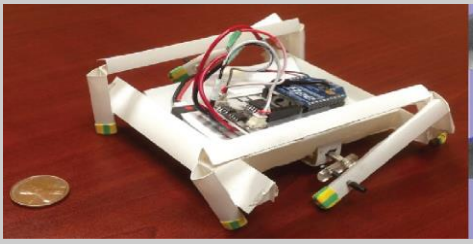
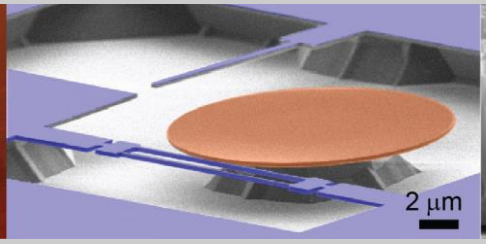
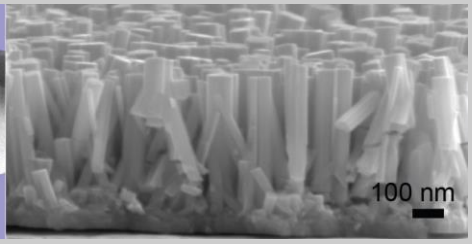
WPI MECHANICAL ENGINEERING







WPI ME Graduate Seminar Series 2019-2020

Mechanism of Carotid Plaque Rupture and Progression: New Paradigm, New Imaging Surrogates, New Technology

Luis Savastano

Senior Associate Consultant

Department of Neurosurgery

Mayo Clinic- Rochester

10:00-10:50 am, Wednesday, Nov. 20
Higgins Labs 218

Stroke is a leading cause of death and disability and one of the most devastating of all neurological conditions. Worldwide it accounts for approximately 5.5 million deaths annually, and the prevalence of stroke is expected to steadily increase in the years to come as the population ages. The most common known cause of ischemic stroke is artery-to-artery embolism in the setting of carotid atherosclerotic carotid disease. Although strokes due to carotid artery disease (CAD) are typically thromboembolic, clinical management is guided by the degree of stenosis, largely because of limited understanding of the plaque disruption mechanism and reliable imaging tools. This study provides a

About the Speaker

Luis E. Savastano, M.D. Ph.D. was born in London, England in 1985 and grew up in Milan, Italy and in Mendoza, Argentina. He entered the National University of Cuyo Medical School, an elite school in Argentina, aged 17 and graduated in 2009 as Valedictorian and First in his Class. He also completed a doctoral degree focused in experimental neurosurgery with Summa cum laude honors. He was a research fellow at the National Council of Scientific and Technical Research of Argentina (CONICET) from 2009 to 2011 and was then appointed Assistant Professor in the Department of Anatomy in 2011. He then completed a 7-year neurosurgery residency program at the University of Michigan (Ann Arbor, MI) and received neurointerventional radiology fellowship training in Michigan and at Beth Israel Deaconess Medical Center / Harvard Medical School. He then joined the faculty of the Department of Neurosurgery at the

mechanistic paradigm of plaque degradation supported by morphological, hemodynamic and mechanical analyses and introduces a novel laser based technology for high resolution intravascular imaging of structural and biological markers of plaque vulnerability.	Mayo Clinic (Rochester, MN) to concentrate his practice in cerebrovascular neurosurgery and translational research. Dr. Savastano's academic interests lay in the complexities of cerebrovascular diseases and his research has focused in the development of new knowledge and technologies to better understand, diagnose and treat neurological and cerebrovascular diseases. Dr. Savastano is a prolific academic neurosurgeon with over 60 peer-reviewed publication and over 80 presentations in national and international meetings. He also personally led the development of two novel endovascular platforms from the lab to the clinic: one for multimodal endovascular endoscopy, and another for mechanical thrombectomy in stroke.