



# **BUILD YOUR CAREER HERE.**

## **The Department of Mechanical Engineering at the University of Wisconsin–Madison is searching for up to four tenure-track faculty to lead research in energy storage and applied controls.**

DEADLINE FOR FULL CONSIDERATION IS DECEMBER 1, 2019; OPEN UNTIL FILLED

### **ENERGY STORAGE**

Interest has never been higher in transforming our energy infrastructure to be more sustainable, resilient, and capable of supporting future economic growth.

We are seeking faculty candidates with research interests in the broad area of energy systems to meaningfully advance the state of the art.

The ideal candidate will develop a successful research program focused on technologies and approaches that can enable increasing deployment of renewable energy sources, including solar and wind, by integration with various forms of energy storage at scales from building to the grid.

Candidates who have expertise in both component-level and system-level modeling and controls applicable to larger scale energy systems integrated with the utility grid are of particular interest. All candidates must have a strong background in physics-based modeling of thermal-fluid components and energy systems.

Candidates who transcend the traditional boundaries of mechanical engineering—and bring research insights from fields such as controls or energy policy to address high-impact societal problems—are encouraged to apply.

**apply → [go.wisc.edu/energy](https://go.wisc.edu/energy)**

### **APPLIED CONTROLS**

The application of control principles to electro-mechanical, autonomous, and cyber-physical systems is central to mechanical engineering and will continue to increase in importance.

We welcome candidates whose research interests are focused on real-world application of novel control, sensing, and estimation approaches. Areas of interest include, but are not limited to: autonomous vehicles and systems, intelligent robotics, electrified vehicle powertrain control, power storage, and large-scale energy systems and electrification.

Applied controls research at UW-Madison includes a diverse, interdisciplinary group of faculty. The open positions described here are part of continued growth in our applied controls faculty group, which emphasizes collaboration and interdisciplinary research.

We encourage applications from candidates who bring knowledge and solutions from electrical engineering, computer science, or related disciplines; and who design their research to explore critical issues in our world.

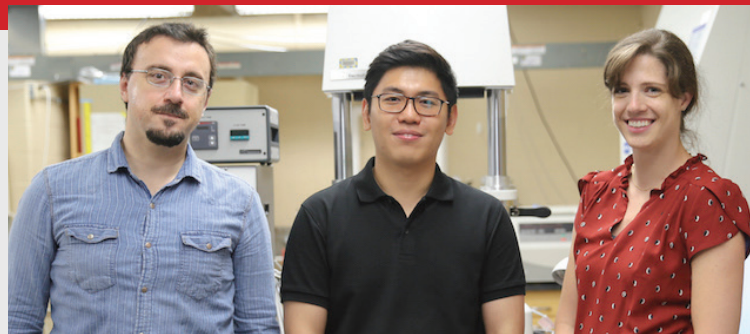
**apply → [go.wisc.edu/controls](https://go.wisc.edu/controls)**

# UNIVERSITY OF WISCONSIN-MADISON MECHANICAL ENGINEERING

**15** ranked nationally among engineering colleges

**17** ranked among mechanical engineering departments

*U.S. News & World Report national ranking 2019*



*Assoc. Prof. Melih Eriten and Asst. Prof. Corinne Henak advised graduate student Guebum Han (center), who studied how how much loading joint cartilage can handle before it fails.*

**956** undergraduate students

**219** graduate students (121 PhD)

**34** faculty (3 added in 2016; 4 added in 2019; 4 projected for 2020)

**10** lecturers and faculty associates

**58** new awarded research grants each year, bringing in  
**\$8.2 million**  
(annual averages)



*Our students are key leaders in the cross-disciplinary Badgerloop team at the SpaceX Hyperloop Competition.*

**125** courses taught



*Students in the Rockwell Automation Industrial Connected Enterprise Lab.*

## Faculty research areas

### Manufacturing

- Metals
- Polymers and composites
- Laser
- Digital
- Sustainable smart manufacturing
- Control of manufacturing

### Mechanical Systems

- Biomechanics
- Computational design
- Controls
- Experimental mechanics
- High-Performance Computing/Scientific Computing
- Multi-Body Dynamics
- Nano- and micromechanics
- Optimization
- Robotics and Mechatronics

### Energy

- Computational Fluid Dynamics
- Cryogenics
- Internal Combustion Engines
- Laser Diagnostics
- Solar Energy
- Two-Phase Flow Heat Transfer