**Electrical & Computer Engineering**

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Seth Bank</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:sbank@ece.utexas.edu">sbank@ece.utexas.edu</a></td>
</tr>
<tr>
<td>Will accept majors</td>
<td>CHE, ECE, ME</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.ece.utexas.edu/people/faculty/seth-bank">http://www.ece.utexas.edu/people/faculty/seth-bank</a></td>
</tr>
</tbody>
</table>

**Research areas and interests:**

- Semiconductors, nanostructures, lasers, photodetectors, transistors.

**Minimum or preferred skills you seek in a student:**

- None, project will be consistent with student background.

**List preferred classes the students should have taken:**

- Not necessary, but beneficial depending on student standing: Electromagnetics, EE339, EE440.

**Description of ‘sample’ projects for prospective participants:**

- Build a laser testing setup; characterize the optical properties of nanomaterials; fabrication of nanomembranes.

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**Mechanical Engineering**

<table>
<thead>
<tr>
<th>Name</th>
<th>Assistant Professor</th>
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<tbody>
<tr>
<td>Title</td>
<td>Michael Cullinan</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:Michael.Cullinan@austin.utexas.edu">Michael.Cullinan@austin.utexas.edu</a></td>
</tr>
<tr>
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<td>CHE, ECE, ME</td>
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<tr>
<td>Website</td>
<td><a href="http://www.me.utexas.edu/faculty/faculty-directory/cullinan">http://www.me.utexas.edu/faculty/faculty-directory/cullinan</a></td>
</tr>
</tbody>
</table>

**Research areas and interests:**

- Nanomanufacturing, Precision Machine Design

**Minimum or preferred skills you seek in a student:**

- Solidworks, Labview

**List preferred classes the students should have taken:**

- Machine Elements, Mechatronics

**Description of ‘sample’ projects for prospective participants:**

- Microscale Additive Manufacturing, Graphene Manufacturing, MEMS Design

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**Civil, Architectural & Environmental Engineering**

<table>
<thead>
<tr>
<th>Name</th>
<th>Professor</th>
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<tbody>
<tr>
<td>Title</td>
<td>Lance Manuel</td>
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<tr>
<td>Email</td>
<td><a href="mailto:lmanuel@mail.utexas.edu">lmanuel@mail.utexas.edu</a></td>
</tr>
<tr>
<td>Will accept majors</td>
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<tr>
<td>Website</td>
<td><a href="http://www.caee.utexas.edu/faculty/directory/manuel">http://www.caee.utexas.edu/faculty/directory/manuel</a></td>
</tr>
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</table>

**Research areas and interests:**

- wind energy, wave energy, structural dynamics, uncertainty quantification

**Minimum or preferred skills you seek in a student:**

- Programming; probability and statistics; prefer knowledge of Matlab, Python, R.

**List preferred classes the students should have taken:**

- Applied probability/statistics

**Description of ‘sample’ projects for prospective participants:**

- Extreme/fatigue loads on wind turbines, wave energy devices

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**Mechanical Engineering**

<table>
<thead>
<tr>
<th>Name</th>
<th>Assistant Professor</th>
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<tbody>
<tr>
<td>Title</td>
<td>James Sulzer</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:james.sulzer@austin.utexas.edu">james.sulzer@austin.utexas.edu</a></td>
</tr>
<tr>
<td>Will accept majors</td>
<td>ARE, ASE, BME, CE, CHE, ECE, ME, PEN/PGE</td>
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<tr>
<td>Website</td>
<td><a href="http://www.me.utexas.edu/faculty/faculty-directory/sulzer">http://www.me.utexas.edu/faculty/faculty-directory/sulzer</a></td>
</tr>
</tbody>
</table>

**Research areas and interests:**

- Rehabilitation Engineering, Biomechanics, Neuroscience, Robotics

**Minimum or preferred skills you seek in a student:**

- Matlab preferred, depending on project, willingness to conduct experiments and work together with others

**List preferred classes the students should have taken:**

- No classes specifically required, but may depend on project.

**Description of ‘sample’ projects for prospective participants:**

- Recording stroke therapy using inertial measurement units

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**Biomedical Engineering, Electrical & Computer Engineering**

<table>
<thead>
<tr>
<th>Name</th>
<th>Professor</th>
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</thead>
<tbody>
<tr>
<td>Title</td>
<td>Thomas Milner</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:terra.laser@gmail.com">terra.laser@gmail.com</a></td>
</tr>
<tr>
<td>Will accept majors</td>
<td>BME, CHE, ECE, ME, PEN/PGE</td>
</tr>
</tbody>
</table>

**Research areas and interests:**

- Biomedical Optics for imaging and surgery

**Minimum or preferred skills you seek in a student:**

- Programming experience and interest in optics

**List preferred classes the students should have taken:**

- No classes specifically required.
Basic programming, physics

Description of 'sample' projects for prospective participants:

Development of an image guided surgical device, build and test instrumentation for pre-clinical and clinical studies

Aerospace Engineering & Engineering Mechanics

Name: Tan Bui
Title: Assistant Professor
Email: tanbui@ices.utexas.edu
Will accept these majors: ASE
Website: http://users.ices.utexas.edu/~tanbui/

Research areas and interests:
Parallel Computing, Numerical Analysis, Scientific Computing, Reduced-order modelling

Minimum or preferred skills you seek in a student:
Well-trained in matlab and mathematics. Love programming to solve mathematical problems.

List preferred classes the students should have taken:
All undergrad math classes, programming classes, and engineering computation

See me for details

Instructions:
List professors here who have mentored TREX/SRA students within the last three years (2014-15, 2015-16 & 2016-17) but DID NOT respond to qualtrics survey
Do NOT list Prof. Peppas
Use 'Master List - Career Paths post TREX' document to determine previous faculty mentors from each year (04 Research > 5 - Results & Student Participants by year)

Other Potential Faculty Members
These professors also participate in working with the TREX program

Department of Aerospace Engineering and Engineering Mechanics

Name | Email
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Dr. Kenneth Liechti | kml@mail.utexas.edu
Dr. Noel T. Clemens | clemens@mail.utexas.edu
Dr. Jayant Sirohi | jayant.sirohi@mail.utexas.edu
Dr. Nanshu Lu | nanshuu@utexas.edu
Dr. Wallace Fowler | fowler@csr.utexas.edu
Dr. Srinivas Bettadpur | srinivas@csr.utexas.edu

Department of Biomedical Engineering

Name | Email
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Dr. Laura Suggs | laura.suggs@mail.utexas.edu

Department of Chemical Engineering

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Dr. Delia Milliron | milliron@che.utexas.edu

Department of Civil, Architectural and Environmental Engineering

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Department of Electrical & Computer Engineering

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Dr. Craig Chase | chase@ece.utexas.edu
Dr. Sanjay Banerjee | sanjayb@austin.utexas.edu

Department of Mechanical Engineering

Name | Email
--- | ---
Dr. Paulo Ferreira | ferreira@mail.utexas.edu
Dr. Richard Neptune | rneptune@mail.utexas.edu
Dr. Paul Ho | paulho@mail.utexas.edu

Department of Petroleum and Geosystems Engineering

Name | Email
--- | ---

List preferred classes the students should have taken:

- Energy Technology and Policy
- Energy water nexus
- Energy food nexus

Minimum or preferred skills you seek in a student:

- Machine Elements
- Mechatronics
- Solidworks
- Labview

Will accept these majors:

- Mechanical Engineering
- Electrical & Computer Engineering
- Civil, Architectural & Environmental Engineering
- Aerospace Engineering & Engineering Mechanics
- Chemical Engineering

Research areas and interests:

- Characterization of novel materials and devices
- Modern Physics
- Nanoelectronics, solid-state devices
- Wireless communication, communication and sensing in cars, aerial vehicles, radar
- Surface energies for surfactant-driven wettability alteration
- Simulation of Marangoni-driven lithography
- Reactions with indoor materials

Minimum or preferred skills you seek in a student:

- Basic programming, physics
- Programming experience (any language) and enthusiasm to learn new languages/tools
- Awareness, Space Surveillance and Tracking, Orbital Debris, Space Objectification
- Good mathematical skills and programming ability
- Well-trained in matlab and mathematics. Love programming to solve mathematical problems
- Completed EM306 and EM319
- Matlab or Mathematica
- Reacting to indoor reactions with indoor materials
- Electromagnetics
- EE339, EE440

None, project will be consistent with student background.

Website:

- http://www.ece.utexas.edu/people/faculty/seth-bank
- http://www.caee.utexas.edu/faculty/directory/manuel
- http://www.ae.utexas.edu/faculty/faculty-directory/rodin
- http://users.ices.utexas.edu/~tanbui/
- http://www.me.utexas.edu/faculty/faculty-directory/taleff
- http://www.me.utexas.edu/people/faculty/directory/anne
- http://www.che.utexas.edu/faculty/directory/whittingham
- http://www.ece.utexas.edu/people/faculty/seth-bank
- http://www.ae.utexas.edu/faculty/faculty-directory/rodin
- http://www.che.utexas.edu/faculty/directory/whittingham