

# Massachusetts HPC day

## May 25, 2017

hosted by  
*UMass Dartmouth Center for Scientific  
Computing and Visualization Research*

- 8:00am**      **Breakfast (Sponsored by Dell)**
- 9:00 - 9:45**    **Keynote: Sushil Prasad** *Developing IEEE TCPP Parallel and Distributed Computing Curriculum and NSF Advanced Cyberinfrastructure Learning and Workforce Development Programs*
- 10:00 - 10:25** **Arghavan Louhghalam** *Quantitative Engineering Sustainability: Integration of Mechanics-based Models in Lifecycle Footprint*
- 10:25 - 10:50** **Ofer Cohen** *Computational Plasma Physics in the Solar System and Beyond*
- 10:50 - 11:15** **Giovanni Widmer** *Visualizing complex bacterial populations in animal models.*
- 11:15 - 11:40** **Min Hyung Cho** *Fast computational method for wave scattering*
- 11:40 - 12:40** **Lunch break & posters (Sponsored by Microway)**
- 12:40 - 1:05**    **Marinos Vouvakis** *High-Performance Electromagnetic Computations: The Domain Decomposition Paradigm*
- 1:05 - 1:30**    **Paul Whitford** *How HPC is transforming the study of biological machines*
- 1:30 - 1:55**    **Randy Paffenroth** *Musings on Exabyte Scale Principal Component Analysis*
- 1:55 - 2:20**    **Samuel Isaacson** *Jump Process Approximation of Particle-Based Stochastic Reaction-Diffusion Models*
- 2:20 - 3:10**    **Education Roundtable**
- 3:10 - 3:45**    **Break (Sponsored by Dell)**
- 3:45 - 4:10**    **Ryan McKinnon:** *Cosmological Simulations of Galaxy Formation*
- 4:10 - 4:35**    **Alfa Heryudono** *Polygonal Brain, Conformal Transplant, and Alzheimer's Disease.*
- 4:35 - 5:00**    **Devesh Tiwari** *What is stopping us from getting to exascale computing and what should we do about it?*
- 5:00 - 5:45**    **Keynote Lecture: Luke Kelley** *Predictions of future Gravitational Wave Observations using Simulations of the Universe*
- 5:45 - 6:00**    **Closing Remarks & Student poster prizes awarded**  
Prizes sponsored by Microway, Dell, SIAM, and MathWorks

Organizing committee: Kavitha Chandra (UMassL), Qian-Yong Chen (UMassA), Min Hyung Cho (UMassL), Sigal Gottlieb (UMassD), Chris Hill (MIT), Sam Isaacson (BU), David Kaeli (Northeastern), Gaurav Khanna (UMassD), Misha Kilmer (Tufts) Julia Mullen (Lincoln Lab), Eric Polizzi (UMassA), Homer Walker (WPI), Karen Willcox (MIT), and Ralph Zottola (UMassPO).