

UNIVERSITY of WASHINGTON

MECHANICAL ENGINEERING & ADVANCED MANUFACTURING



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NOTABLE PARTNERS

The Boeing Company
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Ricoh USA
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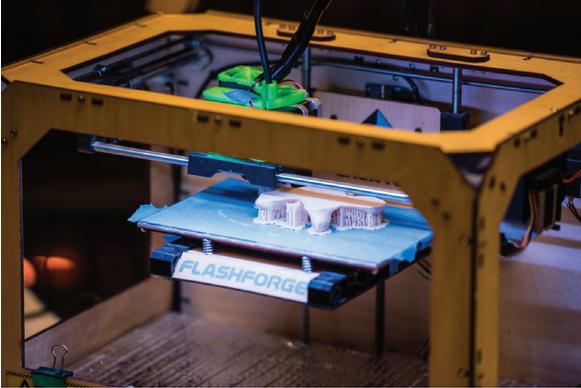
OVERVIEW

UW Mechanical Engineering is helping to advance manufacturing and strengthen the innovation ecosystem in the State of Washington and the nation. Washington is at the forefront of advanced manufacturing — using technology to improve products, services and processes. It has a growing health technology and medical device industry, as well as the most robust aerospace cluster in the world. Next-generation advanced manufacturing will be knowledge-intensive and will require innovations that leverage emerging information and sensing technologies. The new processes and solutions being developed in our labs are helping to create a stronger, more sustainable, globally competitive manufacturing sector.



KEY RESEARCH AREAS

- Advanced composite materials and structures
- Biomanufacturing
- Machine learning and big data
- Modeling, simulation and sensors
- Nanomanufacturing
- Printed and flexible electronics
- Robotics and human interaction
- Self-assembly manufacturing
- 3-D printing and digital manufacturing



ME faculty helped establish and continue to advance the fields of **rapid prototyping** and **additive manufacturing**.



Boeing Advanced Research Center pairs Boeing engineers with students and faculty to develop solutions for Boeing products in the areas of automation, robotics and aircraft assembly.



The **Washington Clean Energy Testbeds** accelerate the development, scale-up and adoption of new energy technologies by providing labs for prototype manufacturing, testing and systems integration.



A consortium of academic institutions, aerospace companies and government agencies, the **Center for Advanced Materials in Transport Aircraft Structures** seeks solutions to the challenges associated with the application of composites and advanced materials for large commercial aircraft.

AWARD-WINNING STUDENT TEAMS

Formula Motorsports designs, builds and competes small formula-style racecars from scratch. The team has had years of success with combustion vehicles and is now solely focusing on electric.

Husky Robotics designs, builds, programs and competes Mars Rovers in simulated missions while providing students with experience in machining, circuit design, coding and project management.

WOOF 3-D Print Club provides emerging engineers with an environment centered on additive manufacturing.

STARTUPS

Companies resulting from recent ME faculty and student research include:

Alchemai provides advanced data analytics for supply chain risk management.

NanoFactory introduced a technology addressing the challenge to rapidly concentrate and purify DNA with results comparable to popular commercial kits, but at a much lower cost.

VICIS has developed a helmet designed to mitigate impact forces in NFL, college and youth football.

