DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

http://engineering.tamu.edu/materials (http://engineering.tamu.edu/materials/)

Head: I. Karaman

Director, Graduate Program: M. Demkowicz

Materials Science and Engineering (MSEN) at Texas A&M University is jointly operated by the College of Engineering and College of Science. The Department works collaboratively with several universities nationally and internationally as well as with institutions including several NASA Research Centers, Army Research Laboratory, Air Force Research Laboratory, U.S. Naval Research Laboratory, and many of the Department of Energy National Laboratories, in addition to dozens of fortune 500 companies.

Graduate Study in the MSEN department provides the fundamental knowledge, practical skills, and professional experience necessary to enter a successful career involving advanced materials. Many of today’s most pressing scientific problems stem from the limitations of materials currently available, and this department is at the forefront of new knowledge and discovery. Materials science and engineering involves the characterization of the physical and chemical properties of solid materials—metals and alloys, ceramics, magnetic materials, polymers, optical materials, semiconductors, superconductors, and composites—for the purpose of using, changing, or enhancing inherent properties to create or improve end products.


Modern facilities and equipment are available to enhance study and instruction in Materials Science and Engineering. These facilities include the following: Corrosion and Materials Reliability Laboratory, Microstructural Engineering of Structural and Active Materials (MESAM), Mass Spectroscopy Application and Collaboration Facility, Materials Characterization Facility (MCF), Interdisciplinary Soft Matter Facility (SoMF), Center for Infrastructure Renewal (CIR), Center for Research Excellence on Dynamically Deformed Solids (CREDDS), Materials Development and Characterization Center, Microscopy and Imaging Center (MIC), Nuclear Science Center, and Polymer Technology Consortium (PTC).

Degree Programs
The Department offers graduate studies leading to the degrees of: Master of Engineering (non-thesis), Master of Science (thesis and non-thesis), and Doctor of Philosophy in Materials Science and Engineering. This multidisciplinary department includes faculty members from several disciplines, including aerospace engineering, biomedical engineering, chemical engineering, chemistry, electrical engineering, mechanical engineering, nuclear engineering and physics.

Certificate Programs
Two certificate programs are offered to enable individuals the opportunity to gain specific knowledge and skill-sets: Corrosion Science and Engineering, and Materials, Informatics and Design. All departmental certificates are stand-alone programs, enrollment in a degree program is not required. Certificates may be awarded upon completion of requirements.

Contact
For more information on obtaining any of the degrees and/or certificates, please contact the graduate advising office at msen-advising@tamu.edu.

Faculty
Akbulut, Mustafa, Associate Professor
Materials Science & Engr
PHD, University of California at Santa Barbara, 2007

Alge, Daniel L, Associate Professor
Materials Science & Engr
PHD, Purdue University, 2010

Arroyave, Raymundo, Professor
Materials Science & Engr
PHD, Massachusetts Inst of Technology, 2004

Asadi, Amir, Assistant Professor
Materials Science & Engr
PHD, University of Manitoba, 2013

Balbuena, Perla B, Professor
Materials Science & Engr
PHD, The University of Texas at Austin, 1996

Banerjee, Sarbajit, Professor
Materials Science & Engr
PHD, State University of New York at Stony Brook, 2004

Batteas, James D, Professor
Materials Science & Engr
PHD, University of California at Berkeley, 1995

Bazzi, Hassan, Professor
Materials Science & Engr
PHD, McGill University, 2003

Benzerga, Amine A, Professor
Materials Science & Engr

Bullard, Jeffrey, Professor
Materials Science & Engr
PHD, University of California at Berkeley, 1993

Butler, Brady, Visiting Assistant Professor
Materials Science & Engr
PHD, Johns Hopkins University, 2017

Cagin, Tahir, Professor
Materials Science & Engr
PHD, Clemson University, 1988
Department of Materials Science and Engineering

Case, Raymundo P, Professor of the Practice
Materials Science & Engr
PHD, University of Manchester Institute of Science and Technology, 2002

Castaneda-Lopez, Homero, Professor
Materials Science & Engr
PHD, Penn State University, 2001

Creasy, Terry S, Associate Professor
Materials Science & Engr
PHD, University of Delaware, 1997

Demkowicz, Michal J, Associate Professor
Materials Science & Engr
PHD, Massachusetts Institute of Technology, 2005

Elabd, Yossef A, Professor
Materials Science & Engr
PHD, Johns Hopkins University, 2001

Elwany, Alaa Mohamed, Assistant Professor
Materials Science & Engr
PHD, Georgia Institute of Technology, 2009

Erdemir, Ali, Professor
Materials Science & Engr
PHD, Georgia Institute of Technology, 1986

Fang, Lei, Associate Professor
Materials Science & Engr
PHD, Northwestern University, 2010

Fulvio, Pasquale, Research Assistant Professor
Materials Science & Engr
PHD, Kent State University, 2009

Gaharwar, Akhilesh K, Associate Professor
Materials Science & Engr
PHD, Purdue University, 2011

Grasley, Zachary C, Professor
Materials Science & Engr
PHD, University of Illinois Urbana Champaign, 2006

Green, Micah, Professor
Materials Science & Engr
PHD, Massachusetts Institute of Technology, 2007

Grunlan, Jaime C, Professor
Materials Science & Engr
PHD, University of Minnesota, 2001

Grunlan, Melissa A, Professor
Materials Science & Engr
PHD, University of Southern California, 2004

Guo, Bing, Associate Professor
Materials Science & Engr
PHD, Tsinghua University, China, 1998

Harris, Harlan R, Associate Professor
Materials Science & Engr
PHD, Texas Tech University, 2003

Hartl, Darren, Associate Professor
Materials Science & Engr
PHD, Texas A&M University, 2009

Hemmer, Philip R, Professor
Materials Science & Engr
PHD, Massachusetts Inst of Technology, 1984

Hipwell, M Cynthia, Professor
Materials Science & Engr
PHD, University of California at Berkeley, 1996

Hwang, Wonmuk, Associate Professor
Materials Science & Engr
PHD, Boston University, 2001

Jeong, Hae-Kwon, Professor
Materials Science & Engr
PHD, University of Minnesota, 2004

Kameoka, Jun, Professor
Materials Science & Engr
PHD, Cornell University, 2002

Kane, Matthew H, Instructional Associate Professor
Materials Science & Engr
PHD, Georgia Institute of Technology, 2007

Karaman, Ibrahim, Professor
Materials Science & Engr
PHD, University of Illinois at Urbana-Champaign, 2000

Katehi-Tseregounis, Linda, Professor
Materials Science & Engr
PHD, University of California, 1984

Kolluru, Pavan, Assistant Professor
Materials Science & Engr
PHD, University of Illinois at Urbana-Champaign, 2014

Kuo, Yue, Professor
Materials Science & Engr
PHD, Columbia University, 1980

Kuttolamadom, Mathew A, Associate Professor
Materials Science & Engr
PHD, Clemson University, 2012

Lagoudas, Dimitris C, University Distinguished Professor
Materials Science & Engr
PHD, Lehigh University, 1986

Le Graverend, Jean-Briac B, Associate Professor
Materials Science & Engr

Liang, Hong, Professor
Materials Science & Engr
PHD, Stevens Institute of Technology, 1992

Lin, Paotai, Associate Professor
Materials Science & Engr
PHD, Northwestern University, 2009
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Department</th>
<th>University</th>
<th>Year</th>
</tr>
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<tbody>
<tr>
<td>Lutkenhaus, Jodie</td>
<td>Professor</td>
<td>Materials Science</td>
<td>Massachusetts Institute of Technology, 2007</td>
<td>2007</td>
</tr>
<tr>
<td>Ma, Chao</td>
<td>Assistant Professor</td>
<td>Materials Science</td>
<td>University of California, 2015</td>
<td>2015</td>
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<tr>
<td>Mansoor, Bilal</td>
<td>Associate Professor</td>
<td>Materials Science</td>
<td>University of Michigan, 2010</td>
<td>2010</td>
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<tr>
<td>McDeavitt, Sean M</td>
<td>Professor</td>
<td>Materials Science</td>
<td>Purdue University, 1992</td>
<td>1992</td>
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<tr>
<td>McShane II, Michael J</td>
<td>Professor</td>
<td>Materials Science</td>
<td>Texas A&amp;M University, 1999</td>
<td>1999</td>
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<tr>
<td>Michaudel, Quentin</td>
<td>Assistant Professor</td>
<td>Materials Science</td>
<td>The Scripps Research Institute, 2015</td>
<td>2015</td>
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<tr>
<td>Naraghi, Mohammad</td>
<td>Associate Professor</td>
<td>Materials Science</td>
<td>University of Illinois at Urbana Champaign, 2009</td>
<td>2009</td>
</tr>
<tr>
<td>Naugle, Donald G</td>
<td>Professor</td>
<td>Materials Science</td>
<td>Texas A&amp;M University, 1965</td>
<td>1965</td>
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<tr>
<td>Needleman, Alan</td>
<td>University Distinguished Professor</td>
<td>Materials Science</td>
<td>Harvard University, 1971</td>
<td>1971</td>
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<tr>
<td>Nyakiti, Luke Q</td>
<td>Instructional Assistant Professor</td>
<td>Materials Science</td>
<td>Texas Tech University, 2008</td>
<td>2008</td>
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<tr>
<td>Ozmetin, Ali E</td>
<td>Senior Lecturer</td>
<td>Materials Science</td>
<td>Texas A&amp;M University, 2009</td>
<td>2009</td>
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<tr>
<td>Paramore, James</td>
<td>Visiting Assistant Professor</td>
<td>Materials Science</td>
<td>University of Utah, 2015</td>
<td>2015</td>
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<tr>
<td>Pentzer, Emily</td>
<td>Associate Professor</td>
<td>Materials Science</td>
<td>Northwestern University, 2010</td>
<td>2010</td>
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<tr>
<td>Pharr IV, George M</td>
<td>Professor</td>
<td>Materials Science</td>
<td>Stanford University, 1979</td>
<td>1979</td>
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<tr>
<td>Pharr, George</td>
<td>Assistant Professor</td>
<td>Materials Science</td>
<td>Harvard University, 2014</td>
<td>2014</td>
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<td>Qian, Xiaofeng</td>
<td>Associate Professor</td>
<td>Materials Science</td>
<td>Massachusetts Institute of Technology, 2008</td>
<td>2008</td>
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<tr>
<td>Radovic, Miladin</td>
<td>Professor</td>
<td>Materials Science</td>
<td>Drexel University, 2001</td>
<td>2001</td>
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<tr>
<td>Raiman, Stephen</td>
<td>Assistant Professor</td>
<td>Materials Science</td>
<td>University of Michigan, 2016</td>
<td>2016</td>
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<tr>
<td>Reddy, Junuthula</td>
<td>Distinguished Professor and Regents Professor</td>
<td>Materials Science</td>
<td>University of Alabama at Huntsville, 1974</td>
<td>1974</td>
</tr>
<tr>
<td>Ross Jr, Joseph H</td>
<td>Professor</td>
<td>Materials Science</td>
<td>University of Illinois at Urbana-Champaign, 1986</td>
<td>1986</td>
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<tr>
<td>Sagapuram, Dinakar</td>
<td>Assistant Professor</td>
<td>Materials Science</td>
<td>Purdue University, 2013</td>
<td>2013</td>
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<tr>
<td>Seminario, Jorge M</td>
<td>Professor</td>
<td>Materials Science</td>
<td>Southern Illinois University Carbondale, 1987</td>
<td>1987</td>
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<tr>
<td>Shamberger, Patrick J</td>
<td>Associate Professor</td>
<td>Materials Science</td>
<td>University of Washington, 2010</td>
<td>2010</td>
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<tr>
<td>Shao, Lin</td>
<td>Professor</td>
<td>Materials Science</td>
<td>University of Houston, 2001</td>
<td>2001</td>
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<tr>
<td>Sheldon, Matthew T</td>
<td>Assistant Professor</td>
<td>Materials Science</td>
<td>University of California at Berkeley, 2010</td>
<td>2010</td>
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<tr>
<td>Srivastava, Ankit</td>
<td>Associate Professor</td>
<td>Materials Science</td>
<td>University of North Texas, 2013</td>
<td>2013</td>
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<tr>
<td>Su, Hung-Jue</td>
<td>Professor</td>
<td>Materials Science</td>
<td>University of Michigan at Ann Arbor, 1988</td>
<td>1988</td>
</tr>
<tr>
<td>Sukhishvili, Svetlana A</td>
<td>Professor</td>
<td>Materials Science</td>
<td>Lomonosov Moscow State University, 1989</td>
<td>1989</td>
</tr>
<tr>
<td>Talreja, Ramesh R</td>
<td>Professor</td>
<td>Materials Science</td>
<td>The Technical University of Denmark, 1974</td>
<td>1974</td>
</tr>
<tr>
<td>Tamamis, Phanourios</td>
<td>Assistant Professor</td>
<td>Materials Science</td>
<td>University of Cyprus, 2010</td>
<td>2010</td>
</tr>
<tr>
<td>Teizer, Winfried</td>
<td>Professor</td>
<td>Materials Science</td>
<td>University of Massachusetts - Amherst, 1998</td>
<td>1998</td>
</tr>
<tr>
<td>Thomas, Edwin L</td>
<td>Visiting Professor</td>
<td>Materials Science</td>
<td>Cornell University, 1974</td>
<td>1974</td>
</tr>
</tbody>
</table>
Tu, Qing, Assistant Professor
Materials Science & Engr
PHD, Duke University, 2017

Vaddiraju, Sreeram, Associate Professor
Materials Science & Engr
PHD, University of Louisville, 2006

Wang, Jyhwen, Professor
Materials Science & Engr
PHD, Northwestern University, 1991

Wang, Shiren, Associate Professor
Materials Science & Engr
PHD, Florida State University, 2006

Ware, Taylor, Associate Professor
Materials Science & Engr
PHD, University of Texas at Dallas, 2013

Whitcomb, John D, Professor
Materials Science & Engr
PHD, Virginia Tech, 1988

Wilkerson, Justin, Assistant Professor
Materials Science & Engr
PHD, Johns Hopkins University, 2014

Williams, Richard, Professor
Materials Science & Engr
PHD, University of California at Berkeley, 1978

Wong, Zi Jing, Assistant Professor
Materials Science & Engr
PHD, University of California at Berkeley, 2015

Wooley, Karen L, University Distinguished Professor
Materials Science & Engr
PHD, Cornell University, 1993

Wu, Wenhao, Associate Professor
Materials Science & Engr
PHD, University of Chicago, 1992

Xie, Yu Xuan, Assistant Professor
Materials Science & Engr
PHD, University of Sydney, 2013

Yu, Choongho, Professor
Materials Science & Engr
PHD, The University of Texas at Austin, 2004

Zhou, Hongcai J, Professor
Materials Science & Engr
PHD, Texas A&M University, 2000

Doctoral
• Doctor of Philosophy in Materials Science and Engineering (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/materials-science/phd/)

Certificates
• Corrosion Science and Engineering Certificate (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/materials-science/corrosion-science-engineering-certificate/)
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• Master of Science in Materials Science and Engineering (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/materials-science/ms/)