

# Curriculum Vitae

## A. Biographical Information

**NAME:** Nader Motee

**BUSINESS ADDRESS:**

19 Memorial Drive West, Bethlehem  
552 Packard Laboratory  
Department of Mechanical Engineering and Mechanics  
Lehigh University PA 18015

Website: <https://dcds.lehigh.edu>

Email: [motee@lehigh.edu](mailto:motee@lehigh.edu)

Phone: (626) 375-6587

**EDUCATIONAL HISTORY:**

**Doctor of Philosophy**, Electrical and Systems Engineering

University of Pennsylvania, Philadelphia, PA

Primary Fields: Control Systems and Robotics

Title of Dissertation: Optimal Control of Spatially Distributed Systems (Advisor: Prof. Ali Jadbabaie)

Completion Date: August 16, 2006 – December 31, 2007

**Master of Science**, Electrical and Systems Engineering

University of Pennsylvania, Philadelphia, PA

Depth Area: Control Systems and Robotics

Completion Date: June 01, 2003 – August 15, 2006

**Master of Science**, Mechanical Engineering

Louisiana State University, Baton Rouge, LA

Depth Area: Control Systems

Title of Dissertation: Minimization of Power Losses in Active Magnetic Bearing Control

Completion Date: July 01, 2001– May 31, 2003

**Bachelor of Science**, Electrical Engineering, Sharif University of Technology, Tehran, Iran

Completion Date: September 01, 1995 – February 01, 2000

**EMPLOYMENT HISTORY:**

**Associate Professor**, Lehigh University, Bethlehem, PA

Affiliation: Department of Mechanical Engineering and Mechanics

Appointment Duration: May 2017– present

**Assistant Professor**, Lehigh University, Bethlehem, PA

Affiliation: Department of Mechanical Engineering and Mechanics

Appointment Duration: August 2011– May 2017

**Postdoctoral Scholar**, California Institute of Technology, Pasadena, CA

Affiliation: Control and Dynamical Systems (CDS) Department (Advisor: Prof. John C. Doyle)

Appointment Duration: November 2008 – August 2011

**Visiting Postdoctoral Scholar**, University of California at Santa Barbara, Santa Barbara, CA

Affiliation: The Center for Control, Dynamical Sys. & Computation (Advisor: Prof. Bassam Bamieh)

Appointment Duration: March 23, 2009 – March 23, 2011

**Postdoctoral Research Fellow**, University of Pennsylvania, Philadelphia, PA

Affiliation: General Robotics, Automation, Sensing, and Perception (GRASP) Laboratory.

Appointment Duration: January 1, 2008 – October 31, 2008

## B. Publications and Creative Activities

### ARTICLE IN REFEREED JOURNALS:

#### PUBLISHED:

- [J1] M. Siami and N. Motee. *New spectral bounds on H2-norm of noisy linear dynamical networks*. **Automatica**. Vol. 80, pp. 305-312, June 2017.
- [J2] N. Motee and Q. Sun. *Sparsity and spatial localization measures for spatially distributed systems*. **SIAM Journal Control and Optimization**. 55(1), pp. 200-235, 2017.
- [J3] M. Siami and N. Motee. *Fundamental limits and tradeoffs on disturbance propagation in large-scale dynamical networks*. **IEEE Transactions on Automatic Control**. Vol. 61, Issue: 12, pp. 4055-5062, December 2016.
- [J4] N. Motee, B. Bamieh and M. Khammash. *Stability analysis of quasi-polynomial dynamical systems with applications to biological network models*. **Automatica**, Vol. 48, Issue 11, pp. 2945-2950, Nov. 2012.
- [J5] N. Motee and A. Jadbabaie. *Distributed multi-parametric quadratic programming*. **IEEE Trans. on Automatic Control**, Vol. 54, No. 10, pp. 2279-2289, October 2009.
- [J6] N. Motee and A. Jadbabaie. *Optimal control of spatially distributed systems*. **IEEE Trans. on Automatic Control**, Vol. 53, No. 7, pp. 1616-1629, August 2008.
- [J7] A. Karimi, I.D. Landau, and N. Motee. *Effects of the design parameters of multimodel adaptive control on the performance of a flexible transmission system*. **International Journal of Adaptive Control and Signal Processing**, Vol. 15 (3):335-352, April 2001.

#### ACCEPTED FOR PUBLICATION:

- [J8] M. Siami, S. Bolouki, B. Bamieh, and N. Motee. *Centrality measures in linear consensus networks with structured network uncertainties*. **IEEE Transactions on Control of Networks Systems**. DOI: 10.1109/TCNS.2017.2655731
- [J9] S. Bolouki, R.P. Malhame, M. Siami and N. Motee. *Eminence grise coalitions: on the shaping of public opinion*. **IEEE Transactions on Control of Networks Systems**. DOI: 10.1109/TCNS.2015.2482218

#### SUBMITTED AND WORKING ARTICLES:

- [WJ10] Y. Ghaedsharaf and N. Motee. *Performance analysis and improvement of time-delay linear consensus networks*. **IEEE Transactions on Automatic Control**. Under review.
- [WJ11] M. Siami and N. Motee. *Growing linear consensus networks via systemic performance measures*. **IEEE Transactions on Automatic Control**. Under review.

- [WJ12] M. Siami and N. Motee. *Abstraction of linear dynamical networks with guaranteed systemic performance measures*. **IEEE Transactions on Automatic Control**. Under review.
- [WJ13] M. Siami, G. Buzi, B. Bamieh, M. Khammash and N. Motee. *Performance limitations in autocatalytic pathways*. **IEEE Transactions on Automatic Control**. Under review.
- [WJ14] C. Somarakis, E. Paraskevas, J.S. Baras and N. Motee. *Convergence analysis of classes of asymmetric networks of cuckoo-smale type with deterministic perturbations*. **IEEE Transactions on Control of Network Systems**. Under Review.
- [WJ15] N. Motee and Q. Sun. *Localized stability certificates for spatially distributed systems with sparse graph topologies*. **IEEE Transactions on Automatic Control**. Under review.

### **REFEREED CONFERENCE PAPERS IN PROCEEDINGS:**

#### **PUBLISHED:**

- [C49] C. Somarakis and N. Motee. *Aggregate fluctuations in time-delay linear consensus networks: A systemic risk perspective*. American Control Conference, Seattle, WA, May 2017.
- [C48] H.K. Mousavi, C. Somarakis, M. Bahavarnia and N. Motee. *Performance bounds and optimal design of randomly switching linear consensus networks*. American Control Conference, Seattle, WA, May 2017.
- [C47] Y. Ghaedsharaf and N. Motee. *Performance improvement in time-delay linear consensus network*. American Control Conference, Seattle, WA, May 2017.
- [C46] M. Siami, B. Bamieh and N. Motee. *Notions of Centrality in Consensus Protocols with Input Uncertainties*. The 55th IEEE Conference on Decision and Control (CDC'2016), Las Vegas, NV, December 2016.
- [C45] R. Arastoo, M. Bahavarnia, M.V. Kothare, and N. Motee. *Closed-Loop Feedback Sparsification Under Parametric Uncertainties*. The 55th IEEE Conference on Decision and Control (CDC'2016), Las Vegas, NV, December 2016.
- [C44] N. Motee and Q. Sun. *Localized Stability Certificates for Spatially Distributed Systems with Sparse Graph Topologies*. The 55th IEEE Conference on Decision and Control (CDC'2016), Las Vegas, NV, December 2016.
- [C43] H.K. Mousavi, C. Somarakis and N. Motee. *Koopman Performance Analysis of a Class of Nonlinear Dynamical Networks*. The 55th IEEE Conference on Decision and Control (CDC'2016), Las Vegas, NV, December 2016.
- [C42] M. Bahavarnia and N. Motee. *Periodic time-triggered sparse linear quadratic controller design*. The 54th Annual Allerton Conference on Communication, Control, and Computing, Urbana, IL, September 2016.
- [C41] Y. Ghaedsharaf and N. Motee. *Complexities and Performance Limitations in Growing Time-Delayed Linear Consensus Networks*. The 6th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys'16), Tokyo, Japan, September 2016. Note: **Winner of the Best Student Paper: Runner-Up Award**
- [C40] C. Somarakis, M. Siami and N. Motee. *Interplays Between Systemic Risk and Interconnection Topology in Linear Dynamical Networks*. The 6th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys'16), Tokyo, Japan, September 2016.
- [C39] C. Somarakis and N. Motee. *Nonlinear Flocking with Guaranteed Relative Distances*. The 10th IFAC Symposium on Nonlinear Control Systems (NOLCOS 2016), Monterey, CA, August 2016.

- 
- [C38] C. Somarakis, J.S. Baras, and N. Motee. Consensus and Synchronized Periodicity in Nonlinear Delayed Networks. The 22nd International Symposium on Mathematical Theory of Networks and Systems (MTNS 2016), Minneapolis, MN, July 2016.
- [C37] M. Siami and N. Motee. *Enhancing Systemic Performance in Linear Consensus Networks by Establishing New Interconnections*. American Control Conference, Boston, MA, July 2016.
- [C36] R. Arastoo, Y. Ghaedsharaf, M.V. Kothare, N. Motee. *Optimal State Feedback Controllers with Strict Row Sparsity Constraints*. American Control Conference, Boston, MA, July 2016.
- [C35] C. Somarakis, E.Paraskevas, J.S. Baras, and N. Motee. Synchronization and Collision Avoidance in Nonlinear Flocking Networks of Autonomous Agents. The 24th Mediterranean Conference on Control and Automation (MED 2016), Athens, Greece, June 2016.
- [C34] Y. Ghaedsharaf, M. Siami, C. Somarakis, N. Motee. *Interplay Between Performance and Communication Delay in Noisy Linear Consensus Networks*. European Control Conference, Denmark, June 2016.
- [C33] M. Siami and N. Motee. *Network sparsification with guaranteed systemic performance measures*. The 5th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys'15), Philadelphia, September 2015. Note: **Winner of the Best Student Paper Award**.
- [C32] R. Arastoo, M. Bahavarnia, and N. Motee. *Output feedback controller sparsification via H2-approximations*. The 5th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys'15), Philadelphia, September 2015.
- [C31] M. Siami and N. Motee. *Effects of exogenous disturbance inputs on performance of linear consensus networks*. American Control Conference, Chicago, IL, June 2015.
- [C30] M. Siami and N. Motee. *Systemic measures for performance and robustness of large-scale interconnected dynamical networks*. The 53rd IEEE Conference on Decision and Control, Los Angeles, CA, Dec. 2014.
- [C29] S. Bolouki, R. Malhame, and N. Motee. *A geometric approach towards linear consensus*. The 53rd IEEE Conference on Decision and Control, Los Angeles, CA, Dec. 2014.
- [C28] S. Bolouki, R. Malhame, M. Siami, and N. Motee. *Eminence grise coalitions in opinion dynamics*. The 52nd Annual Allerton Conf. on Communication, Control, and Computing, October 2014.
- [C27] M. Siami and N. Motee. *Schur-convex robustness measures in dynamical networks*. American Control Conference, Portland, OR, June 2014.
- [C26] N. Motee and Q. Sun. *Sparsity measures in spatially decaying systems*. American Control Conference, Portland, OR, June 2014.
- [C25] M. Siami and N. Motee. *Fundamental limits on robustness measures in networks of interconnected systems*. The 52nd IEEE Conference on Decision and Control, Firenze, Italy, Dec. 2013.
- [C24] N. Motee and Q. Sun. *Measuring sparsity in spatially interconnected systems*. IEEE Conference on Decision and Control, Firenze, Italy, Dec. 2013.
- [C23] M. Siami and N. Motee. *Robustness and performance analysis of cyclic interconnected dynamical networks*. The SIAM Conference on Control and Its Applications (CT13), San Diego, July 2013.
- [C22] M. Siami and N. Motee. *Fundamental limits on performance of autocatalytic pathways with chain topologies*. IEEE Mediterranean Conference on Control and Automation, June 2013, Crete, Greece.
- [C21] M. Siami, N. Motee, and G. Buzi. *Characterization of hard limits on performance of autocatalytic pathways*. American Control Conference, Washington, DC, June 2013.

- 
- [C20] M. Siami and N. Motee. *On existence of hard limits in autocatalytic networks and their fundamental limitations*. The 3rd IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys'12). Santa Barbara, Sep 2012.
- [C19] N. Motee, F. Chandra, B. Bamieh, M. Khammash, and J.C. Doyle. *Performance limitations in autocatalytic networks in biology*. IEEE Conference on Decision and Control. Dec. 2010.
- [C18] N. Motee, B. Bamieh, and M. Khammash. *Model reduction of polynomial dynamical systems using differential algebra*. IEEE Conference on Decision and Control. Atlanta, GA, December 2010.
- [C17] N. Motee, A. Jadbabaie, G. Pappas. *A duality approach to path planning for multiple robots*. International Conference on Robotics and Automation, Anchorage, AK. May 2010.
- [C16] N. Motee, B. Bamieh, M. Khammash. *Stability analysis of a class of biological network models*. American Control Conference, Baltimore, MD, June 2010.
- [C15] N. Motee, A. Jadbabaie, G. Pappas. *Path planning for multiple robots using duality*. American Control Conference, Baltimore, MD, June 2010.
- [C14] N. Motee and A. Jadbabaie. *Approximation methods and spatial interpolation in distributed control systems*. American Control Conference, St. Louis, Pages: 860-866, June 2009.
- [C13] Ahmadzadeh, N. Motee, A. Jadbabaie, G. Pappas, and V. Kumar. *Multi-vehicle path planning in dynamically changing environments*. International Conference on Robotics and Automation, Kobe, Japan. Pages: 2449-2454, May 2009.
- [C12] N. Motee, A. Jadbabaie, and B. Bamieh. *On decentralized optimal control and information structures*. American Control Conference, Seattle, Pages: 4985-90, June 2008.
- [C11] N. Motee and A. Jadbabaie. *An operator theoretic framework for analysis of large-scale quadratic programming*. IEEE Conference on Decision and Control, New Orleans, LA, Dec 2007.
- [C10] N. Motee and A. Jadbabaie. *Optimal control of spatially distributed systems*. American Control Conference, Pages: 778-783, July 2007. **(Winner of the Best Student Paper Award)**
- [C9] N. Motee and A. Jadbabaie. *Receding Horizon Control of Spatially Distributed Systems over Arbitrary Graphs*. IEEE Conference on Decision and Control, Pages: 3467–3472, Dec. 2006.
- [C8] N. Motee and A. Jadbabaie. *Stability Analysis of Distributed Receding Horizon Control of Spatially Invariant Systems*. International Symposium on Mathematical Theory of Networks and Systems (MTNS), Kyoto, Japan, July, 2006.
- [C7] N. Motee and A. Jadbabaie. *Distributed receding horizon control of spatially invariant systems*. In Proceedings, American Control Conference, Pages: 731-736, June 2006. **(Finalist, Best Student Paper Award)**
- [C6] A. Jadbabaie, N. Motee, M. Barahona. *On the stability of the Kuramoto model of coupled nonlinear oscillators*. American Control Conference, Vol. 5: 4296-4301, May 2004.
- [C5] N. Motee and B. Sayyar-Rodsari. *Optimal partitioning in distributed model predictive control*. American Control Conference, Vol. 6: 5300-5305, June 2003.
- [C4] N. Motee and M.S. de Queiroz. *A switching control strategy for magnetic bearings with a state-dependent bias*. IEEE Conference on Decision and Control, Vol. 1: 245-250, Dec 2003.
- [C3] N. Motee and M.S. de Queiroz. *Control of active magnetic bearings with a smart bias*. IEEE Conference on Decision and Control, Vol. 1: 860-865, December 2002.

- [C2] N. Motee, M.S. de Queiroz, Y. Fang, and D.M. Dawson. *Active magnetic bearing control with zero steady-state power loss*. American Control Conference, Vol. 1: 827-832, May 2002.
- [C1] N. Motee. *Design parameters selection in multimodel adaptive control*. IEEE Mediterranean Electrotechnical Conference, Vol. 3: 1214–1217, May 2000. **(Finalist, IEEE R8 Best Student Paper)**

### C. Honors and Awards

1. Best Student Paper: Runner-Up Award (as advisor), IFAC Conference on Distributed Estimation and Control in Networked Systems, Tokyo, Japan, 2016
2. The Office of Naval Research Young Investigator Award (**ONR YIP**), 2016
3. Best Student Paper Award (as advisor), IFAC Conference on Distributed Estimation and Control in Networked Systems, Philadelphia, PA, 2015
4. NSF Faculty Early Career Development (**CAREER**) Award, 2015
5. The Air Force Office of Scientific Research Young Investigator Award (**AFOSR YIP**), 2013
6. The P.C. Rossin Assistant Professorship, Lehigh University Endowed Chair, 2013-2015
7. IEEE Senior Member, 2013-present
8. O Hugo Schuck Award for Theory, American Automatic Control Council, 2008
9. Joseph, D'16, and Rosaline Wolf Award for Best Dissertation, Penn Engineering, UPenn, 2008
10. Best Student Paper Award, American Control Conference, 2007
11. Best Student Paper Award, Finalist, American Control Conference, 2006
12. Best Poster Award, Research Forum at Penn Engineering, 2006
13. IEEE Best Student Paper Contest, Finalist, IEEE Region 8 (Europe, Africa, and Middle East), 2000
14. Sharif University of Technology Scholarship, Awarded for achievement in the nation-wide university entrance exam, September 1995 (Ranked 28th out of more than 300,000 applicants)

### D. Research Funding (Total amount awarded as sole PI: \$2,155,000)

#### COMPETITIVELY AWARDED RESEARCH FUNDING:

**Project/Proposal Title:** Systemic Risk and Fragility in Collaborative Networks

**Source of Support:** DOD-ONR-Young Investigator Program

**Total Award Amount:** \$510,000

**Period Covered:** 6/1/2016-5/31/2019

**Role:** Sole PI

**Project/Proposal Title:** CAREER: Systemic Performance and Robustness Measures for Large-Scale Dynamical Networks

**Source of Support:** NSF-Directorate for Engineering

**Total Award Amount:** \$500,000

**Period Covered:** 3/15/2015-2/29/2020

**Role:** Sole PI

**Project/Proposal Title:** Emergence of Fundamental Limits in Spatially Distributed Dynamical Networks and Their Tradeoffs

**Source of Support:** DOD-ONR

**Total Award Amount:** \$450,000

**Period Covered:** 8/1/2013-01/31/2017

**Role:** Sole PI

**Project/Proposal Title:** Compressive Feedback Control Design for Spatially Distributed Systems

**Source of Support:** DOD- AFOSR-Young Investigator Program

**Total Award Amount:** \$360,000

**Period Covered:** 3/15/2013-07/14/2016

**Role:** Sole PI

**Project/Proposal Title:** Algebraic Methods of Designing Spatially Distributed Control Systems and Their Approximations

**Source of Support:** NSF-Directorate for Engineering

**Total Award Amount:** \$335,500

**Period Covered:** 7/1/2012-6/30/2016

**Role:** Sole PI

## E. Scholarly Presentations

### INVITED PRESENTATIONS:

Title: *Network Sparsification with Guaranteed Systemic Performance Measures*. Electrical and Computer Engineering, Northeastern University, March 13, 2017.

Title: *Network Sparsification with Guaranteed Systemic Performance Measures*. Electrical and Computer Engineering, University of Delaware, December 05, 2016.

Title: *Systemic Measures for Performance and Robustness in Large-Scale Dynamical Networks*. The Center for Information and Systems Engineering (CISE), Boston University, April 4, 2014.

Title: *Sparsity Measures in Spatially Distributed Systems*. The Center for Control, Dynamical Systems and Computation, University of California at Santa Barbara. February 28, 2014.

Title: *Sparsity Measures in Spatially Distributed Systems*. Control and Dynamical Systems Department, California Institute of Technology, Pasadena, CA. February 27, 2014.

Title: *Sparsity Measures in Spatially Distributed Systems*. Ming Hsieh Department of Electrical Engineering, USC, Los Angeles, CA. February 26, 2014.

Title: *Robustness Measures in Interconnected Dynamical Networks*. Mechanical Engineering Department, Johns Hopkins University, Baltimore, MD. October 17, 2013.

Title: *Compressive Feedback Control Design for Spatially Distributed Systems*. Mechanical Engineering Department, Drexel University, Philadelphia, PA. December 7, 2012.

Title: *Structural Properties of Complex Interconnected Systems*. Lockheed Martin Space Systems Company, Sunnyvale, CA. May 15, 2011.

Title: *Structural Properties of Complex Interconnected Systems*. Department of Mechanical Engineering, University of Texas at Dallas. Dallas, TX. May 2, 2011.

Title: *Structural Properties of Complex Interconnected Systems*. Department of Mechanical Engineering and Mechanics, Lehigh University. Bethlehem, PA. April, 2011.

Title: *Structural Properties of Complex Interconnected Systems*. Department of Electrical & Computer Engineering, University of New Mexico, Albuquerque, NM. April 7, 2011.

Title: *Structural Properties of Complex Interconnected Systems*. Electrical Engineering Department, University of California, Riverside, Riverside, CA. March 17, 2011.

Title: *Structural Properties of Complex Interconnected Systems*. Mechanical Engineering Department, Boston University. Boston, MA. March 11, 2011.

Title: *A duality theory for path planning for multiple vehicles*. The Mobility and Robotics Systems Section, The Jet Propulsion Laboratory, NASA Center, Pasadena, CA. October 25, 2010.

Title: *A duality approach for path planning for multiple robots*. Institute of Pure and Applied Mathematics, University of California at Los Angeles, Los Angeles, CA. October 19, 2010.

Title: *Performance limitations in autocatalytic networks*. Institute of Pure and Applied Mathematics, Workshop, Internet Multi-Resolution Analysis, Lake arrowhead, CA. June 2010.

Title: *Multi-Vehicle Path-Planning with Spatio-Temporal Constraints*. ICRA 2010 Workshop on Communication, Control, and Perception for Teams of Small Robots, Anchorage, Alaska, May 2010.

Title: *Structural properties of spatially distributed dynamical systems*. Institut de Génie Mécanique, Swiss Federal Institute of Technology (EPFL), Lausanne, Switzerland, March 2010.

Title: *Structural Properties of Spatially Distributed Systems*. Electrical Engineering Department, University of California at Los Angeles, Los Angeles, CA. February 20, 2009.

Title: *Banach Algebra of Spatially Decaying Operators*. Institute of Pure and Applied Mathematics, University of California at Los Angeles, Los Angeles, CA. November 2008.

Title: *Optimal Control of Spatially Distributed Systems*. Electrical and Computer Engineering Department, Carnegie Mellon University, Pittsburgh, PA. March 18th and 20th, 2008.

Title: *Optimal Control of Spatially Distributed Systems*. Mathematical and Algorithmic Sciences Research Center at Bell Laboratories, Alcatel-Lucent, Murray Hill, New Jersey. April 25, 2007.

#### **ORGANIZED OR CHAIRED SESSIONS:**

##### **Session Chair/Co-chair:**

IEEE 25th Mediterranean Conference on Control and Automation, Regular session on “Decentralized Control”, Valletta, Malta, July 2017

IEEE Conference on Decision and Control, Invited session on “Analysis and Synthesis of Dynamical Networks,” Las Vegas, VA, December 2016

IEEE Conference on Decision and Control, Invited session on “Control Synthesis of Infinite Dimensional Systems”, Las Vegas, VA, December 2016

The 10th IFAC Symposium on Nonlinear Control Systems, Regular session on “Multi-Agent and Networked Systems II”, Monterey, CA, August 2016

IEEE 24th Mediterranean Conference on Control and Automation, Regular session on “Agent-Based Systems”, Athens, Greece, June 2016

IEEE conference on Decision and Control, Regular session on “Large-Scale Systems”, Los Angeles, CA, December 2014

IEEE Conference on Decision and Control, December 2006 (San Diego, CA) and December 2010 (Atlanta, GA)



**Organized Sessions and Full-day Workshops:**

IEEE Conference on Decision and Control, an invited session on “*Analysis and Synthesis of Dynamical Networks*,” Las Vegas, NV, December 2016

IEEE Conference on Decision and Control, a full-day pre-conference workshop on “*New Perspectives on Performance and Robustness Measures in Dynamical Networks*,” Las Vegas, NV, December 2016

American Control Conference, an invited session on “*Sparsity and Localization in Networked Systems*,” Boston, MA, June 2016

The 2016 Modeling and Optimization: Theory and Applications (MOPTA), two invited sessions on “*Applications of Optimization in Networked Control Systems Part I & II*,” Bethlehem, PA, August 2016

The 49th IEEE Conference on Decision and Control, a full-day pre-conference workshop on “*Smart Grids: New Challenges for Control Systems Society*,” Atlanta, Georgia, December 2010

American Control Conference, an invited session on Session on “*Distributed Control Systems*,” St. Louis, MO, June 2009

The 48th IEEE Conference on Decision and Control and 28th Chinese Control Conference, a full-day pre-conference workshop on “*Network Science: New Directions in Control Systems*,” Shanghai, China, December 2009

**F. Teaching and Research Advising****COURSES TAUGHT:**

Semester	Course # (credits)	Course Title	Q#1: Overall Instructor Effectiveness	Q#2: Overall Quality of Course	Q#14: Learnt a great deal in this course
SP 2012	MECH425(3)	Analytical Methods in Dynamics/Vibrations	4.33/5.00	4.20/5.00	4.20/5.00
FL 2012	ME433(3)	State Space Control	4.08/5.00	4.08/5.00	4.42/5.00
FL 2012	MECH450(3)	Complex Networks of Dynamical Systems	4.57/5.00	4.71/5.00	4.29/5.00
FL 2013	MECH450(3)	Convex Optimization	5.00/5.00	5.00/5.00	4.86/5.00
FL 2013	ME433(3)	State Space Control	3.90/5.00	3.76/5.00	3.81/5.00
SP 2014	ME387(3)	Digital Control	3.86/5.00	3.86/5.00	4.00/5.00
FL 2014	ME433(3)	State Space Control	5.00/5.00	5.00/5.00	4.80/5.00
SP 2015	ME387(3)	Digital Control	4.29/5.00	4.14/5.00	4.14/5.00
SP2015	MECH450(3)	Distributed Control & Dynamical Systems	5.00/5.00	5.00/5.00	4.86/5.00
FL 2015	ME433(3)	State Space Control	4.69/5.00	4.69/5.00	4.56/5.00
SP 2016	MECH495(3)	Dynamical Systems Theory	4.75/5.00	4.50/5.00	4.75/5.00
SP 2016	MECH450(3)	Network Control Systems	4.75/5.00	4.50/5.00	4.75/5.00

**RESEARCH ADVISING:****Students Completed:**

Postdoctoral:

Dr. Sadegh Bolouki (01/14/2014–05/31/2015)

Current Position: Postdoctoral scholar at UIUC.

Doctoral:

Milad Siami (01/14/2012-12/31/2016)

Dissertation: *Analysis and design of robust and high-performance complex dynamical networks*

Current Position: Postdoctoral Scholar, IDSS center, MIT

Reza Arastoo (co-advised with M. Kothare, 09/01/2012-12/31/2015)

Dissertation: *Analysis & synthesis of distributed control systems with sparse interconnection topologies*

Current Position: *Control Systems Engineer, Autonomous Cars Lab, Apple Inc.*

Master of Science:

Daniel Loikits (05/31/2015-05/31/2016)

Title of Dissertation: Leader-Based Multi-Agent Systems

Current Position: Systems Engineer at Lockheed Martin.

Milad Siami (01/14/2012-05/30/2014)

Title of Dissertation: Disturbance Propagation in Interconnected Linear Dynamical Networks

Current Position: Ph.D. student at Lehigh

Rozhin Hajian (01/14/2012-05/30/2014)

Title of Dissertation: Autocatalytic Biochemical Networks and Their Fundamental Limits

Current Position: Ph.D. student at Lehigh

Evan Mucasey (08/15/2012-05/30/2013)

Current Position: Structures Engineer, Space Exploration Technologies

**Students In Progress:**

Postdoctoral:

Dr. Christoforos Somarakis (01/01/2016-present)

Doctoral:

Saleh Bahavarnia (08/15/2013-present)

Yaser GhaedSharaf (01/14/2014-present)

Hossein K. Mousavi (01/14/2015-present)

Shima Dezfoulian (08/15/2015-present)

Arash Amini (01/14/2017-present)

Milad Habibi (08/15/2017-present)

**G. Service**

**UNIVERSITY:**

**Services to University/College/ Interdisciplinary Programs:**

Faculty Search Committee, Smart Energy Search, Lehigh College Wide Cluster Hiring in Smart Grid Area, 2012-2014

Faculty Search Committee, Chemical Engineering Department, Lehigh University, 2015-2016

Graduate Admission Committee Member, Lehigh University, Energy Systems Engineering Institute, 2013-2015.

**Services to Department:**

Faculty Search Committee, Mechanical Engineering Department, Lehigh University, 2014-2016.

Undergraduate Advising at MEM Lehigh University (2012–present)

**PROFESSIONAL:**

**Office and Committee memberships held in Professional Organizations:**

Technical Program Committee, IEEE Conference on Decision and Control, Melbourne, Australia, December 12-15, 2017.

Technical Program Committee, American Control Conference, Boston, MA, July 6-8, 2016.

Technical Program Committee, IFAC Workshop on Distributed Estimation and Control in Networked Systems, September 10-11, 2015.

Technical Program Committee, American Control Conference, Chicago, IL, July 1-4, 2015.

Technical Program Committee, American Control Conference, Washington, DC, June 17-19, 2013.

Technical Program Committee, The 10th International Symposium on Distributed Autonomous Robotics Systems, Lausanne, Switzerland, November 1-3, 2010.