DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

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

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Balbuena, Perla B, Professor
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Banerjee, Sarbajit, Professor
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Batteas, James D, Professor
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PhD, McGill University, 2003

Benzerga, Amine A, Professor
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PhD, Ecole Nationale Superieure Des Mines De Paris, 2000

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PhD, University of California at Berkeley, 1993

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Creasy, Terry S, Associate Professor
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Fang, Lei, Associate Professor
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Grasley, Zachary C, Professor
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PHD, Tsinghua University, China, 1998

Harris, Harlan R, Associate Professor
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PHD, Texas Tech University, 2003

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

Hemmer, Philip R, Professor
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PHD, Massachusetts Inst of Technology, 1984

Hipwell, M Cynthia, Professor
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Hwang, Wonmuk, Associate Professor
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PHD, Boston University, 2001

Jeong, Hae-Kwon, Professor
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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
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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
PHD, Ecole Nationale de Mécanique et dAérotechnique, France, 2013

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>Degree</th>
<th>University and Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lutkenhaus, Jodie</td>
<td>Professor</td>
<td>Materials Science &amp; Engr</td>
<td>PHD</td>
<td>Massachusetts Institute of Technology, 2007</td>
</tr>
<tr>
<td>Ma, Chao</td>
<td>Assistant Professor</td>
<td>Materials Science &amp; Engr</td>
<td>PHD</td>
<td>University of California, 2015</td>
</tr>
<tr>
<td>Mansoor, Bilal</td>
<td>Associate Professor</td>
<td>Materials Science &amp; Engr</td>
<td>PHD</td>
<td>University of Michigan, 2010</td>
</tr>
<tr>
<td>McDeavitt, Sean M</td>
<td>Professor</td>
<td>Materials Science &amp; Engr</td>
<td>PHD</td>
<td>Purdue University, 1992</td>
</tr>
<tr>
<td>Michaudel, Quentin</td>
<td>Assistant Professor</td>
<td>Materials Science &amp; Engr</td>
<td>PHD</td>
<td>The Scripps Research Institute, 2015</td>
</tr>
<tr>
<td>Naraghi, Mohammad</td>
<td>Associate Professor</td>
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<td>PHD</td>
<td>University of Illinois at Urbana Champaign, 2009</td>
</tr>
<tr>
<td>Naugle, Donald G</td>
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</tr>
<tr>
<td>Needlemam, Alan</td>
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<td>Materials Science &amp; Engr</td>
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<td>Harvard University, 1971</td>
</tr>
<tr>
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<td>Texas Tech University, 2008</td>
</tr>
<tr>
<td>Ozmetin, Ali E</td>
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<td>PHD</td>
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</tr>
<tr>
<td>Paramore, James</td>
<td>Visiting Assistant Professor</td>
<td>Materials Science &amp; Engr</td>
<td>PHD</td>
<td>University of Utah, 2015</td>
</tr>
<tr>
<td>Pentzer, Emily</td>
<td>Associate Professor</td>
<td>Materials Science &amp; Engr</td>
<td>PHD</td>
<td>Northwestern University, 2010</td>
</tr>
<tr>
<td>Pharr IV, George M</td>
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<td>Materials Science &amp; Engr</td>
<td>PHD</td>
<td>Stanford University, 1979</td>
</tr>
<tr>
<td>Pharr, George</td>
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<td>Materials Science &amp; Engr</td>
<td>PHD</td>
<td>Harvard University, 2014</td>
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<td>Qian, Xiaofeng</td>
<td>Associate Professor</td>
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<td>PHD</td>
<td>Massachusetts Institute of Technology, 2008</td>
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<tr>
<td>Radovic, Miladin</td>
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<td>Materials Science &amp; Engr</td>
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<td>Drexel University, 2001</td>
</tr>
<tr>
<td>Raiman, Stephen</td>
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</tr>
<tr>
<td>Reddy, Junuthula</td>
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</tr>
<tr>
<td>Ross Jr, Joseph H</td>
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</tr>
<tr>
<td>Seminario, Jorge M</td>
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<tr>
<td>Shamberger, Patrick J</td>
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<td>University of Washington, 2010</td>
</tr>
<tr>
<td>Shao, Lin</td>
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<td>University of Houston, 2001</td>
</tr>
<tr>
<td>Shandal, Matthew T</td>
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</tr>
<tr>
<td>Srivastava, Ankit</td>
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<td>University of North Texas, 2013</td>
</tr>
<tr>
<td>Su, Hung-Jue</td>
<td>Professor</td>
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</tr>
<tr>
<td>Sukhishvili, Svetlana A</td>
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</tr>
<tr>
<td>Talreja, Ramesh R</td>
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<tr>
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</tr>
<tr>
<td>Teizer, Winfried</td>
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</tr>
<tr>
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</tr>
</tbody>
</table>
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**Masters**

- Master of Engineering in Materials Science and Engineering (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/materials-science/meng/)
- Master of Science in Materials Science and Engineering (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/materials-science/ms/)

**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/)
- Materials, Informatics and Design Certificate (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/materials-science/materials-informatics-design-certificate/)