

The Mechanical and Aerospace Engineering (MAE) Department was formed in 2002 by a merger of Mechanical Engineering, Aerospace Engineering, Mechanics and Engineering Science. We seek to provide exceptional educational experiences at the BS, MS and PhD levels, preparing our students for future leadership in industry, academia and government.

MAE WELCOMES...



John Conklin

(PhD Stanford) joined MAE after working for three years at the W. W. Hansen Experimental Physics Laboratory at Stanford University as a research associate. In 2011, John was the Fulbright Junior Lecturer at the University of

Trento in Italy. He has been awarded the Zeldovich Medal (2010) by COSPAR & the Russian Academy of Sciences for contributions to fundamental physics in space and the Balhaus Prize (2009) for best PhD thesis in Aeronautics and Astronautics at Stanford. John's research is in the development of precision instruments, spacecraft dynamics & control, and the design and analysis of space missions that depend heavily on these technologies.



Yong Huang

(PhD Georgia Tech) joined MAE in January 2013 after teaching at Clemson since 2003. His research interests are twofold: processing of biological and engineering materials for healthcare/energy applications, including three-dimensional direct writing of biological

and engineering structures, and understanding of process-induced damage or defect structures. He received the NSF CAREER Award, the SME Outstanding Young Manufacturing Engineer Award (2006) and the ASME Blackall Machine Tool and Gage Award (2005). He is a Fellow of ASME.



Chelsey Simmons

(PhD Stanford) joins MAE following a visiting research position at the Swiss Federal Institute of Technology (ETH) Zurich. She received her B.S. from Harvard and has been awarded numerous fellowships and grants, including an NSF Graduate Research Fellowship, the

Stanford Cardiovascular Institute Smittcamp Fellowship and a Burroughs Wellcome Foundation Collaborative Research Grant. Chelsey also received a Ph.D. Minor in Education and was a founding officer and President of Stanford's American Society for Engineering Education. Her research focuses on mechanical design for biomedical benefit: inventing, prototyping and testing microsystems to mimic bodily functions in a dish.

MAE FACTS

Largest department on UF campus

53 full-time faculty members

1,550 Undergraduate students

36% of MAE BS graduates go on to pursue full or part-time graduate studies

250 MS students

200 PhD students

41 PhD students graduated last year

\$13.1M in 2012 research expenditures

RESEARCH & FACULTY UPDATES

Congratulations to MAE Prof. **S. Balachandar** and colleagues for their new Predictive Science Academic Alliance Program (**PSAAP II**) award from the NNSA. The five-year **\$8M** award funds the Center for Compressible Multiphase Turbulence, which will focus on turbulence and mixing in particulate-laden flows under conditions of extreme pressure and temperature. Balachandar directs the College of Engineering Institute for Computational Engineering.

MAE faculty members continue our strong tradition in energy research, including two on-going **ARPA-E** grants totaling more than **\$5.5M**. Prof. **Saeed Moghaddam** leads a project on Membrane-Based Absorption Refrigeration Systems, while Prof's **David Hahn**, **James Klausner** and **Renwei Mei** collaborate on a Solar Thermochemical Fuel Production project, leveraging MAE's unique 10 kW solar simulator located at the UF Energy Research park.

Prof. **Warren Dixon** was elected to serve on the prestigious Air Force Science Advisory Board for a four-year term.

We would like to welcome Maj. Gen. **Jeffrey Riemer**, USAF (Ret.) as Chair of MAE's External Advisory Board. Dr. Riemer is an MAE alumnus (BSAE 1974) and is currently chief operating officer for InDyne, Inc.

Knox T. Millsaps Professor **Peter Ifju** recently completed his tenure as President of the Society for Experimental Mechanics by presiding over the 12th International Congress on Experimental Mechanics. He now joins Prof's Charles Taylor and Daniel Drucker on the list of SEM past presidents from UF.

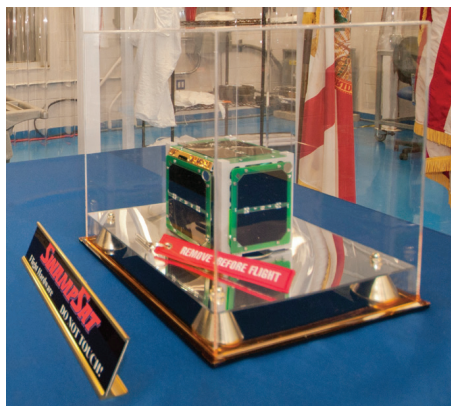
MAE plans to hire 6 additional faculty members, please look for our ads in Fall 2013.



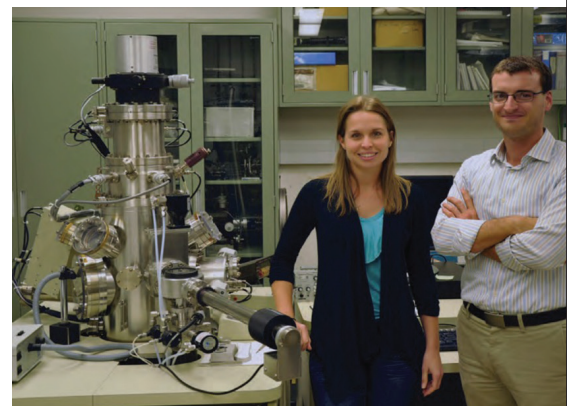
MECHANICAL AND AEROSPACE ENGINEERING is highly committed to providing an active learning environment with an emphasis on design, innovation, leadership and teamwork. We are pleased to highlight a few of our students, student groups and activities, and look forward to the completion of our new 3,600 sq. ft. **Student Design Realization Center** this year. The SDRC will provide state-of-the-art space fully dedicated to MAE student design and build activities



MAE student interns and alumni at Hawthorne, CA, SpaceX location show their school spirit with the Gator Chomp. **Nearly 50% of our undergraduate students completed an internship during their studies.**



SwampSat, a student and faculty designed and built small satellite, at the unveiling. **SwampSat is scheduled for launch in November 2013.**



Two recent MAE PhD graduates are now staff members at Sandia National Laboratories. **MAE has placed numerous PhD graduates at Sandia and other national labs in recent years.**



MAE students at the 2013 Formula SAE competition in Michigan with their student designed and built car. **Congratulations to the team for their top 10 finish.**



MAE students at the 2012 Society of Women Engineers National Conference. **SWE is one of more than a dozen active students groups with a strong presence in MAE.**

DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING

UF | UNIVERSITY of FLORIDA

Mechanical Engineering is among the oldest and most diverse of the engineering disciplines. It covers traditional topics such as design, manufacturing, energy and power generation, as well as modern topics of robotics, mechatronics, nano- and biotechnology, and autonomous systems. Aerospace Engineering is focused on the design, manufacturing and testing of aircraft and space systems, and it enjoys considerable synergy with the mechanical engineering discipline. At the University of Florida, MAE has experienced strong and steady growth, making us the most popular majors in the College of Engineering, and driving MAE to now be the largest department on the University of Florida campus.

MAE FACTS

Largest department on UF campus

53 full-time faculty members

More than a dozen student societies

5 dedicated undergraduate teaching laboratories

1,600 Undergraduate students

300 MS students

200 PhD graduate students



MAE students at the 2012 Society of Women Engineers National Conference



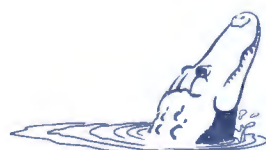
MAE students at the 2013 Formula SAE competition in Michigan with their student designed and built race car

MAE MISSION

The Department was formed in 2002 by a merger of Mechanical Engineering, Aerospace Engineering, Mechanics and Engineering Science. We seek to provide exceptional educational experiences at the BS, MS and PhD levels, preparing our students for future leadership in industry, academia and government. MAE is committed to conducting internationally recognized fundamental and applied research in support of our educational mission.

Faculty, staff and students form the heart of MAE. Our distinguished faculty includes many society Fellows and is supported by highly dedicated technical, computational and administrative staff. MAE students benefit from social and professional opportunities through various student societies, such as the American Society of Mechanical Engineers, the American Institute of Aeronautics and Astronautics and our two professional honor societies.

We hope that you are excited about the prospects of a career in mechanical and aerospace engineering, and we welcome you to contact us for additional information. Go Gators!



**Mechanical &
Aerospace
Engineering**

www.mae.ufl.edu

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The Department of Mechanical and Aerospace Engineering graduated nearly 800 students with a Bachelor of Science degree in Mechanical Engineering (ME) or Aerospace Engineering (AE) between the Fall 2010 and Spring 2013 semesters. Over this period, our graduating class was divided about 73% ME and 27% AE, with more than 14% receiving the BS degree in both ME and AE. MAE students continue to be sought out by a wide range of employers covering a variety of employment sectors. Based on our alumni survey of this group of MAE graduates through December 2012, we are proud to summarize the employment data for our newest Gator Engineers.

MAE GRADUATION FACTS

(December 2010 – May 2013)

898 BS Degrees Awarded

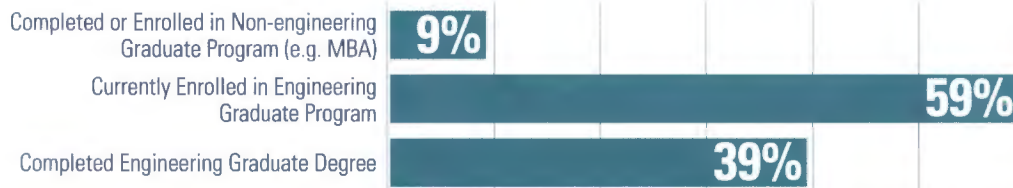
14% dual ME/AE majors

95% are now employed or are full-time graduate students

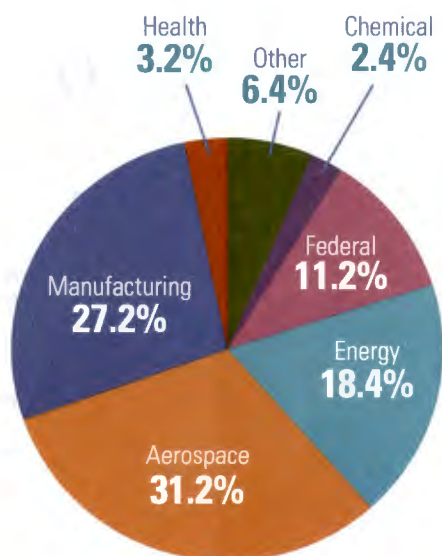
Nearly **50%** completed an internship during their studies

CONTINUING EDUCATION

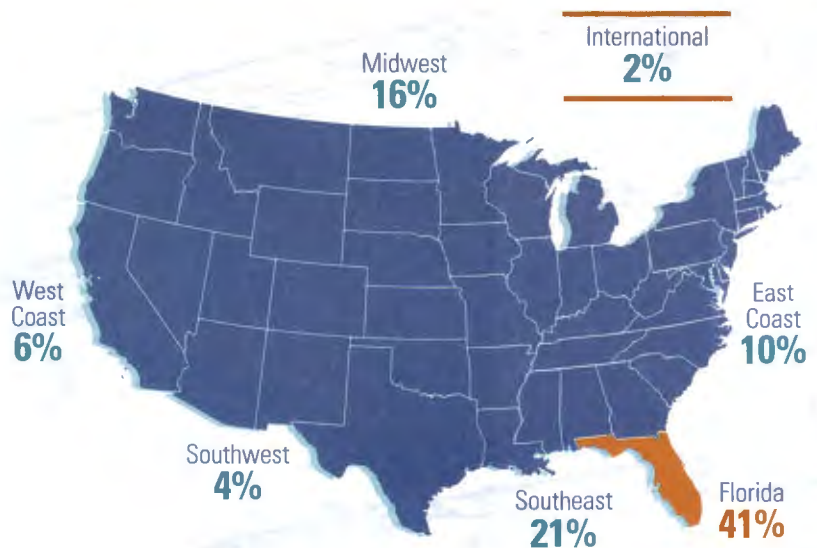
36% of our graduates are either currently enrolled or have completed a graduate degree program. These students have indicated the following:



GRADUATES ENTERING THE WORKFORCE



EMPLOYMENT SECTOR



GEOGRAPHICAL DISTRIBUTION