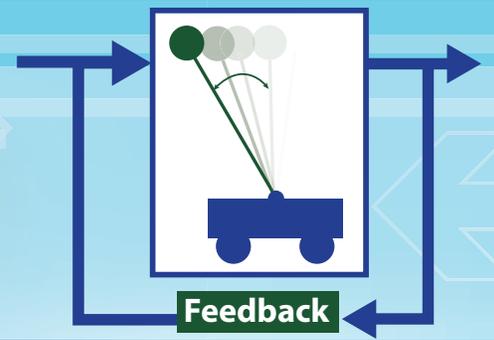


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Control Seminar



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Dynamic Reconfiguration for Versatile Mobile Performance



ANIRBAN MAZUMDER

Assistant Professor
Georgia Institute of Technology

Friday, February 15, 2019

3:30 – 4:30 pm 1500 EECS

ABSTRACT: Mobile robots can transform how society addresses important challenges including disaster response, infrastructure inspection, and public safety. However, many mobile systems cannot yet live up to this promise. Robots designed for high performance in one environment are frequently unable to maintain mobility, energy efficiency, and performance in a new or dynamic setting. Systems that can reconfigure have the potential to function effectively in unstructured environments by changing their gearing, shape, or control architecture to best match the changing conditions. In this talk I will describe how dynamic reconfiguration can enable versatility, agility, and efficiency in mobile robots. I will explore two case study examples from my research: Energy efficient legged locomotion and Agile human-machine teaming. The talk will conclude with an overview of my vision for how dynamic reconfiguration can enhance the future of mobile robotics and human mobility.

BIO: Anirban Mazumdar is an Assistant Professor at the George W. Woodruff School of Mechanical Engineering at the Georgia Institute of Technology. He received his BS, MS, and PhD degrees in Mechanical Engineering from the Massachusetts Institute of Technology in 2007, 2009, and 2013 respectively. He was a Postdoctoral Appointee in the High Consequence Automation and Robotics group at Sandia National Laboratories from 2013 to 2018. His current research interests include versatile energy efficiency, human-machine teaming, and multi-modal adaptation. He was the recipient of a National Science Foundation Graduate Research Fellowship (2008) and a Tau Beta Pi Fellowship (2007). In 2013, he was awarded the MIT Department of Mechanical Engineering's de Florez award for "Outstanding Ingenuity and Creative Judgement" for his PhD research on maneuverable underwater robots.

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Questions? Contact: Judi Jones asap@umich.edu