

Faculty members – <http://mte.eng.ua.edu/people/>

Dr. Viola L. Acoff, Professor, Department Head
Ph.D. University of Alabama at Birmingham
Joining, welding and processing of intermetallic compounds

Dr. Nitin Chopra, Associate Professor
Ph.D. University of Kentucky
Nanostructure growth, spectroscopic and microscopic analysis, nanofabrication, materials chemistry/biochemistry, and devices

Dr. Nagy El-Kaddah, Professor
Ph.D. London University
Transport, kinetics, electromagnetic processing of materials

Dr. Subhadra Gupta, Professor, Director of MFF
Ph.D. University of Cincinnati
Thin film applications to magnetic, semiconductor display, optical and medical technology

Dr. Lin Li, Assistant Professor
Ph.D. The Ohio State University
Computational materials science, mechanical behavior

Dr. Laurentiu Nastac, Associate Professor
Ph.D. University of Alabama
Casting and solidification, microstructure modeling, ultrasonic processing of alloys and metal-matrix-nanocomposites

Dr. Ramana G. Reddy, ACIPCO Professor
Ph.D. University of Utah
Thermodynamics, molten metal chemistry, composite processing

Dr. Jinhui Song, Assistant Professor
Ph.D. Georgia Institute of Technology
Nanomaterials with emphasis in semiconducting and piezoelectric device fabrication and characterization

Dr. Takao Suzuki, Professor, MINT Director
Ph.D. California Institute of Technology
Magnetism and magnetic based devices, nanomaterials

Dr. Gregory B. Thompson, Professor, Director of the UA Materials Science PhD Program, Associate Director of CAF
Ph.D., The Ohio State University
Phase transformations, analytical microscopy, microstructure-property relationships, thin films, and shape memory alloys

Dr. Mark L. Weaver, Professor
Ph.D. Univ. of Florida
Heat-resistant materials, mechanical properties, electron microscopy, tribology

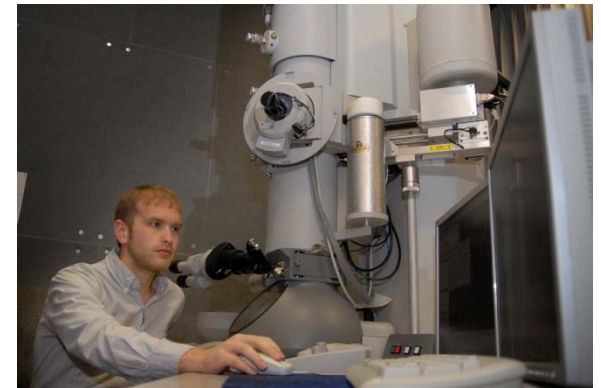
Tuscaloosa and the surrounding area

Tuscaloosa, located along the banks of the Black Warrior River in West Central Alabama, is approximately 60 miles, or 100 kilometers, from Birmingham, Ala. The Tuscaloosa metropolitan area, with more than 200,000 people, was named an All-American City by the National Civic League in 2002. In 2008, Tuscaloosa hosted the USA Olympic Triathlon trails for the Beijing Games. The city offers a range of shopping, restaurants and state parks in the vicinity. Tuscaloosa is home to Mercedes-Benz U.S. International, which allows Tuscaloosa to have the only Mercedes-Benz Museum in the world outside of Germany. In addition, the city has the Westervelt Warner Museum of American Art, featuring one of the most significant assemblages of American art to be found anywhere in the world.



Historic UA President's mansion located on the UA campus. Constructed in 1847, the building is one of the most recognized on campus.

Graduate Studies in Metallurgical & Materials Engineering



<http://mte.eng.ua.edu/>

THE UNIVERSITY OF
ALABAMA
FOUNDED 1831

About the department

In 1837, The University of Alabama became one of the first five universities in the nation to offer engineering classes. The Department of Metallurgical & Materials Engineering (MTE) offers a bachelors and masters of science along with a Ph.D. In addition, many of the MTE faculty are members of the UA Tri-campus Materials Science PhD program (<http://materialsscience.ua.edu>) giving materials-orientated graduate students a range of academic opportunities. The MTE department is one of only eight accredited metallurgical degree granting institutions in the United States. Its core emphasis in metallurgy and materials provides students depth in structure-processing-property relationships. UA has more than 34,000 students with about 20 percent being graduate students.

The department has 11 faculty members that educate approximately 100 undergraduate students and 40 graduate students. Faculty research interest include magnetic materials, nanomaterial synthesis and device fabrication, phase-microstructure relationships, heat-resistant aerospace coatings, deformation mechanisms in metals and ceramic structures, smart materials, casting and solidification sciences as well as computational materials science and engineering.



The Science & Engineering Complex offering students modern facilities for research.

Research Facilities

The University of Alabama has a range of research centers that provide students state-of-the-art facilities and multi-disciplinary, collaborative interaction. Many of the MTE faculty either manage or are members of these centers.

Science and Engineering Complex – Completed in 2013, these \$250M modern research and teaching buildings houses the laboratories for the engineering and sciences. <http://eng.ua.edu/buildings/>

AIME – The Alabama Institute for Manufacturing Excellence provides faculty and student an incubator for start-up companies initiated by research at UA.

Central Analytical Facility (CAF) – Houses more than \$10 million of analytical microscopy equipment, including a TEM, FIBs, SEMs, XPS, atom probe and microprobe. Please visit <http://www.caf.ua.edu>

MINT – Materials for Information Technology is a multidisciplinary research center that brings together faculty and students who work on magnetic and energy based research. <http://www.mint.ua.edu>

Micro-Fabrication Facility (MFF) – A multi-million dollar, 7,000-square-foot clean room with more than 2,200 square feet of class 100/1000 that houses various physical vapor deposition, lithographic and ion etching instruments that provides for device and related nanomaterials research.

Ray L. Farabee Metal Casting Laboratory – This more than 6,000 square-foot facility houses various melting furnaces for casting steels, brass, bronze, cast iron, aluminum, superalloys, etc. as well as mold equipment, a spectrometer, and a 3D printer for investment casting pattern fabrication.

Center for Advanced Vehicle Technologies – Research center dedicated to the vehicle technologies including powertrains, energy storage, materials manufacturing and electronics and serves the budding auto-manufacturing industry in the southeastern US. <http://cavt.eng.ua.edu/>

Application process

The Metallurgical and Materials Engineering Department accepts applicants throughout the year. Most admission decisions are made in March for the next fall academic term. Faculty members who have external support for new students may expedite the admission date decision for identified, outstanding candidates. The majority of the graduate students in the department are supported through external research funds, fellowships or teaching assistantships which includes tuition, health care and a stipend. Students accepted into the program, but declined funding and chose not to support the cost of their degree at the time of acceptance, are still eligible for admission up to one year. These students will be on a department list of eligible, admitted students for faculty to consider if external funding is awarded at some later date. Applicants interested in graduate studies are encouraged to contact faculty advisors to determine compatibility and available funding opportunities.

How to Apply

To apply, applicants should visit <http://graduate.ua.edu/> and complete the on-line form. You will need to provide a statement of purpose, official academic transcript, references and submission of an official GRE score. International applicants (non-native English speakers) will also be required to complete a provisional language exam (TOEFL or IELTS or PTE.) Regular admission requirements are >3.0 GPA; >300 revised GRE (>1000 general GRE); and > 550 pBT or 79iBT TOEFL, >6.5 IELTS, >59 PTE. These scores do not necessarily grant admission to the department. Competitive MTE entering graduate applications have scores exceeding these minimums.

Please send questions concerning the graduate program to mtegradcoord@eng.ua.edu.