



Department of Mechanical & Aerospace Engineering
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Join the Conversation



UF RISES TO NO. 5 FOR PUBLIC UNIVERSITIES IN THE NATION

U.S. News and World Report 2022

MAE BY THE NUMBERS



1919 Undergraduate Students
2% growth from 2020



416 Master's Students
28% growth from 2020



163 Doctoral Students
1% growth from 2020



51 Tenure - Track Faculty
3 new faculty in 2021 & 5 open positions for 2022



\$16.2M Research expenditures
(ASEE \$15.4M)
28% growth from 2020



Record Setting New Funding Levels
Record Setting Expenditures per Faculty

INCREASING NUMBER OF FACULTY

INTERESTED IN JOINING UF MAE?
We are currently hiring for tenure
and research track positions.
You can learn more at
MAE.UF.EDU

PATRICK MUSGRAVE Assistant Professor

- Ph.D. degree from Virginia Tech in 2018 and BSc & BSE degrees from the University of Pittsburgh in 2012.
- Research Scientist at the US Naval Research Laboratory (NRL) in the Naval Center for Space Technology prior to UF.
- Research focuses on adaptive and morphing systems operating in fluidic environments, in particular systems subject to dynamic fluid-structure interactions
- Jerome Karle's Fellow at NRL and received early career funding in the area of bio-inspired underwater propulsion.

JANE JAEJEONG SHIN Assistant Professor

- Ph.D. and M.S. degrees in Mechanical Engineering from Cornell University Department of Mechanical and Aerospace Engineering.
- B.Sc. degree in Naval Architecture and Ocean Engineering in 2017 from Seoul National University, Korea.
- Current research interests are in the development of design and control methodologies for autonomous robotic systems equipped with sensors, other interests such as information theoretic learning, computational geometry, motion planning, machine learning and optimization.

YU WANG Assistant Professor

- Postdoctoral associate at the Department of Electrical and Computer Engineering at Duke University.
- Ph.D. degree in Mechanical Engineering and M.S. degree in Statistics and Mathematics from the University of Illinois at Urbana-Champaign.
- Current interest is on learning-based formal synthesis and verification for system control in unknown environments.
- Received the Best Paper Finalist of the ACM SIGBED International Conference on Embedded Software (EMSOFT) and was nominated for the Ph.D. Thesis Award of the Coordinated Science Laboratory of UIUC.

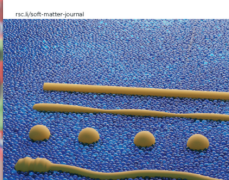


GATR2 TEAM TAKES FIRST PLACE

In one of the most competitive Vex Robotics events of the year, the GATR VexU team challenges some of the best teams in the country and secures first place at the Texas Qualifier after qualifying for the World Championship.



Soft Matter

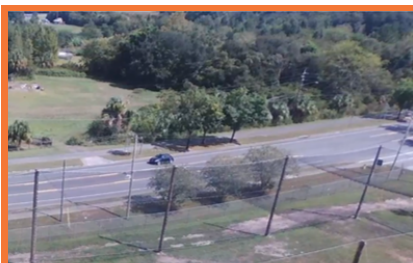


RESEARCH COVER FEATURES

Dr. Saeed Moghaddam was featured on the cover of Advanced Materials Interfaces for his paper on using graphene oxide as an active membrane in dialysis applications. Dr. Thomas Angelini was featured on Soft Matter for his research on capillary forces drive buckling, plastic deformation, and break-up of 3D printed beams.



The new Archer Aviation Building donated by Archer Aviation to support multiple research efforts focused on e-VTOL aircraft design.



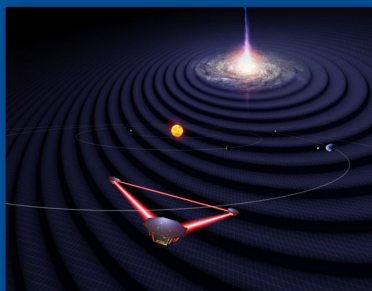
DURIP and private are used to construct a netted outdoor LTE/5G networked facility for robotic vehicles in support of the UF led AFOSR Center of Excellence on Assured Autonomy.



MAE CENTERS' CONTINUED GROWTH

Professor SA Sherif received continuation funding from the U.S. Department of Energy for the Industrial Assessment Center at the University of Florida (UF-IAC) for five more years (2021-2026). The UF-IAC is one of 32 centers across 28 states conducting industrial assessments to help local manufacturers reduce carbon footprint, lower costs, and train the energy workforce of tomorrow.

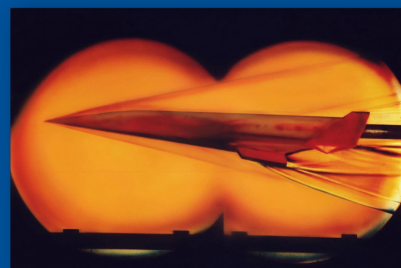
GRANTS & AWARDS



Artist's imagining of LISA when launched

John Conklin and Co-PIs Peter Wass and Guido Mueller (Physics) won a \$12.5M contract with NASA to develop the charge management system (CMS), a payload instrument for the Laser Interferometer Space Antenna (LISA) comprised of three spacecraft that orbit the sun in formation. LISA will launch in the early 2030's and use precision inertial sensors and laser interferometry between each satellite to detect gravitational waves, e.g. those from merging supermassive black holes.

Steve Miller received the 2021 Defense Advanced Research Projects Agency (DARPA) Young Faculty Award for his research in Analytical Prediction of Near-Field Hypersonic Aerodynamics. The method uses an advanced mathematical solution technique to predict the nonlinear pressure near-field, quickly and accurately, near a hypersonic lifting body at high-mach numbers (without CFD or experiments).



Model hypersonic vehicle and flow-field in a wind tunnel at the NASA Langley Research Center