



Dr. Marin Kobilarov

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Friday, October 10, 2014

4:00 p.m. / 108 Jack E. Brown Chemical Engineering Bldg

Motion Planning and Control of Robotic Systems in Natural Environments

ABSTRACT

The talk will describe ongoing research at the Laboratory for Autonomous Systems, Control, and Optimization (ASCO) at JHU related to planning and control of robotic vehicles. Our main motivation is the development of autonomous robotic systems capable of operating with agility and robustness in their natural environments. Our research focuses on analytical and computational methods at the intersection of dynamical systems and control, planning and optimization, as well as machine learning, real-time implementation and integration of these methods in robotic embedded systems. Current application areas include the development of autonomous aerial and ground vehicles, and computational tools for control and optimization of multi-body mechanical systems.

BIO

Marin Kobilarov is an assistant professor in Mechanical Engineering at the Johns Hopkins University where he leads the recently established Laboratory for Autonomous Systems, Control, and Optimization. His research focuses on dynamics and control of mechanical systems, on approximation methods for optimization and motion planning, and on the development of robotic embedded systems. Current applications include unmanned aerial systems and ground vehicles. Prior to joining JHU in 2012, he received the Keck Institute for Space Studies post-doctoral award and the United Technologies Research Center postdoctoral award and performed research in Control and Dynamical Systems at the California Institute of Technology. He obtained a Ph.D. from the University of Southern California in Computer Science (2008) and a B.S. in Computer Science and Applied Mathematics from Trinity College, Hartford, CT (2003).

Pizza will be served at 3:45 p.m.