengths:
- Center for Research in Computer Vision Center
- Genomics and Bioinformatics Cluster
- Renewable, Sustainable, Intelligent Energy Systems (RISES) + Siemens Center
- CATER + Siemens (Energy, Turbomachinery) Cluster
- Sustainable Coastal Systems Center
- Cyber Security and Privacy Cluster
- Biionix (Bionics, Materials, Implants and Interfaces) Cluster

- Faculty
  163 T/TE
  431/1
  69 Adjuncts
  64 Post-Docs

- Deans AB
  40 + Companies
  Lockheed Martin
  L3Harris
  Northrop
  Leidos, Raytheon
  NASA-KSC
  Space Industry

- Chip Technology Initiative 16+ Hires
- Digital Twin Initiative 14+ Hires
- Infectious Diseases Initiative 15+ Hires
CECS Departments

- Civil, Environmental and Construction Engineering (CECE)
- Computer Science (CS)
- Electrical and Computer Engineering (ECE)
- Industrial Engineering and Management Systems (IEMS)
- Materials Science and Engineering (MSE)
- Mechanical and Aerospace Engineering (MAE)

www.cecs.ucf.edu
CECS Graduate Programs

Master’s of Science (MS) Degree Programs
- Aerospace Engineering
- Biomedical Engineering
- Civil Engineering
- Computer Engineering
- Computer Science
- Electrical Engineering
- Environmental Engineering
- Digital Forensics
- Engineering Management
- Environmental Engineering
- FinTech*
- Industrial Engineering
- Materials Science and Engineering
- Mechanical Engineering
- Modeling and Simulation*
- Systems Engineering
- Travel Technology and Analytics

Specialty Graduate Programs
- MS in Engineering Management, Professional Project & Systems Engineering Track (a cohort-based program)
- MS in Data Analytics
- Graduate Certificate in Data Analytics
- MS in Healthcare Systems Engineering Track

Doctor of Philosophy (PhD) Degree Programs
- Aerospace Engineering
- Big Data Analytics*
- Biomedical Engineering
- Civil Engineering
- Computer Engineering
- Computer Science
- Electrical Engineering
- Environmental Engineering
- Industrial Engineering
- Materials Science and Engineering
- Mechanical Engineering
- Modeling and Simulation*

Admit Term | Fall Priority | Fall | Spring | Fall
---|---|---|---|---
App. Deadline | January 15th (December 1st) | July 1st (December 1st) | December 1st (July 1st) | April 1st
Domestic (International) | | | | |
**MS Programs**

- MS Civil: MSCE, Transportation, Smart Cities, Water Resources, Geotechnical and Structural
- MS: Environmental Engineering and Environmental Engineering Sciences

**Options**

- Thesis (8 classes+ research) versus Non-thesis (10 classes)
- In Person, Online, Hybrid

**Admissions**

- 3.0 GPA (Domestic can be below 3.0)
- No GRE
- International Transcript Evaluation
- TOEFL (80), IELTS 6.5
- Essay and Letters of Recommendation

**Point of Contact**

- Dr. Andrew Randall andrew.randall@ucf.edu

[cece.ucf.edu](http://cece.ucf.edu)
College of Engineering and Computer Science

Industrial Engineering and Management Systems

MS Programs

- Industrial Engineering: MSIE (for BSIE grads) and IE MS, HSE Track
- MS in Engineering Management and PP&SE Track
- MS in Systems Engineering

Options

- Thesis (8 classes+ research) versus Non-thesis (10 classes)
- In Person, Hybrid, Online
- At least 15 hours of 6000-level

Admissions

- BS IE or related field with 3.0 GPA (Domestic can be below 3.0) (probability and stats, calculus, programming)
- No GRE
- International Transcript Evaluation
- TOEFL (80), IELTS 6.5
- Resume, Essay, and Two Letters of Rec

Point of Contact

- Dr. Mansooreh Mollaghasemi mollagha@ucf.edu

iems.ucf.edu

CECS Virtual Graduate Programs Open House | Fall 2023
Industrial Engineering and Management Systems

Research Interests

- Modeling, Simulation, and Training Systems
- Operations Research and Optimization
- Manufacturing, Quality, and Production Systems
- Human Factors and Ergonomics
- Management Systems Engineering
- Innovation and Technology Entrepreneurship

Outcomes

- PhD Program, Aero and Defense, Energy, Entertainment
- Consulting, Healthcare, Build your business

Why IE at UCF

- IEMS is the top ranked program at CECS, and one of only two ranked IE Programs in Florida (after University of Florida)
- IE graduate programs ranked 40th in the world by U.S. News & World Report Best Graduate Schools 2021 guide
- Top 10 BSIE majors producers in the nation
- Faculty are excellent teachers and researchers, student-oriented, professionally active
- Large graduate program (100+ PhD and 300+ MS students)
- Graduate research opportunities
- Team projects - IE students get valuable practical experience through team projects

iems.ucf.edu
Computer Science

MS Programs

- Computer Science
- Computer Vision
- Cyber Security and Privacy (two tracks)
- Data Analytics (Market Rate, joint w/ C. of Sciences)
- Digital Forensics (online)
- FinTech (joint with College of Business)

Options

- Thesis (8 classes+ research) versus Non-thesis (10 classes)
- B in CDA 5106 and COT 5405 required

Admissions

- 3.0 GPA (Domestic can be below 3.0), B’s or better in undergraduate programming courses (Architecture, OS, Discrete Structures)
- GRE (no minimum, but Q:160 preferred)
- International Transcript Evaluation
- TOEFL (80), IELTS 6.5
- Resume, Essay, and Two Letters of Rec

Point of Contact

- Dr. Wei Zhang Wei.Zhang@ucf.edu

cs.ucf.edu
Research Areas

- Bioinformatics and Systems Biology
- Computer Architecture
- Computer Graphics
- Computer Security and Digital Forensics
- Computer Vision
- Database
- Image and Video Processing
- Machine Learning and AI
- Networking and Mobile Computing
- Parallel Computation
- Software Engineering and Systems
- Theory of Computing, Algorithms and Quantum Computing
- Virtual Reality and HCI

Faculty Highlights

- 3 NAE Fellows, 6 IEEE Fellows, 1 ACM Fellow, 2 AAAS Fellows
- National Collegiate Cyber Defense Championship and Programming Contest winners and awardees
College of Engineering and Computer Science

Interdisciplinary Approach

- Master of Science in FinTech (MS)
  Utilize Technology and Innovation to Shape the Future of Finance

- Master of Science (MS) in Themed Experience
  Design and Produce Themed Environments in Orlando, Florida

- Big Data Analytics (PhD)

- Modeling and Simulation (PhD)

CECS Virtual Graduate Programs Open House | Fall 2023
On-Demand Program-Specific Overviews

Over 30 Overviews

Line-Up:
- Graduate Program Director/Coordinators
- Faculty Talks
- Campus Tour
- Financial Aid
- College Overview

All attendees to receive a link to the CECS On-Demand Overview of their prospective program
Graduate Fellowships

- **Internal** – ORCGS, Presidential, Trustees, McKnight, McNair, etc.
- **External** – NSF, DoD SMART, DoD NDSEG, NASA, GEM, etc.
- Apply early
  - For Fall 2024 – November time-frame
- Contact prospective faculty advisor early
- Most funding is geared towards PhD students

https://graduate.ucf.edu/fellowships/

Renewed for Fall 2023
Application
Application Mr. Leben Goldman

- Associate Director of Recruiting in the College of Graduate Studies
- Admissions and Recruiting
- Key lead on all Graduate Recruitment for UCF, recruitment event planning for graduate fairs, travel to represent UCF and its graduate programs at national conferences, design of relevant recruitment materials for UCF graduate programs
- Joined UCF in 2014
- Degrees from UCF and FSU
College Goals:

- Being a pre-eminent research-oriented college
- **Double** the number of engineering and computer science faculty
- **Double** the current enrollment of graduate students from 2,000 to 4,000 by the year 2032 (PhD students from about 600 to 1,500 | MS students from 1,400 to 2,500)

CECS LAC Scholarship is means by which the College can attract more students interested in pursuing thesis research and potentially a doctoral degree

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“Under Florida statute 1009.21, full-time students who are a citizen of a Latin American or Caribbean country (including Puerto Rico and the U.S. Virgin Islands) and who receive scholarships from the federal or state government shall be classified as residents for tuition purposes. This provision of the law provides an opportunity to encourage the continued internationalization of UCF and to attract more high-quality students from Latin America and the Caribbean.”
• LAC award must be a scholarship (cannot be employment-related).

• LAC award must be at least $500.00 per semester and consist of either a state/federal scholarship or a combination of state/federal funding, with equal matching funds from private businesses, private foundations, and/or public agencies.

• LAC award may be provided to a student who has dual citizenship between an eligible country and the United States.

• LAC award requires full-time enrollment (see enrollment requirements https://registrar.ufl.edu/registration/enrollment-requirementshere).
CECS LAC: Timeline (Fall Admission)

November:
- Start CECS LAC Application

December:
- Review Websites
- Contact Faculty
- Complete Application
- Look for Other Support Sources

January:
- Receive Admission Decision
- Apply for Other Support Sources
- Stay Connected with Faculty
- CECS LAC Scholarship Notification

February:
- Stay Connected with Faculty

March:
- Stay Connected with Faculty

April:
- Stay Connected with Faculty

May:
- Arrive to UCF

June:

July:

August:
### 2023-2024: CECS LAC Awardees

<table>
<thead>
<tr>
<th>Name</th>
<th>Program</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angel Argueta</td>
<td>Computer Science MS</td>
<td>Honduras</td>
</tr>
<tr>
<td>Tisana Richards</td>
<td>Biomechanics MS</td>
<td>Jamaica</td>
</tr>
<tr>
<td>Diana Rodriguez De Francisco</td>
<td>Biomedical Engineering MS</td>
<td>Venezuela</td>
</tr>
</tbody>
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*Angel Argueta*

“The Latin American and Caribbean (LAC) Scholarship will play a crucial role in my academic journey at CECS by providing essential financial support for my Master's program in Computer Science/Artificial Intelligence. It has allowed me to focus on my studies without the burden of financial stress, enabling me to fully immerse myself in the program and make valuable contributions to the field.”

*Tisana Richards*

“Receiving the LAC scholarship is a major blessing to have. As I continue to pursue my career in biomechanics, being able to receive my master's degree without a huge financial burden has been invaluable. It has allowed me to fully commit to my studies and research, leading to significant advancements in my field.”

*Diana Rodriguez De Francisco*

“The LAC Scholarship has been crucial for my career, one for which I cannot express enough gratitude. It has not only made it possible for me to pursue my Biomedical Engineering Master’s degree but has also opened doors to internships and networking opportunities that have further enriched my educational experience.”
CECS LAC Scholarship: More Info

• CECS LAC students involved in thesis research are eligible for 4 semesters of CECS Scholarship support.

• Students involved in thesis research will receive consideration for full funding for the PhD program in CECS.

• CECS LAC students not involved in research will receive 2 or 3 semesters of scholarship support.

Award Description

The College of Engineering and Computer Science (CECS) supports the Latin American and Caribbean (LAC) Scholarship. It is a multi-semester award (maximum of three semesters) for students who are citizens or be reclassified as a Florida resident for tuition purposes. The CECS Office of Graduate Affairs awards scholarships to students pursuing selected CECS-based MS degrees. This award has been renewed for the 2023-24 academic year. In receiving the CECS-LAC Scholarship, students must submit an application after they are admitted to a CECS graduate program. Interested students can learn more about the LAC award at the following UCF Global website: https://global.ucf.edu/programs/laac/ by contacting Mr. Sergio Ponce-Cordova at Sergio.PonceCordova@ucf.edu. Eligibility will be verified with UCF Global and the college before any award can be made. You may apply for the 2024 spring and fall award semesters.
Next Steps
Research Centers and Faculty

- Advanced Materials Processing Analysis Center (AMPAC)
- Center for Advanced Transportation Systems Simulation (CATSS)
- Center for Advanced Turbomachinery and Energy Research (CATER)
- Center for Research in Computer Vision (CRCV)
- Coastal Dynamics of Sea Level Rise Research Cluster of Excellence
- Consortium for Applied Acoustoelectronics Technology
- Environmental Systems Engineering Institute
- FEEDER Center, DOE
- Future City Initiative
- Institute for Advanced Systems Engineering
- Interactive Systems & User Experience Research Cluster of Excellence
- Materials Characterization Facility (MCF)
- MIST Center, NSF I/UCRC
- Resilient, Intelligent and Sustainable Energy Systems (RISES) Cluster
- Stormwater Management Academy

2023 Recipients

Kerrie Chen
Engineering and Computer Sciences
NSF CAREER Award: $500,000

Zhaomiao (Walter) Guo
Engineering and Computer Sciences
NSF CAREER Award: $525,781

Luigi Perotti
Engineering and Computer Sciences
NSF CAREER Award: $520,769

2022: 8 Winners | 2021: 13 Winners...
• More recently, faculty are promoting their research in streaming presentations
• Research summaries w/Q&A, opportunity for follow-ups and collaboration
• Directed a variety of audiences
• At UCF CECS, Video Archive is online (https://www.cecs.ucf.edu/faculty-research-talks) searchable by topic, author and department
• Perfect for students to view at their own pace
Outlook and Closing
Benefits of a Graduate Degree

• Advance skillset
• Access to leadership roles
• Improve communication skills
• Enhance network
• Personal achievement
• MS is Pathway to PhD
• And more …
Our Expectations

• Graduate!!
• Abide by the various UCF, CECS, Dept., and Lab policies, guidelines, and regulations
• Explore what UCF has to offer
• Contribute to an atmosphere of collegiality and collaboration
• Be a positive ambassador for UCF
Closing

• Every Fall academic term, approximately 700 new students join CECS graduate programs
• Getting students admitted to and enrolled into graduate-level programs is a team effort
• Prospective students should develop a personal roadmap to execute their plans
Topics:
✓ Accelerated BS-to-MS Programs
✓ MS Programs:
✓ PhD Programs
✓ CECS LAC

http://cecs.ucf.edu/gradday
Thanks for Your Attention

Special Thanks:
CECS:
Heather Houser, Michael Georgiopoulos, Tracey Ziebro

CGS:
Leben Goldman, Brandy Pieper, and Jennifer Parham

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