

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

Date: 07-Mar-2012

1. Name: Matthew G. Feemster

2. Education

PhD, MS, BS Electrical Engineering, Clemson University, 2000, 1996, 1994

3. Academic experience

U.S. Naval Academy, Associate Professor, 2007 – present, full time.

U.S. Naval Academy, Assistant Professor, 2002 – 2007.

4. Non-academic experience

WaveCrest Laboratories, Controls Engineer, 2000 – 2002.

Responsible for the design and construction of the control system for a newly designed multi-phase electric motor.

5. Certifications or professional registrations

None.

6. Current membership in professional organizations

Member of the Institute of Electrical and Electronics Engineers (IEEE) and American Society for Engineering Education (ASEE)

7. Honors and awards

- Nominated for Raouf Teaching Excellence Award for Systems Engineering Department (2011, 2012).
- Phi Kappa Phi Honor Society
- Best Paper Presentation in Session TM-07, *IEEE American Control Conference*, San Diego, CA, pp. 2158-2162, June 1999, M. Feemster, P. Aquino, D. M. Dawson, and D. Haste, "Sensorless Rotor Velocity Tracking Control for Induction Motors."
- Best Paper Presentation in Session TA-06, *IEEE American Control Conference*, Philadelphia, PA, pp. 1488-1492, June 1998, M. Feemster, P. Vedagarbha, D. M. Dawson, and D. Haste, "Adaptive Control Techniques for Friction Compensation."

8. Service activities (within and outside of the institution)

- Member of USNA Trident Scholar committee.
- Member of USNA Naval Academy Research Council committee.
- Member of USNA Academic Affairs committee.
- Member of USNA Service Excellence Award committee.
- WSE Department scheduler.
- Member of WSE Outreach committee.
- Member of WSE curriculum development committee.
- Reviewer for numerous control related journals/conferences.

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
- M. Feemster and J. Esposito, “A Comprehensive Framework for Tracking Control and Thrust Allocation for a Highly Over-Actuated Autonomous Surface Vessel,” *Journal of Field Robotics*, Feb. 2011.
  - C. Scovill, J. Searock, and M. Feemster, “Early Detection of Hostile Intent of a Marine Vessel,” accepted to *AUVSI’s Unmanned Systems Conference*, July 2012.
  - C. Henderson, M. Feemster, and M. Robertson, “Application of Command Shaping to a Convoy of Ground Vehicles,” accepted to the *IEEE Multi-Conference on Systems and Control*, Denver CO, Sept. 2011.
  - C. Henderson, M. Roberts, and M. Feemster, “Headway Control Using Command Shaping,” *IEEE Southeastern Symposium on Systems Theory*, Tyler, TX, March 2009.
  - J. Topp and M. Feemster, “An Adaptive Control Design for a System with Unknown Control Direction,” *IEEE Southeastern Symposium on Systems Theory*, Tyler, TX, March 2009.
  - M. Feemster, “Swarm Manipulation of a Disabled Vessel: Elimination of Velocity Measurements,” *International Mechanical Engineering Congress and Exposition*, Seattle WA, November 2007.
  - B. Maslov, M. Feemster (Principle Investigator), G. Yuan, “Phase Advance Angle Optimization for Brushless Motor Control,” U.S. Patent No: 7,436,139, awarded October 2008.