

Institution: U.S. Naval Academy  
Program: Systems Engineering

Date: 1 February 2012

1. Name: Joel M. Esposito
2. Education –

BS	Mechanical Engineering	Rutgers university	1997
MS	Mechanical Engineering	University of Pennsylvania	1999
PhD	Mechanical Engineering	University of Pennsylvania	2002
3. Academic experience –
  - US Naval Academy, Assistant Professor, 2002-2007 (full time)
  - US Naval Academy, Associate Professor, 2007-Present (full time)
4. Non-academic experience –
  - Research Engineer, Sandia National Labs, NM, Summer 1999
  - Quality Control Engineer, Lockheed Martin, NJ, Summer 1997
5. Certifications or professional registrations: none
6. Current membership in professional organizations: none
7. Honors and awards
  - Raouff Award for Excellence in Engineering Education, USNA 2010
  - Finalist for Best Paper Award, IEEE Conference on Robotics and Automation 2002
  - Graduate Student Leadership Award, University of Pennsylvania 2000
  - NSF Future Faculty, Travel Award, 2001
  - NSF GANN Fellowship, 1997-2002
8. Service activities (within and outside of the institution)
  - Editor in Chief, ASEE Computers in Education Journal
  - Organizer, ASEE Computers in Education Special Issue on Robotics Education
  - Associate Editor, IEEE Intelligent Robot and Systems 2008
  - Organizer, Invited Session on Cooperative Robotic Manipulation
  - Review for many conferences and journals in the field (ACC, CDC, IEEE)
  - Panelist, NSF Robotics Career Awards
  - Panelist, Federal Highway Administration Advanced Research Project Smart Sensor Group  
  - Chair, Engineering Division Curriculum Committee
  - Chair, Systems Engineering Curriculum Committee
  - Member, Faculty Senate Curriculum Committee
  - Chair, Systems Engineering Outreach Committee
  - Member, Engineering Division Outreach Committee
  - Member Teaching Award Committee (2008-2010)
  - Member, Service Excellence Award Committee (2008-2009)
  - Coordinator, Systems Engineering Undergraduate Research (2004-2008)

9. Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- J.M. Esposito, “A simplified model of RRT coverage for kinematic system,” *IEEE/RSJ Intelligent Robots and Systems – Invited Session 50 years of Robot Motion Planning*, p. 2192-2198, Sept 2011
- J.M. Esposito, “Maintaining wireless connectivity constraints for robot swarms in the presence of obstacles”, *Journal of Robotics*, Volume 11, p.1-12, 2011
- M.G. Feemster and **J.M. Esposito**, “Comprehensive framework for tracking control and thrust allocation for a highly over actuated autonomous surface vessel”, *Journal of Field Robotics: Special Issue: State of the Art in Marine Autonomous Surface and Underwater Vehicles, Part 2*, Volume 28, Issue 1, p. 80-100, Jan 2011
- J.M. Esposito, “Decentralized cooperative manipulation with a swarm of mobile robots,” *IEEE/RSJ Intelligent Robots and Systems*, p. 5333-5338, Sept 2009. J.M. Esposito. "Distributed grasp synthesis for swarm manipulation", In IEEE Conference on Robotics and Automation, pages 1489-1494, 2008.
- M.G. Feemster, J.M. Esposito, and E.T. Smith. “Cooperative manipulation on the water”. In IEEE Conference on Robotics and Automation, pages 1501-1506, 2008.
- J.M. Esposito, E.T. Smith, M.G. Feemster, “Autonomous Tugboat Swarms”, Workshop on Swarming in Natural and Engineered Systems, Philadelphia, PA, May 2007
- E.T. Smith, M.G. Feemster, and J.M. Esposito, “Swarm Manipulation of an Unactuated Surface Vessel”, IEEE Southeastern Symposium on Systems Theory, March 2007, P. 16-20
- J.M. Esposito, and M. Kim, “Using formal modeling with an automated analysis tool to design and parametrically analyze a multi-robot coordination protocol: a case study” , IEEE Transactions on Systems, Man and Cybernetics: Part A, Systems. Vol 37, Issue 3, May 2007 Page(s): 285-297
- J.M. Esposito and V.Kumar, "A State Event Detection Algorithm for Numerically Simulating Hybrid Systems with Model Singularities", ACM Transactions on Modeling and Computer Simulation, Volume 17, Issue 1, p. 1-22, January 2007

10. Briefly list the most recent professional development activities

Attended ASEE Annual Conference 2011

Attended, Workshop on Project Based Learning, USNA Center for Teaching and Learning, 2009