

UNIVERSITY of WASHINGTON

# MECHANICAL ENGINEERING & HEALTH

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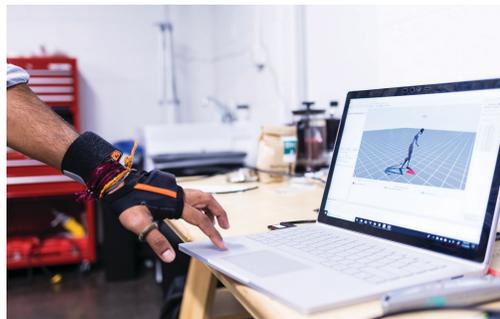
## NOTABLE PARTNERS

Nabtesco  
Novo Nordisk  
Origincell  
PATH  
Seattle Children's Hospital  
Stryker  
UW Medicine  
UW Schools of Dentistry,  
Nursing and Pharmacy  
VA Puget Sound

## OVERVIEW

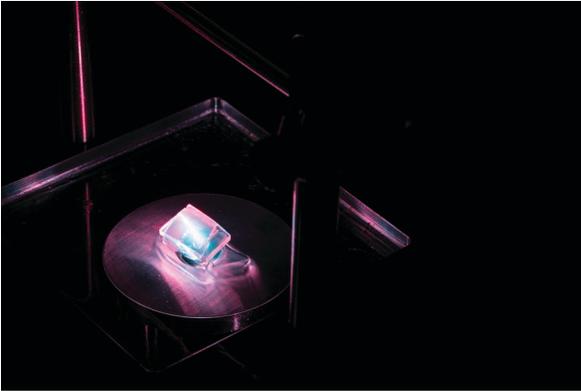
There has never been a more opportune time for researchers, engineers, clinicians and entrepreneurs to contribute to the development of health technology for the purpose of lowering costs and improving the quality of care. Our programs and partnerships bridge boundaries between engineers and health-care practitioners by integrating research, student projects, clinical practice and commercialization to train leaders in health care innovation. The new technological solutions being developed in our labs will help improve the quality and efficiency of health care while reducing costs.

UW Mechanical Engineering has a rich history of advancements in biomechanics and health technologies, thanks to the work of pioneers in the field, including emeritus faculty Colin Daly and Albert Kobayashi and alumni Wayne Quinton and Savio Woo. Today, nearly half of ME's core faculty research in this area.



## KEY RESEARCH AREAS

- Assistive design technology and accessible design
- Biomechanics, biotechnologies and human movement
- Bio-microelectromechanical systems (BioMEMs), cell mechanics and nanotechnology
- Blood, tissue and organ interaction
- Cryopreservation and biobanking technologies
- Innovation in health and biomedical device development
- Nano and biologically inspired robotics
- Photonics - diagnostic imaging, surgical guidance and laser therapy
- Point-of-care diagnostics
- Prosthetics, orthoses and exoskeletons



ME researchers are advancing **cancer detection and treatment** through innovations in nanorobotics, optical technologies and biomedical diagnostics.



**Engineering Innovation in Health** is a year-long program in which engineering students and faculty partner with clinicians to design medical devices aimed toward lowering costs and improving care.



Focused on amplifying human and robotic interaction, the **AMP Lab** advances understanding of the dynamics and control of movement to design treatment strategies and assistive technologies that improve function and quality of life.



ME's 15-year partnership with the **Seattle VA's Center for Limb Loss and Mobility** has resulted in hands-on research opportunities for students and has helped propel UW biomechanics research in new directions.

## AWARD-WINNING STUDENT PROJECTS

**MedsForAll**, an affordable alternative to the epinephrine auto-injectors currently on the market, developed for communities worldwide.

**MistEase**, a device that makes it easier for elderly people with glaucoma to administer their eye drops.

**PlayGait™**, a pediatric exoskeleton that helps children with gait disorders walk more, so they can build muscle strength and increase independent mobility.

## NOTABLE STARTUPS

**Phoresa** is developing an innovative test for infectious diseases to help doctors better diagnose and treat patients in a single visit.

**Stasys** is commercializing a device to assess platelet dysfunction in trauma patients within minutes, helping emergency physicians save lives.

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