Florida A&M University | Florida State University

Chemical & Biomedical Engineering

Graduate Programs

RESEARCH AREAS AND FACULTY ALIGNMENT

- Biomedical Imaging (Drs. Sam Grant, Teng Ma and Anant Paravastu)
- Cellular & Tissue Engineering (Drs. Hoyong Chung, Sam Grant, Jingliao Guan, Yan Li and Teng Ma)
- Multi-Scale Theory, Modeling & Simulations (Drs. Ravindran Chella and Jose Mendoza-Cortes)
- Nanoscale Science & Engineering (Drs. Ravindran Chella, Hoyong Chung, Sam Grant, Jingliao Guan, Daniel Hallinan, Egewu Kalu, Bixue Ma, Jose Mendoza-Cortes, Subramanian Ramakrishnan and Theo Siegrist)
- Plasma Reaction & Electrochemical Engineering (Drs. Eric Kalu, Bruce Locke and Jose Mendoza-Cortes; Mr. Wright Finney)
- Polymers & Complex Fluids (Drs. Rufina Alamo, Ravindran Chella, Hoyong Chung, Daniel Hallinan, Jose Mendoza-Cortes, Anant Paravastu and Subramanian Ramakrishnan)
- Renewable & Advanced Power Production (Drs. Daniel Hallinan, Egewu Kalu, Bruce Locke, Bixue Ma, Jose Mendoza-Cortes, Subramanian Ramakrishnan, John Telotte and Yaw Yeboah)

ADMISSION REQUIREMENTS: University Graduate Admission Requirements

1. A baccalaureate degree from an accredited college or university;
2. Maintenance of a good standing in the institution last attended;
3. Evidence by ORIGINAL transcript of a satisfactory prior academic record;
4. At least 3.0 grade point average on a 4.0 grading scale as an upper division undergraduate student, or a 3.0 for a master’s degree from an accredited institution.
5. Test scores from a nationally standardized graduate admission test, namely the revised GRE in the 48th percentile (>150) for verbal reasoning and in the 75th percentile (>158) for quantitative reasoning. It should be noted that the GRE percentiles of funded graduate students on assistantship are typically higher than these minimal (combined GRE > 308);
6. A statement of professional goals; and
7. Three letters of recommendation from persons familiar with the student’s work and background.

Note: Deadlines for applications are determined by the Universities (see websites below). However, full consideration for assistantships is processed by the department, and this deadline is four months before the University deadline (e.g. an applicant wishing to start in the Fall should submit by March 1 for funding consideration).

DEGREE PROGRAMS:

- MS (course or thesis based): Biomedical Engineering and Chemical Engineering
- PhD (dissertation): Biomedical Engineering and Chemical Engineering

Florida A&M University application: www.famu.edu/graduatemstudies
Florida State University application: www.admissions.fsu.edu/graduate/
In total, CBE Faculty have secured over 10 patents, $6 million in research funding and numerous other awards and honors in just the last five years.

FACILITIES AND AFFILIATED LABORATORIES:
- National High Magnetic Field Laboratory
- High Performance Materials Institute
- Center for Advanced Power Systems
- Aero-Propulsion, Mechatronics and Energy Center
- Institute of Molecular Biophysics
- FSU Biomedical Research Facility - Laboratory Animal Resources

ACADEMIC PARTNERS:
- FSU Departments of Scientific Computing, Chemistry & Biochemistry, Physics and Biological Science
- FSU College of Medicine and Biomedical Sciences
- FAMU School of Pharmacy & Pharmaceutical Sciences

FACULTY HIGHLIGHTS
The 20 CBE faculty members rank among the most successful and acclaimed researchers in the engineering profession. Notable recent accomplishments include:

Dr. Rufina Alamo, The Simon Ostrach Professor of Engineering, has been named as a Fellow of the American Physical Society “for her use of well-characterized materials and performance of carefully designed experiments to address structure-property relationships in polyolefins” and accepted the Mettler-Toledo Award for outstanding achievement by the North American Thermal Analysis Society. She also has been named as a FSU Distinguished Research Professor.

Dr. Teng Ma, Professor, has secured numerous State of Florida, American Heart Association and DOD grants to advance the use and evaluation of adult stem cell therapies and bioreactors.

Dr. Egwu Kalu, Professor, was awarded a Fulbright Fellowship to conduct research and educational activities in Nigeria on renewable energy systems by investigating the development of a continuous reactor and catalyst system for biodiesel.

Dr. Anant K. Paravastu, Assistant Professor, was awarded a National Science Foundation Faculty Early Career Development Award, also known as a CAREER Award, to advance his research into “designer” proteins and biopolymers.

Dr. Theo Siegrist, Professor, was awarded an Alexander von Humboldt Fellowship to conduct research in Germany and continue collaborative work in the synthesis and analysis of a variety of inorganic materials including iron based superconductors and alkaline earth metal oxides.

Dr. Jingjiao Guan, Assistant Professor, has been awarded a National Science Foundation grant to integrate polyelectrolyte contact printing and aryldiazonium chemistry for nanopatterning.

Dr. Subramanian Ramakrishnan, Associate Professor, was one of five FAMU faculty researchers recognized for “research excellence with caring” at FAMU. He recently has been awarded grants from the DOD, NASA and NSF to investigate structure function relationships in novel nanomaterials for defense and aerospace applications. Projects are in collaboration with Argonne National Laboratory to investigate structure and dynamics in soft matter.

Dr. Yan Li, Assistant Professor, has been awarded funds from the National Science Foundation (BRIDGE) and FSU (GAP, EIEG and STC) to institute equipment and techniques for the processing of pluripotent stem cells and detection of proteins by nanofluidics.

Dr. Bruce Locke, Professor and Associate Vice President for Academic Affairs, has been awarded numerous grants from the National Science Foundation to study the design and reaction kinetics of plasma reactors.

Dr. Sam Grant, Associate Professor and Graduate Coordinator, has won a subcontract on a recently awarded National Institutes of Health R01 grant to pursue the use of magnetic resonance imaging to map electrical pathways and activation in nervous tissue. In collaboration with Dr. Ma, he has secured numerous grants for the analysis and treatment of ischemic stroke and other neurodegenerative diseases using the world’s highest field MRI.

FOR MORE INFORMATION ABOUT GRADUATE PROGRAMS IN CBE:

DR. SAMUEL C. GRANT
Associate Professor & Graduate Coordinator
(850) 410-6151
chemical@eng.fsu.edu
www.eng.fsu.edu/cbe/graduate

CHEMICAL & BIOMEDICAL ENGINEERING
2525 Pottsdamer Street, A131
Tallahassee, Florida 32310-6046
(850) 410-6149
www.eng.fsu.edu/cbe

Scan the QR code to view the CBE department website.