

# Neuro-Autonomy: Neuroscience-Inspired Perception, Navigation, and Spatial Awareness for Autonomous Robots



Wednesday, November 13, 2019 - Day 1

Location: 8 Saint Mary's Street (Photonics Bldg.) Room PHO 339

- 8:30am-9:00am **Breakfast**
- 9:00am-9:25am **Yannis Paschalidis**, Boston University  
Introductions and Overview
- 9:25am-9:50am **Michael Hasselmo**, Boston University  
Spatiotemporal Coding of Trajectories and Environments in Cortex
- 9:50am-10:15am **Margrit Betke**, Boston University  
3D Visual Tracking and Pose Estimation of Animals
- 10:15am-10:40am **Chantal Stern**, Boston University  
Functional MRI Studies of Navigation in Humans
- 10:40am-10:55am **Coffee Break**
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- 10:55am-11:20am **Anthony Burkitt**, University of Melbourne  
Data-Driven Neural Modelling Approaches to Understanding Sensory Processing
- 11:20am-11:45am **Ken Cheng**, Macquarie University  
The Antarium: A Reconstructed Visual Reality Arena
- 11:45am-12:10pm **John Baillieul**, Boston University  
From C. Elegans to R. Norvegicus and Beyond: Autonomy Through Synthetic Neuromotor Systems
- 12:10pm-1:00pm **Lunch**
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- 1:00pm-1:25pm **John Leonard**, Massachusetts Institute of Technology  
Semantic Navigation and Spatial Awareness
- 1:25pm-1:50pm **Michael Milford**, Queensland University of Technology  
Place Perception Through Bio-Mimetic Sensing and Fusing Neurally-Inspired and Deep Neural Networks
- 1:50pm-2:15pm **Girish Nair**, University of Melbourne  
Information Theory in the Sense-Perceive-Act Cycle
- 2:15pm-3:15pm **Coffee Break: Tour at the Boston University Robotics Lab**
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- 3:15pm-3:40pm **William Moran & Simon Williams**, University of Melbourne  
Optimal Scheduling for Situation Assessment
- 3:40pm-4:05pm **Andrey Savkin**, University of New South Wales  
UAV Navigation for Collision Avoidance and Following Targets
- 4:05pm-5:15pm Visit of the BU Center for Integrated Life Sciences and Engineering (CILSE) and Tour of the Facilities (fMRI, Rat Physiology Lab)
- 6:00pm **Dinner: Barcelona Wine Bar** (1700 Beacon St., Brookline)

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