

GE Advanced Technology Initiative

INNOVATION PARTNERSHIP BUILDING AT UCONN TECH PARK



About

The GE Advanced Materials Partnership at UConn supports research to develop advanced materials and sophisticated arc-physics simulations that will enable the next generation of industrial circuit breakers and electrical distribution equipment. The five-year \$7.5 million investment from GE Industrial Solutions makes possible multidisciplinary collaborations between academic and industry researchers through three initiatives: \$3.3 million to research in materials, manufacturing, and advanced circuit breaker technologies; \$2.7 million in grants for graduate and undergraduate student fellows through the GE Fellowship for Innovation program; and a \$1.5 million endowment for a GE professorship in the School of Engineering.

From design through manufacturing and service, GE Industrial Solutions leads with cutting edge technology for the safe control of electricity from grid to point of use. The company's history and breadth of expertise provide unparalleled resources for powering scientific advances in electrical distribution.

Areas of Expertise

GE's Industrial Solutions provide electrical distribution protection and control solutions for applications including:

- Commercial
- Data Center
- Healthcare
- Industrial
- Mining
- Oil and Gas
- Residential
- Telecommunications

Across this range, GE Industrial Solutions products serve three areas: critical power, motor and lighting controls, and protection and distribution of electricity. Their services encompass such offerings as:

- Engineering
- Installation
- Technical Support
- Monitoring
- Diagnostics
- Training
- Emergency Services
- Inspection
- Repairs
- Forensics
- Upgrades and Retrofits
- Services for Uninterruptible Power Supply (UPS)

Center Characteristics

Advanced Materials Partnership

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Research Funding

Since its inception in 2014, the partnership has funded three GE-directed research initiatives, and 50 student fellows pursuing terminal degrees in advanced materials, magnetic materials, polymeric materials, and energy and modeling. The partnership's supported research projects align with the core mission of GE Industrial Solutions to offer technologies that protect and control the distribution of electricity, exploring innovations in metals and alloys, electrical arc physics, and thin films to advance circuit breaker technology. For the past four years, the GE Fellowship for Innovation program has attracted top talent among undergraduates from Mechanical Engineering and Materials Science and Engineering, with graduate student fellows also pursuing self-directed research under the guidance of UConn Faculty as GE Fellows advisors.

Collaboration

Structured meetings, reports, and events formally support ongoing collaborative research under the GE Advanced Materials Partnership. Researchers at UConn work closely together with GE leadership and research teams throughout the year. For GE-directed research, collaboration includes biweekly meetings with GE counterparts, as well as two formal project review meetings per year. In culmination, UConn hosts the annual GE Night to spotlight results and ongoing research supported by the partnership. Researchers pursuing GE-directed projects and students funded by grants from the GE Fellowship for Innovation program present their work to an audience of students, faculty, and GE engineers and executives.

Creating Opportunities

The partnership between GE and UConn not only produces cutting edge discoveries with immediate relevance to core industry applications, but also provides UConn students with valuable new context for their academic work. Through visits to GE facilities and ongoing teamwork with GE counterparts, students benefit from corporate and industrial perspectives and gain insight for career planning and development. Bringing together teams of top talent to tackle important challenges, the GE Advanced Materials Partnership creates extraordinary opportunities for students and leads to critical innovations in science and industry.



Contact

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