

IOANNIS (YANNIS) CH. PASCHALIDIS

Department of Electrical and Computer Engineering,
and Division of Systems Engineering,
Boston University,
8 Saint Mary's Street,
Boston, MA 02215
Tel: (617) 353-0434, Fax: (617) 353-6440
e-mail: yannisp@bu.edu
url: <http://sites.bu.edu/paschalidis/>

Updated: Spring 2019.

Current Positions

BOSTON UNIVERSITY Boston, MA

- **Professor** with a joint appointment in the Department of Electrical and Computer Engineering (9/09–present), the Division of Systems Engineering (9/09–present), and the Department of Biomedical Engineering (5/14–present).
- **Data Science Fellow**, Boston University, (9/18–present).
- **Director**, Center for Information and Systems Engineering (CISE) (1/14–present). CISE is an interdisciplinary research center with 41 affiliated faculty in Engineering, Sciences, and Business. The Center is responsible for a number of sponsored research projects that correspond to more than \$7 million of annual research expenditures.
- **Affiliations:** Affiliated with the AI Research Initiative, the Center for Systems Neuroscience, the BioMolecular Engineering Research Center (BMERC), the Center for Information and Systems Engineering (CISE), the Clinical & Translational Science Institute (CTSI), the Precision Diagnostics Center (PDC), and the Rafik B. Hariri Institute for Computing and Computational Science & Engineering.

Education

MASSACHUSETTS INSTITUTE OF TECHNOLOGY Cambridge, MA
Ph.D. in Electrical Engineering and Computer Science, May 1996.
Ph.D. Thesis: “Large Deviations in High Speed Communication Networks”.
Advisors: Prof. Dimitris Bertsimas and Prof. John Tsitsiklis.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY Cambridge, MA
S.M. in Electrical Engineering and Computer Science, February 1993.
S.M. Thesis: “Scheduling of Multiclass Queueing Networks: Bounds on Achievable Performance”.

NATIONAL TECHNICAL UNIVERSITY OF ATHENS Athens, Greece
Diploma in Electrical and Computer Engineering, June 1991.

Main Research Interests

Systems and control, networking, optimization, data science, applied probability, operations research, computational biology, and bioinformatics. Specifics topics of interest include:

- Design, performance analysis and control of networks (communication, sensor, electric power, transportation, social).
- Optimization and decision theory.
- Data Science and Medical informatics.
- Protein docking, metabolic and gene networks.

- Cyber-security, anomaly detection.
- Queueing theory and stochastic systems; Large deviations theory.
- Pricing and revenue management with applications in communication networks and the smart-grid.
- Design, stability, performance analysis and control of manufacturing systems, supply chains, and distribution systems.

**Teaching
Experience**

- *Optimization Theory and Methods.*
Linear Programming; Linear large scale optimization methods; Introduction to nonlinear programming; Interior-point methods; Integer Programming.
- *Advanced Optimization Theory and Methods.*
Nonlinear programming; Cone and semi-definite programming; Large scale optimization methods; Stochastic approximation.
- *Learning from Data.*
Supervised and unsupervised learning, including classification, regression, kernels, robustness and regularization, concepts from learning theory, clustering, dimensionality reduction, generative models, neural networks, and deep learning.
- *Communication Networks Control.*
A systems and control perspective into communication and sensor networks research. Topics include: Network Services and Layered Architectures, Traffic Management and Congestion Control, Traffic Modeling, Admission Control, Flow Control and TCP/IP, Routing, Sensor Networks, Wireless Networks, Network Economics and Pricing.
- *Probability, Statistics, and Data Science.*
Probability theory, Statistics, Detection, Estimation, Markov chains, Introduction to Data Science.
- *Discrete Stochastic Processes.*
Poisson processes; Renewal Theory; Markov chains; Markov processes; Martingales.

**Work
Experience**

	VARIOUS BUSINESSES	
1/95–Present	Consultant to a variety of companies in my areas of interest.	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Cambridge, MA
9/17–1/18	Visiting Professor, Operations Research and Statistics, Sloan School of Management.	
	BOSTON UNIVERSITY	Boston, MA
9/04–12/13	Co-Director, Center for Information and Systems Engineering (CISE).	
	BOSTON UNIVERSITY	Boston, MA
11/04–12/12	Academic Director, The Sensor Network Consortium (SNC) – an industry consortium of about 15 member companies with diverse business activities and strong interest in wireless sensor networks.	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Cambridge, MA
1/10–8/11	Visiting Scholar, Operations Research Center.	
	BOSTON UNIVERSITY	Boston, MA

1/00–08/09	Associate Professor, College of Engineering. COLUMBIA UNIVERSITY	New York, NY
9/03–12/03	Visiting Scholar, Columbia Business School. MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Cambridge, MA
1/03–6/03	Visiting Scholar, Laboratory for Information and Decision Systems. COGENTRIC, INC.	Portsmouth, NH
9/00–12/01	Principal Scientist. BOSTON UNIVERSITY	Boston, MA
9/96–12/99	Assistant Professor, College of Engineering. MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Cambridge, MA
6/96–8/96	Post-Doctoral Associate, Laboratory for Information and Decision Systems.	
9/91–6/96	Research assistant; research on the design and control of manufacturing systems and high speed communication networks.	
1/94–6/94	Teaching Assistant.	
1/95	AT&T BELL LABORATORIES Consultant in the Mathematics of Networks and Systems Department. Worked in a quick simulation project.	Murray Hill, NJ
	NATIONAL TECHNICAL UNIVERSITY OF ATHENS	Athens, Greece
9/89–6/91	Research Assistant. Worked in projects funded by the European Union.	

Honors and Awards

- Data Science Fellow, Boston University, 2018–present.
- Semi-plenary speaker, *23rd International Symposium on Mathematical Theory of Networks and Systems (MTNS 2018)*, Hong Kong University of Science and Technology, Hong Kong, July 16–20, 2018.
- The paper “Cooperative Multi-Quadrotor Pursuit of an Evader in an Environment with No-Fly Zones” (with Alyssa Pierson, Armin Ataei, and Mac Schwager), which appeared in the *IEEE International Conference on Robotics and Automation (ICRA)*, May 16–21, 2016, Stockholm, Sweden, was a finalist for the conference best paper award.
- Supervised Theodora Brisimi who won third prize and the Crowd Sourcing Prize in the IEEE Computer Society 70th Anniversary Student Challenge for the joint project “Healthcare Analytics: Predicting Hospitalizations Based on Electronic Health Records,” May 2016.
- Plenary speaker, *2016 LIDS Student Conference*, Laboratory for Information and Decision Systems, Massachusetts Institute of Technology (MIT).
- Supervised the Ph.D. Thesis of Wuyang Dai which won the Societal Impact Dissertation Award from the College of Engineering, Boston University, May 2015.
- Invited Speaker, Oberwolfach Mathematical Institute, Workshop on “Control Theory: A Mathematical Perspective on Cyber-Physical Systems”, February 2015.
- Supervised the student team which won an IBM/IEEE Smarter Planet Challenge Award for the project “Street Bumps and Big Data Analytics: Crowdsourcing Our Way to Better Roads,” December 2014.

- Invited participant, 12th Annual National Academies Keck Futures Initiative (NAKFI) conference, “Collective Behavior: From Cells to Societies”, Organized by the National Academies, November 2014, Irvine, California. Participation by invitation only after a competitive selection process.
- IEEE Fellow (2014).
- Founding Editor-in-Chief, IEEE Transactions on Control of Network Systems.
- Supervised the Ph.D. Thesis of Fuzhuo Huang which won the Best Dissertation Award from the Division of Systems Engineering, Boston University, January 2013.
- Distinguished faculty fellow, College of Engineering, Boston University, 2011-2016.
- Dean’s catalyst award, May 2011, College of Engineering, Boston University, for research project “A Quantitative Approach to Disease Prevention and Management Leveraging Electronic Health Records”.
- Best student paper award at the 9th Intl. Symposium of Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2011) won by Ph.D. student Reza Moazzez-Estanjini for joint paper “Improved Delay-Minimized Data Harvesting with Mobile Elements in Wireless Sensor Networks”.
- Best performance in modeling selected protein-protein complexes against 64 other predictor groups that combine software models with human analysis (with D. Kozakov, P. Vakili, S. Vajda, et al.), CAPRI (Critical Assessment of Predicted Interactions) Evaluation meeting, Barcelona, Spain, Dec. 9-11, 2009.
- Invited Participant, *Workshop on Mathematics of Molecular and Cellular Biology, Protein Folding*, Institute for Mathematics and Its Applications (IMA), January 14-18, 2008. Workshop organized as part of the IMA thematic year on Molecular and Cellular Biology; participation is by invitation only.
- First prize in the *3rd Critical Assessment PRedicted (Protein) Interaction (CAPRI) Evaluation Meeting*, April 20-21, 2007, Toronto, Canada, for presented poster publication on “Refinement of rigid-body protein docking predictions using semi-definite underestimation” (with Y. Shen, P. Vakili, and S. Vajda). CAPRI is the community-wide experiment in which all computational protein docking groups compete.
- IEEE Senior Member (2006).
- Invited Participant, *2002 U.S. Frontiers of Engineering Symposium*, National Academy of Engineering (NAE). An annual symposium organized by the NAE that brings together 100 of the U.S.-based outstanding young engineers –ages 30-45– from industry, academia, and government.
- *National Science Foundation (NSF) CAREER Award* (Directorate for Computer & Information Science & Engineering, Networking Research), 2000.
- Plenary Speaker, *1998 and 2002 LIDS Student Conference*, Laboratory for Information and Decision Systems, Massachusetts Institute of Technology (MIT).
- Second Prize, *1997 George E. Nicholson* paper competition. Awarded by INFORMS, the Institute for Operations Research and the Management Sciences, to the best Operations Research & Management Science papers on work done as a doctoral student.
- Elected Full Member of *Sigma Xi*, a honor society, (1996, MIT Chapter).
- Graduated ranking first (out of 206), class of 1991, Department of Electrical and Computer Engineering (ECE), National Technical University of Athens (NTUA), Greece.
- Four times recipient (1986-1990) of a scholarship from the *National Scholarship Foundation of Greece* (awarded to the top five students in the ECE Department at NTUA).
- Three times recipient (1988-1990) of an award from the *Technical Chamber of Greece* (based on performance as an undergraduate student at NTUA).

- Included in Who's Who in America, Who's Who in Science and Engineering, Who's Who in American Education, and Who's Who of Emerging Leaders.

Professional Activities

- Editor-in-Chief (founding), *IEEE Transactions on Control of Network Systems* (2/2013–present).
- Guest Editor, *IEEE Transactions on Automatic Control*, Special Issue on Wireless Sensor and Actuator Networks, Volume 56 (2011), Issue 10 (October).
- Associate Editor:
 - *Operations Research* (1/12–6/2013);
 - *ACM Trans. on Sensor Networks* (1/11–6/2013);
 - *SIAM Journal on Control and Optimization* (1/10–12/12);
 - *Operations Research Letters* (2/02–7/10);
 - *IEEE Transactions on Automatic Control* (1/06–12/09);
 - *Automatica* (8/02–12/07).
- Professional Leadership positions:
 - American Automatic Control Council, *Alternate Director, Board of Directors*, 2016–present;
 - IEEE Control Systems Society, Board of Governors (Appointed 2010–2012; Elected 2013–2016; Ex officio 2017–present);
 - Member, IEEE Life Sciences Technical Community (LSTC) Conferences Committee (2/2016–present);
 - Member, IEEE Technical Committee on Cybernetics for Cyber-Physical Systems (CCPS) (10/2015–present);
 - Liaison position between the IEEE Control Systems Society and the Institute for Operations Research and the Management Sciences (INFORMS) (11/2007–12/13);
 - Member, *Technical Committee on Systems Biology*, and *Technical Committee on Medical and Health Care Systems*, IEEE Control Systems Society, (1/13–present);
 - Chair, *Technical Committee on Networks and Communication Systems*, IEEE Control Systems Society, (1/06–12/11);
 - Member, International Federation of Automatic Control (IFAC) Technical Committee on Stochastic Systems (2004–2007);
 - Chair, Working Group on Finance Systems under the Network and Communications Technical Committee of the *IEEE Control Systems Society* (1997–2004).
- Conference Organizing Committees:
 - Editor for Invited Sessions, *European Control Conference*, Naples, Italy, June 25–28, 2019.
 - General Chair, *IEEE Infocom 2018 Workshop, 11th International Workshop on Wireless Sensor, Robot and UAV Networks*, Honolulu, Hawaii, April 16, 2018.
 - Co-Organizer, *NSF Workshop on Effective Community-University-Industry Collaboration Models for Smart and Connected Communities Research*, Arlington, Virginia, November 30–December 1, 2017.
 - General Chair, *2nd Symposium on the Control of Network Systems (SCONES)*, Boston, Massachusetts, October 16–17, 2017.
 - Co-Organizer, *Visioning Meeting, NSF Program on Smart and Connected Communities*, Boston, Massachusetts, July 27–28, 2017.
 - Chair and Organizer, *Visioning and PI Meeting, NSF Program on Smart and Connected Health*, Boston, Massachusetts, March 20–22, 2017.
 - Steering Committee, *International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN)*, 2015–2017.

- Co-Organizer, *NSF Workshop on Smart Cities*, Arlington, Virginia, December 3–4, 2015.
- General Chair, 1st *Symposium on the COntrol of NEtwork Systems (SCONES)*, Boston, Massachusetts, October 27–28, 2014.
- General Chair, *8th International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN 2014)*, June 22–27, 2014, Benidorm, Spain.
- Co-Organizer, Symposium on *Systems Science: Shaping Society’s Future*, Boston University, May 2012;
- Steering Committee, *1st International Conference on Sensor Networks Applications, Experimentation and Logistics (Sensappeal 2009)*;
- Organizer, Mini-workshop on “*Security and Wireless Sensor Networks*”, *National Colloquium for Information Systems Security Education*, hosted at Boston University, June 2007;
- Registration Chair, *46th IEEE Conference on Decision and Control*, December 2007, New Orleans, Louisiana;
- Co-Organizer, Workshop on “*Challenges and Opportunities in Distributed Sensor Networks*”, *The Center for Nonlinear Studies, Los Alamos National Laboratory*, Los Alamos, New Mexico, USA, March 2006;
- Co-Organizer, *Emerging Technologies Symposium* on “*Sensor Networks: What’s real and what lies ahead*”, Boston University, November 2005;
- Organizer, *Emerging Technologies Symposium* on “*Sensor Networks: Where Technologies Meet and Applications are Endless*”, Boston University, May 2004;
- Chair, Local Arrangements Committee, *43rd IEEE Conference on Decision and Control*, December 2004, Paradise Island, Bahamas;
- Member of the organizing committee, *1998 Information Theory Symposium*, Boston, MA.
- Program Committees:
 - Member of the Technical program committee, *6th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys)*, September 10–11, 2015, Philadelphia, PA.
 - Member of the Technical program committee, *IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS 2013)*, May 20–23, 2013, Cambridge, Massachusetts.
 - Member of the Technical program committee, *11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)*, May 13–17, 2013, Tsukuba Science City, Japan.
 - Member of the Technical program committee, *4th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys)*, September 25–26, 2013, Koblenz, Germany.
 - Member of the Technical program committee, *21st Mediterranean Conference on Control and Automation (MED)*, June 25 – 28, 2013 Crete, Greece.
 - Member of the Technical program committee, *3rd IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys)*, September 14–15, 2012, Santa Barbara, California.
 - Member of the Technical program committee, *20th Mediterranean Conference on Control and Automation (MED)*, July 3–6 2012, Barcelona, Spain.
 - Member of the Technical program committee, *10th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)*, May 14–18, 2012, Paderborn, Germany.
 - Member of the Technical program committee, *19th Mediterranean Conference on Control and Automation (MED)*, June 20-23 2011, Corfu, Greece.

- Member of the Technical program committee, *2nd International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN 11)*, April 10-15, 2011, Shanghai, China.
- Member of the Technical program committee, *9th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)*, May 9-13, 2011, Princeton, New Jersey.
- Member of the Technical program committee, *2nd IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys)*, 13-14 September, 2010, Centre de Congrès de L' Impérial Palace, Annecy, France.
- Member of the Technical program committee, *1st International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN 10)*, June 17th, 2010, Montreal, Canada.
- Member of the Technical program committee, *2nd ACM International Workshop on Mobile Entity Localization and Tracking in GPS-less Environments (MELT 09)*.
- Co-Chair, Sensors and Sensor Networks Track, Program Committee of the *2009 IEEE Conference on Automation Science and Engineering (CASE 2009)*.
- Member of the Technical program committee, *Workshop on End-to-End, Sense-and-Respond Systems, Applications, and Services (in conjunction with MobiSys '05)*.
- Member of the Technical program committee, *2002 American Control Conference*.
- Member of the Technical program committee, *IEEE INFOCOM 2002* conference.
- Member and Group Leader (i.e., area editor) of the Technical program committee, *IEEE INFOCOM 2001* conference.
- Member of the program committee, *Internet II: QoS and Future Directions Conference, SPIE 2000 Voice, Video, and Data Communications Symposium*.
- Member of the program committee, *37TH IEEE Conference on Decision and Control (1998)*.
- Member of the program committee, *9TH INFORMS Applied Probability Conference (1997)*.
- Served in blue-ribbon and many other peer review panels for the *National Science Foundation (NSF)*. Reviewed proposals for various NSF programs. Served in Review Visiting Committees to evaluate DOE funded projects at Universities and at the National Labs. Referee for many technical journals. Session Organizer and Chair in many sessions at the IEEE Conference on Decision and Control, the INFORMS National Meeting, and the INFORMS Applied Probability conference.
- Fellow of the *IEEE (Institute of Electrical and Electronics Engineers)*. Member of *INFORMS (Institute for Operations Research and the Management Sciences)*, Sigma Xi, and of the *Technical Chamber of Greece*.

Sponsored Projects

Summary: PI or Co-PI for more than \$ 43 M in sponsored projects since 1997.

- [F1] “SCH: INT: Distributed Analytics for Enhancing Fertility in Families”, **Principal Investigator (PI)**, (Co-PIs: Mahalingaiah, Olshevsky, and Wise), *NSF/NIH Smart and Connected Health*, 9/1/2019–8/31/2022, \$1.2M.
- [F2] “Neuro-Autonomy: Neuroscience-Inspired Perception, Navigation, and Spatial Awareness”, **Principal Investigator (PI)**, (Co-PIs: Baillieul, Betke, Hasselmo, Stern, and Tron at BU; Leonard and Roy at MIT), *ONR MURI grant*, 9/1/2019–8/31/2022, \$4.5M.
- [F3] “QuBBD: From Personalized Predictions to Better Control of Chronic Health Conditions”, **Principal Investigator (PI)**, (with C. G. Cassandras and R. G. Mishuris), *NSF/NIH Initiative on Quantitative Approaches to Biomedical Big Data (QuBBD)*, 6/1/2018–5/31/2021, \$899,999.

- [F4] “Integrated Diagnostics: Pathology-Radiology Correlation”, **Principal Investigator (PI)**, *Philips Healthcare*, 1/1/2018–8/31/2020, \$94,147.
- [F5] “Robust Predictive Models of Fertility”, **Principal Investigator (PI)**, (Co-PI: Shruthi Mahalingaiah), *CISE Seed Grant*, Boston University, 5/1/2018–12/31/2018, \$ 26,330.
- [F6] “Smart and Connected Communities Workshop: Visioning for Effective Community/University/Industry Collaboration Models”, Co-PI (with Azer Bestavros), *NSF Smart & Connected Communities*, 9/5/17–9/4/18, \$ 99,963.
- [F7] “Optimizing Discharge Decisions to Reduce Surgery Re-Admissions”, **Principal Investigator (PI)** (with G. Kasotakis), *Digital Health Initiative (DHI) Research Award*, Boston University, 9/1/17–8/31/18, \$ 50,000.
- [F8] “Sustainable IT and IT for Sustainability”, Co-PI (with Ayse Coskun and Michael Caramanis), Dean’s Catalyst Award, College of Engineering, Boston University, 6/1/17–5/31/19, \$ 80,000.
- [F9] “CPS: Breakthrough: A Dynamic Optimization Framework for Connected Automated Vehicles in Urban Environments”, Co-PI (PI: G. C. Cassandras), *NSF Program on Cyber-Physical Systems*, 5/1/2017–4/30/2020, \$424,995.
- [F10] “Smart and Connected Health (SCH) PI Workshop, 2017”, **Principal Investigator (PI)**, *NSF Smart and Connected Health Program*, 1/15/17–9/15/17, \$93,994.
- [F11] “Detecting Non-Typical Traffic Jams Using Waze Data” (student support for Jing Zhang), *Boston Area Research Initiative*, 1/17–5/17, \$ 5,000.
- [F12] “Outlier and Anomaly Detection with Applications to CT Radiation Dose Safety”, **Principal Investigator (PI)** (with J. Siegelan and V. Valtchinov), *Joint Brigham and BU Program in Radiology and Engineering*, 6/1/16–5/31/18, \$ 80,000.
- [F13] “Predicting and Preventing Re-Admissions within 30 days after Surgery”, **Principal Investigator (PI)** (with G. Kasotakis), *Boston University Clinical and Translational Science Institute (BU-CTSI)*, Pilot Grant Program, 1/1/16–5/31/16, \$17,000.
- [F14] “Manifold optimization algorithms for protein-protein docking”, Co-PI (with D. Kozakov, S. Vajda, and P. Vakili), *NSF Expeditions in Computing Program*, 7/1/15–6/30/18, \$450,000.
- [F15] “Clinical Decision Support System for Patient-Specific Cancer Diagnosis and Management,” Co-PI (with V. Saligrama at BU and K. Andriole, Brigham and Women’s Hospital), *Joint Brigham and BU Program in Radiology and Engineering*, 5/1/14–4/30/15, \$ 40,000.
- [F16] “Effective Classification and Actionable Obstacle Detection from Roadway Data”, Co-PI (with C.G. Cassandras), *City of Boston*, 9/1/13–9/30/14, \$ 85,000.
- [F17] “SHB: Type II (INT): Collaborative Research: Algorithmic Approaches to Personalized Health Care,” **Principal Investigator (PI)**, (Collaborative grant with D. Bertsimas at MIT, BU Co-PI Dr. Adams), *NSF Smart Health and Wellbeing Program*, 9/12/12–9/11/18, \$ 1,100,000 (BU budget).
- [F18] “CPS: Synergy: Collaborative Research: A Cyber-Physical Infrastructure for the ‘Smart City’”, Co-PI, (PI: C.G. Cassandras at BU, Co-PIs: A. Bestavros, A. Kfoury at BU, collaborative with W. Gong at UMass Amherst and R. Gao at UConn), *NSF Cyber-Physical Systems Program*, 10/1/12–9/30/16, \$ 700,000 (BU budget).
- [F19] “Associating growth conditions with cellular composition in Gram-negative bacteria”, Co-PI, (PI: C. Wilke UT Austin, subcontract to BU team of D. Segré and I. Paschalidis), *DoD Multidisciplinary University Research Program (MURI) FY12*, 10/1/12–2/28/18, \$ 7,500,000.

- [F20] “A Coordinated Approach to Cyber-Situation Awareness Based on Traffic Anomaly Detection”, **Principal Investigator (PI)**, (Co-PIs: C.G. Cassandras, M. Crovella at BU and P. Barford at U. of Wisconsin), Army Research Office, 6/11/11–12/31/16, \$ 730,000.
- [F21] “A Quantitative Approach to Disease Prevention and Management Leveraging Electronic Health Records”, PI, Dean’s Catalyst Award, College of Engineering, Boston University, 5/1/11–4/30/12, \$ 33,315.
- [F22] “KIOS Center”, CISE Collaboration with the University of Cyprus, **Principal Investigator (PI)**, (Co-PI: C.G. Cassandras), 4/1/11–12/31/16, \$ 55,158.64.
- [F23] “AIRFOILS: Animal Inspired Robust Flight with Outer and Inner Loop Strategies”, Co-PI (PI: K. Morgansen at U. of Washington Seattle, subcontract to BU team of J. Baillieul, C. Belta, I. Paschalidis, and T. Kunz), *DoD Multidisciplinary University Research Program (MURI)* FY11, 9/1/10–8/31/15, \$ 7,500,000.
- [F24] “Refinement Methods for Protein Docking based on Exploring Multi-Dimensional Energy Funnels”, **Principal Investigator (PI)**, (Co-PIs D. Kozakov and P. Vakili), *National Institutes of Health (NIH), National Institute of General Medical Sciences (NIGMS) R01 grant*, 4/10–4/16, \$ 1,580,473.
- [F25] “A Statistical Approach to Internet Traffic Anomaly Detection”, **Principal Investigator (PI)**, *Army Research Office (ARO)*, 9/09 – 5/10, \$ 50,000.
- [F26] “Supplement: Distributed Wireless Sensor Networks for Long-term Deployments”, **Principal Investigator (PI)**, (Co-PI C.G. Cassandras), *Department of Energy (DOE)*, 9/09 – 8/11, \$ 360,000.
- [F27] “Forklift Sensor Network at the Abel-Womack Warehouse”, **Principal Investigator (PI)**, *Raymond Corporation*, 6/09-5/10, \$ 10,691.
- [F28] “EFRI-ARESCI: Event-Driven Sensing for Enterprise Reconfigurability and Optimization”, Co-PI (with C. G. Cassandras and A. Bestavros at Boston University and R. Gao and W. Gong at UMass Amherst), *NSF Emerging Frontiers of Research and Innovation Initiative*, 11/1/07–4/30/13, \$ 1,999,573.
- [F29] “Distributed Wireless Sensor Networks for Long-term Deployments”, **Principal Investigator (PI)**, (Co-PI C.G. Cassandras), *Department of Energy (DOE)*, 9/06 – 8/10, \$ 752,117.
- [F30] “Final-Stage Optimization Methods for Protein Docking Exploiting Energy Funnels”, **Principal Investigator (PI)**, (Co-PI P. Vakili), *National Institutes of Health (NIH), National Institute of General Medical Sciences (NIGMS)*, 2/07–12/09, \$ 437,852.
- [F31] The Sensor Network Consortium, **Academic Director**, An industry consortium of 14 companies supporting the consortium activities and research on Sensor Networks, 2004–2012, \$ 188,000.
- [F32] “NeTS-NOSS: SensorNet Architectures for Indoor Location Detection: From Resolution to Robustness”, Co-PI (with D. Starobinski and A. Trachtenberg), *NSF, Research in Networking Technology and Systems (NeTS)*, 9/1/04–8/31/08, \$ 600,000.
- [F33] “ITR: COLLABORATIVE RESEARCH: Diagnosis and Assessment of Faults, Misbehavior and Threats in Distributed Systems and Networks”, **Principal Investigator (PI)**, (with C. Hadjicostis, C. Beck, R. Sreenivas at the University of Illinois at Urbana-Champaign, J. Tsitsiklis at MIT, S. Tatikonda at Yale, and K. Thulasiraman at the Univ. of Oklahoma), *NSF, Information Technology Research for National Priorities (ITR)*, 9/15/04–8/31/09, \$ 1,100,000.
- [F34] “SENSORS: A Control and Optimization Science Base for Sensor Networks in Adverse and Stochastic Environments”, Co-PI (with C. G. Cassandras, J. Baillieul and D. Castanon at Boston University and R. Gao, W. Gong, and A. Deshmukh at UMass Amherst), *NSF Sensors and Sensor Networks Initiative*, 9/1/03–8/31/09, \$ 2,487,459.

- [F35] “Planning, Coordination, and Control of Supply Chains”, **Principal Investigator (PI)**, (Co-PI: M. C. Caramanis), *NSF, Directorate for Engineering (ENG), Division of Design, Manufacture and Industrial Innovation (DMII), Manufacturing Enterprise Systems (MES) Program*, 8/1/03–7/31/07, \$ 350,000, REU Supplement \$ 12,000, 6/1/04.
- [F36] Equipment and Software donation by *Hewlett-Packard Labs* to support pricing and resource allocation work in communication networks, **Principal Investigator (PI)**, 2002, valued \$ 360,000.
- [F37] “Communicating Networked Control Systems”, Co-PI (with J. Baillieul and T. Bifano at Boston University, R.W. Brockett at Harvard University, P.R. Kumar at the University of Illinois at Urbana-Champaign, and P.S. Krishnaprasad, J.S. Baras, D. Hristu-Varsakelis, P. Narayan, and G.C. Walsh at the University of Maryland, College Park), *DoD Multidisciplinary University Research Program (MURI) FY01*, 5/1/01–4/30/06, \$ 5,000,000.
- [F38] “CAREER: Pricing and Resource Allocation in Multiservice Broadband Communication Networks”, **Principal Investigator (PI)**, *NSF CAREER Award*, Advanced Networking Infrastructure and Research (ANIR) Division, Directorate for Computer and Information Sciences and Engineering (CISE), 7/1/00–6/31/05, \$ 450,000.
- [F39] “Quality of Service Provisioning, Scheduling, and Pricing in Communication Networks”, **Principal Investigator (PI)**, (Co-PIs: C.G. Cassandras, J.Q. Hu), *Nokia Research Center (Boston)*, 9/1/99–12/31/01, \$ 55,000.
- [F40] “Synergistic and Decentralized Decision Making in Complex Stochastic Systems”, Co-PI (with M.C. Caramanis, C.G. Cassandras and F.J. Alexander at Boston University, D.P. Bertsekas and J.N. Tsitsiklis at MIT, and Y.M. Ioannides at Tufts), *NSF Knowledge and Distributed Intelligence (KDI) Initiative*, 10/01/98–04/30/03, \$ 1,162,000.
- [F41] “Efficient Resource Allocation and Yield Management in Internet Services”, **Principal Investigator (PI)**, *MIT Internet Telephony Consortium*, 1/1/97–7/31/98, \$ 47,542.
- [F42] “Admission Control in High Speed Multimedia Networks”, **Principal Investigator (PI)**, *NSF Directorate for Computer and Information Sciences and Engineering (CISE), Networking Research Program*, 9/1/97–8/31/01, \$ 200,146.
- [F43] “United Technologies Sponsored Seminar Series in Manufacturing and Systems Engineering”, **Principal Investigator (PI)**, *United Technologies*, 9/1/97–8/31/02, \$ 40,000.

Citations

(Last updated December 2018.)

Google scholar profile:

http://scholar.google.com/citations?user=Es_hZOQAAAAJ&hl=en

More than 3,370 according to Google scholar. My h -index, defined as

$$h\text{-index} = \max\{h \mid h \text{ papers each having } \geq h \text{ citations}\},$$

is equal to 32. My $i10$ -index (papers with more than 10 citations) is 69. My m -index (h -index over the number of years I have been publishing) is equal to 1.28.

Books

- [B1] Special Issue on Wireless Sensor and Actuator Networks, Edited Volume (with J. Chen, K. H. Johansson, S. Olariu, I. Stojmenovic), *IEEE Transactions on Automatic Control*, Volume 56 (2011), Issue 10 (October).

**Book
Chapters**

- [B2] “Systems & Control for the future of humanity, research agenda: Current and future roles, impact and grand challenges”, in *Annual Reviews in Control*, Vol. 43, 2017, pages 1-64, by F. Lamnabhi-Lagarrigue et al.
- [B3] “Probabilistic Indoor Tracking of Mobile Wireless Nodes Relative to Landmarks” (with K. Li, D. Guo, Y. Lin), in *The Art of Wireless Sensor Networks, Vol 2: Advanced Topics and Applications*, H. M. Ammari (Ed), Springer, 2014, pages 169–200, doi: [dx.doi.org/10.1007/978-3-642-40066-7](https://doi.org/10.1007/978-3-642-40066-7).
- [B4] “Model-Free Probabilistic Localization of Wireless Sensor Network Nodes in Indoor Environments” (with K. Li and D. Guo), *Lecture Notes in Computer Science*, Vol. 5801 (MELT), pages 66–78, R. Fuller and X. D. Koutsoukos (Eds), Springer, 2009.
- [B5] “Statistical Location Detection” (with S. Ray, W. Lai, and D. Guo), in *Localization Algorithms and Strategies for Wireless Sensor Networks: Monitoring and Surveillance Techniques for Target Tracking*, Guoqiang Mao and Baris Fidan, eds., IGI Global, 2009, pages 230–257.
- [B6] “Supply Chain Production Planning Modeling Facility Lead Time and Quality of Service” (with O. Anli and M. Caramanis), in *Analysis, Control and Optimization of Complex Dynamic Systems*, El Kebir Boukas and Roland P. Malhamé, eds., Kluwer Academic Publishers (2005), pages 106-136.

**Journal
Articles**

- [J1] “Learning from Past Bids to Participate Strategically in Day-Ahead Electricity Markets” (with Ruidi Chen, Michael C. Caramanis, and Panagiotis Andrianesis), *IEEE Trans. Smart Grid*, in print, doi: [10.1109/TSG.2019.2891747](https://doi.org/10.1109/TSG.2019.2891747).
- [J2] “Predicting Diabetes-related Hospitalizations based on Electronic Health Records” (with Theodora S. Brisimi, Tingting Xu, Taiyao Wang, and Wuyang Dai), *Statistical Methods in Medical Research*, in print, doi: doi.org/10.1177/0962280218810911.
- [J3] “Detection of Unwarranted CT Radiation Exposure from Patient and Imaging Protocol Meta-Data Using Regularized Regression” (with Ruidi Chen, Vladimir Valtchinov, Jenifer Siegelman, Hiroto Hatabu), *European Journal of Radiology Open*, Vol. 6, pages 206–211, 2019, doi: <https://doi.org/10.1016/j.ejro.2019.04.007>.
- [J4] “Designing metabolic division of labor in microbial communities” (with Meghan Thommes, Taiyao Wang, Qi Zhao, and Daniel Segre), *mSystems*, Vol. 4, Issue 2, March-April 2019, doi: doi.org/10.1128/mSystems.00263-18.
- [J5] “Learning Policies for Markov Decision Processes from Data” (with Manjesh K. Hanawal, Hao Liu, Henghui Zhu), *IEEE Transactions on Automatic Control*, Vol. 64, Issue 6, June 2019, pages 2298–2309, doi: doi.org/10.1109/TAC.2018.2866455.
- [J6] “Distributed MPC for Coordinated Energy Efficiency Utilization in Microgrid Systems” (with Y. Du, J. Wu, C. Long), *IEEE Transactions on Smart Grid*, Vol. 10, Issue 2, March 2019, pages 1781–1790, doi: [dx.doi.org/10.1109/TSG.2017.2777975](https://doi.org/10.1109/TSG.2017.2777975).
- [J7] “A Robust Learning Approach for Regression Models Based on Distributionally Robust Optimization” (with Ruidi Chen), *Journal on Machine Learning Research*, Vol. 19, 2018, No. 13, pages 1–48, <http://jmlr.org/papers/v19/17-295.html>.
- [J8] “Neural Circuits for Learning Context-Dependent Associations of Stimuli” (with Henghui Zhu and Michael Hasselmo), *Neural Networks (Special Issue on Deep Reinforcement Learning in Neural Networks)*, Ron Sun, David Silver, Gerald Tesauro,

Guang-Bin Huang, Eds., Vol. 107, November, 2018, pages 48–60
doi: doi.org/10.1016/j.neunet.2018.07.018.

- [J9] “Protein docking refinement by convex underestimation in the low-dimensional subspace of encounter complexes” (with Shahrooz Zarbafian, Mohammad Moghadasi, Athar Roshandelpoor, Feng Nan, Keyong Li, Pirooz Vakili, Sandor Vajda, Dima Kozakov), *Scientific Reports*, 2018, 8:5896,
doi: dx.doi.org/10.1038/s41598-018-23982-3.
- [J10] “The Price of Anarchy in Transportation Networks: Data-Driven Evaluation and Reduction Strategies” (with Jing Zhang, Sepideh Pourazarm, Christos G. Cassandras), *Proceedings of the IEEE*, Vol. 106, 2018, Issue 4 (April), pages 538–553,
doi: dx.doi.org/10.1109/JPROC.2018.2790405.
- [J11] “Predicting Chronic Disease Hospitalizations from Electronic Health Records: An Interpretable Classification Approach” (with Theodora S. Brisimi, Tingting Xu, Taiyao Wang, Wuyang Dai, William G. Adams), *Proceedings of the IEEE*, Vol. 106, 2018, Issue 4 (April), pages 690–707,
doi: dx.doi.org/10.1109/JPROC.2017.2789319.
- [J12] “Federated learning of predictive models from federated Electronic Health Records” (with Theodora S. Brisimi, Ruidi Chen, Theofanie Mela, Alex Olshevsky, and Wei Shi), *International Journal of Medical Informatics*, Vol. 112, 2018, April, pages 59–67,
doi: dx.doi.org/10.1016/j.ijmedinf.2018.01.007.
- [J13] “Statistical Anomaly Detection via Composite Hypothesis Testing for Markov Models” (with Jing Zhang), *IEEE Transactions on Signal Processing*, Vol. 66, Issue 3 (March), 2018, pages 589–602,
doi: dx.doi.org/10.1109/TSP.2017.2771722.
- [J14] “Botnet Detection based on Anomaly and Community Detection” (with Jing Wang), *IEEE Transactions on Control of Network Systems*, Vol. 4, Issue 2 (June), 2017, pages 392–404,
doi: dx.doi.org/10.1109/TCNS.2016.2532804.
- [J15] “An Actor-Critic Algorithm with Second-Order Actor and Critic” (with Jing Wang), *IEEE Transactions on Automatic Control*, Vol. 62, Issue 6 (June), 2017, pages 2689–2703,
doi: dx.doi.org/10.1109/TAC.2016.2616384.
- [J16] “Mapping the landscape of metabolic goals of a cell” (with Qi Zhao, Arion Stettner, Ed Reznik, and Daniel Segrè), *Genome Biology*, 2016, 17:109,
doi: dx.doi.org/10.1186/s13059-016-0968-2.
- [J17] “Sensing and Classifying Roadway Obstacles in Smart Cities: The *Street Bump* System” (with Theodora S. Brisimi, Christos G. Cassandras, Chris Osgood, and Yue Zhang), *IEEE Access*, Vol. 4, 2016, pages 1301–1312,
doi: dx.doi.org/10.1109/ACCESS.2016.2529562.
- [J18] “Provision of Regulation Service by Smart Buildings” (with Enes Bilgin, Michael Caramanis, Christos Cassandras), *IEEE Transactions on Smart Grid*, Vol. 7, No. 3 (May), 2016, pages 1683–1693,
doi: dx.doi.org/10.1109/TSG.2015.2501428.
- [J19] “Focused Grid-Based Resampling for Protein Docking and Mapping” (with A. Mamonov, M. Moghadasi, H. Mirzaei, S. Zarbafian, L. Grove, T. Bohnuud, P. Vakili, S. Vajda, and D. Kozakov), *Journal of Computational Chemistry*, 2016, Apr 30, Volume 37 (11), pages 961–70,
doi: dx.doi.org/10.1002/jcc.24273.
- [J20] “Temporal Logic Motion Control using Actor-Critic Methods” (with J. Wang, X. Ding, M. Lahijanian, C. Belta), *International Journal of Robotics Research*, Vol. 34

- (2015), No. 10, pages 1329-1344,
doi: [dx.doi.org/10.1177/0278364915581505](https://doi.org/10.1177/0278364915581505).
- [J21] “Accounting for Observed Small Angle X-ray Scattering Profile in the Protein-Protein Docking Server ClusPro” (with B. Xia, A. Mamonov, S. Leysen, K. N. Allen, S. V. Strelkov, S. Vajda, and D. Kozakov), *Journal of Computational Chemistry*, Volume 36, 2015, Issue 20, pages: 1568-1572,
doi: [dx.doi.org/10.1002/jcc.23952](https://doi.org/10.1002/jcc.23952).
- [J22] “A Message-Passing Algorithm for Wireless Network Scheduling” (with F. Huang and W. Lai), *IEEE/ACM Transactions on Networking*, Vol. 23 (2015), No. 5, pages 1528–1541,
doi: [dx.doi.org/10.1109/TNET.2014.2338277](https://doi.org/10.1109/TNET.2014.2338277).
- [J23] “Distribution-dependent robust linear optimization with applications to inventory control” (with S.-C. Kang and T. Brisimi), *Annals of Operations Research*, Vol. 231 (2015), Issue 1, pages 229–263,
doi: [dx.doi.org/10.1007/s10479-013-1467-4](https://doi.org/10.1007/s10479-013-1467-4).
- [J24] “The Impact of Side-chain Packing on Protein Docking Refinement” (with M. Moghadasi, H. Mirzaei, A. Mamonov, P. Vakili, S. Vajda, and D. Kozakov), *Journal of Chemical Information and Modeling*, Vol. 55 (2015), No. 4, pages 872–881,
doi: [dx.doi.org/10.1021/ci500380a](https://doi.org/10.1021/ci500380a).
- [J25] “Statistical Traffic Anomaly Detection in Time-Varying Communication Networks” (with Jing Wang), *IEEE Transactions on Control of Network Systems*, Vol. 2 (2015), No. 2, pages 100–111,
doi: [dx.doi.org/10.1109/TCNS.2014.2378631](https://doi.org/10.1109/TCNS.2014.2378631).
- [J26] “Energy minimization on manifolds for docking flexible molecules” (with H. Mirzaei, S. Zarbafian, E. Villar, S. Mottarella, D. Beglov, S. Vajda, P. Vakili, and D. Kozakov), *Journal of Chemical Theory and Computation*, Vol. 11 (2015), No. 3, pages 1063–1076,
doi: [dx.doi.org/10.1021/ct500155t](https://doi.org/10.1021/ct500155t).
- [J27] “Robust fluid processing networks”, (with D. Bertsimas and E. Nasrabadi), *IEEE Transactions on Automatic Control*, Vol. 60 (2015), No 3, pages 715–728,
doi: [dx.doi.org/10.1109/TAC.2014.2352711](https://doi.org/10.1109/TAC.2014.2352711).
- [J28] “Heparin requirements for full anticoagulation are higher for patients on dabigatran than for those on coumadin – a model-based study” (with T. Edrich, G. Frendl, G. Michaud), *Clinical Pharmacology: Advances and Applications*, Vol. 7 (2015), February, pages 19–27,
doi: [dx.doi.org/10.2147/CPAA.S72185](https://doi.org/10.2147/CPAA.S72185).
- [J29] “Adaptive Control of Bivalirudin in the Cardiac Intensive Care Unit”, (with Q. Zhao and T. Edrich), *IEEE Transactions on Biomedical Engineering*, Vol. 62 (2015), No 2, pages 638–647,
doi: [dx.doi.org/10.1109/TBME.2014.2362761](https://doi.org/10.1109/TBME.2014.2362761).
- [J30] “Detection and localization of harmful atmospheric releases via Support Vector Machines” (with R.T. Locke), *Environmental Systems Research*, Vol. 4 (2015), No. 2,
doi: [dx.doi.org/10.1186/s40068-015-0028-z](https://doi.org/10.1186/s40068-015-0028-z).
- [J31] “Data-Driven Estimation in Equilibrium using Inverse Optimization” (with D. Bertsimas and V. Gupta), *Mathematical Programming Series A*, Vol. 153 (2015), Issue 2, pages 595-633,
doi: [dx.doi.org/10.1007/s10107-014-0819-4](https://doi.org/10.1007/s10107-014-0819-4).
- [J32] “Prediction of hospitalization due to heart diseases by supervised learning methods” (with W. Dai, T. Brisimi, V. Saligrama, W. Adams, T. Mela), *International Journal of Medical Informatics*, 2014,
doi: [dx.doi.org/10.1016/j.ijmedinf.2014.10.002](https://doi.org/10.1016/j.ijmedinf.2014.10.002).

- [J33] “Formation Detection with Wireless Sensor Networks” (with W. Dai and D. Guo), *ACM Transactions on Sensor Networks*, Vol. 10 (2014), Issue 4, June, doi: [dx.doi.org/10.1145/2508018](https://doi.org/10.1145/2508018).
- [J34] “Efficient maintenance and update of nonbonded lists in macromolecular simulations” (with Chowdhury, R., Beglov, D., Moghadasi, M., Vakili, P., Vajda, S., Bajaj, C., and Kozakov, D.), *Journal of Chemical Theory and Computation*, Vol. 10 (2014), pages 4449–4454, doi: [dx.doi.org/10.1021/ct400474w](https://doi.org/10.1021/ct400474w).
- [J35] “Encounter Complexes and Dimensionality Reduction in Protein-Protein Association” (with D. Kozakov, K. Li, D. Hall, D. Beglov, J. Zheng, P. Vakili, O. Shueler-Furman, G. Clore, S. Vajda), *eLife*, 2014;3:e01370, doi: [elifesciences.org/content/3/e01370/](https://doi.org/10.1101/013700).
- [J36] “Predicting and Evaluating the Effect of Bivalirudin in Cardiac Surgical Patients” (with Q. Zhao and T. Edrich), *IEEE Transactions on Biomedical Engineering*, Vol. 61 (2014), No. 2 (February), pages 435–443, doi: [dx.doi.org/10.1109/TBME.2013.2280636](https://doi.org/10.1109/TBME.2013.2280636).
- [J37] “Model-Free Stochastic Localization of CBRN Releases” (with R. T. Locke), *IEEE Trans. on Signal Processing*, Vol. 61 (2013), Issue 17 (September), pages 4246–4258, doi: [dx.doi.org/10.1109/TSP.2013.2265679](https://doi.org/10.1109/TSP.2013.2265679).
- [J38] “Scheduling Mobile Nodes for Cooperative Data Transport in Sensor Networks” (with R. Moazzez Estanjini and J. Wang), *IEEE/ACM Trans. on Networking*, Vol. 21 (2013), No. 3 (June), pages 974–989, doi: [dx.doi.org/10.1109/TNET.2012.2216897](https://doi.org/10.1109/TNET.2012.2216897).
- [J39] “Heparin requirements for full anticoagulation are lower for patients treated with coumadin than for those on dabigatran or no chronic anticoagulation” (with T. Edrich and G. Frendl), *Critical Care Medicine*, Vol. 40 (2012), No. 12.
- [J40] “Inverse Optimization: A New Perspective on the Black-Litterman Model” (with D. Bertsimas and V. Gupta), *Operations Research*, Vol. 60 (2012), No. 6, pages 1389–1403, doi: [dx.doi.org/10.1287/opre.1120.1115](https://doi.org/10.1287/opre.1120.1115).
- [J41] “Rigid Body Energy Minimization on Manifolds for Molecular Docking” (with H. Mirzaei, D. Beglov, S. Vajda, P. Vakili, and D. Kozakov), *Journal of Chemical Theory and Computation*, Vol. 8 (2012), No. 11, pages 4374–4380, doi: [dx.doi.org/10.1021/ct300272j](https://doi.org/10.1021/ct300272j).
- [J42] “Position and Movement Detection of Wireless Sensor Network Devices Relative to a Landmark Graph” (with K. Li, D. Guo, Y. Lin), *IEEE Transactions on Mobile Computing*, Vol. 11 (2012), No. 12, pages 1970–1982, doi: [dx.doi.org/10.1109/TMC.2011.214](https://doi.org/10.1109/TMC.2011.214).
- [J43] “Demand-Side Management for Regulation Service Provisioning through Internal Pricing” (with B. Li and M.C. Caramanis), *IEEE Transactions on Power Systems*, Vol. 27 (2012), No. 3, pages 1531–1539, doi: [dx.doi.org/10.1109/TPWRS.2012.2183007](https://doi.org/10.1109/TPWRS.2012.2183007).
- [J44] “Robust Maximum Lifetime Routing and Energy Allocation in Wireless Sensor Networks” (with R. Wu), *International Journal of Distributed Sensor Networks*, 2012, doi: [dx.doi.org/10.1155/2012/523787](https://doi.org/10.1155/2012/523787).
- [J45] “On Delay-minimized Data Harvesting with Mobile Elements in Wireless Sensor Networks” (with R. Moazzez Estanjini), *Ad Hoc Networks*, Vol. 10 (2012), pages 1191–1203, doi: [10.1016/j.adhoc.2012.03.005](https://doi.org/10.1016/j.adhoc.2012.03.005).

- [J46] “A Least Squares Temporal Difference Actor-Critic Algorithm with Applications to Warehouse Management” (with R. Moazzez Estanjini and K. Li), *Naval Research Logistics*, Vol. 59 (2012), Issue 3, pages 197–211, doi: [dx.doi.org/10.1002/nav.21481](https://doi.org/10.1002/nav.21481).
- [J47] “Tachyphylaxis in post-cardiac surgical patients receiving bivalirudin – a retrospective dynamic study using a PKPD model” (with Thomas Edrich and Gyorgi Frenzl), *Critical Care Medicine*, Vol. 39 (2011), No. 12 (December), pages 198, doi: [dx.doi.org/10.1097/01.ccm.0000408627.24229.88](https://doi.org/10.1097/01.ccm.0000408627.24229.88).
- [J48] “On Energy Optimized Averaging in Wireless Sensor Networks” (with B. Li), *IEEE Transactions on Automatic Control*, Special Issue on Wireless Sensor and Actuator Networks, Vol. 56 (2011), No. 10 (October), pages 2290–2304, doi: [dx.doi.org/10.1109/TAC.2011.2163875](https://doi.org/10.1109/TAC.2011.2163875).
- [J49] “Optimizing Warehouse Forklift Dispatching using a Sensor Network and Stochastic Learning” (with R. Moazzez Estanjini, Y. Lin, K. Li, D. Guo), *IEEE Transactions on Industrial Informatics*, Vol. 7 (2011), No. 3 (August), pages 476–486, doi: [dx.doi.org/10.1109/TII.2011.2158834](https://doi.org/10.1109/TII.2011.2158834).
- [J50] “Optimizing the Transportation System’s Response Capabilities”, (with C.G. Casandras), *Journal of Homeland Security, Special Issue on “Catastrophes and Complex Systems: Transportation”*, Published June 23, 2011.
- [J51] “Statistical Anomaly Detection with Sensor Networks” (with Y. Chen), *ACM Transactions on Sensor Networks*, Vol. 7 (2010), No. 3 (August), pages 17:1–17:23.
- [J52] “Achieving reliability and high accuracy in automated protein docking: ClusPro, PIPER, SDU, and stability analysis in CAPRI rounds 13-19” (with D. Kozakov, D. R. Hall, D. Beglov, R. Brenke, S. R. Comeau, Y. Shen, K. Li, J. Zheng, P. Vakili, and S. Vajda), *PROTEINS, Special Issue: Fourth Meeting on the Critical Assessment of PRedicted Interactions*, Vol. 78, No. 15 (July), pages 3124–3130, 2010.
- [J53] “A Distributed Actor-Critic Algorithm and Applications to Mobile Sensor Network Coordination Problems” (with P. Pennesi), *IEEE Transactions on Automatic Control*, Vol. 55 (2010), No. 2 (February), pages 492–497.
- [J54] “Optimized Scheduled Multiple Access Control for Wireless Sensor Networks” (with W. Lai and X. Song), *IEEE Transactions on Automatic Control*, Vol. 54 (2009), No. 11 (November), pages 2573–2585.
- [J55] “Robust and Distributed Stochastic Localization in Sensor Networks: Theory and Experimental Results” (with Dong Guo), *ACM Transactions on Sensor Networks*, Vol. 5 (2009), No. 4 (November), pages 34:1–34:22.
- [J56] “Spatio-Temporal Network Anomaly Detection by Assessing Deviations of Empirical Measures” (with G. Smaragdakis), *IEEE/ACM Transactions on Networking*, Vol. 17 (2009), No. 3 (June), pages 685–697.
- [J57] “Protein docking by the underestimation of free energy funnels in the space of encounter complexes” (with Y. Shen, P. Vakili, and S. Vajda), *PLoS Computational Biology*, Vol. 4 (2008), No. 10 (October).
- [J58] “Optimally Balancing Energy Consumption versus Latency in Sensor Network Routing” (with W. Lai) *ACM Transactions on Sensor Networks*, Vol. 4 (2008), No. 4 (August), pages 21:1–21:28.
- [J59] “SDU: A Semi-Definite Programming-Based Underestimation Method for Stochastic Global Optimization in Protein Docking” (with Y. Shen, P. Vakili and S. Vajda), *IEEE Transactions on Automatic Control*, Vol. 52 (2007), No. 4, pages 664–676.
- [J60] “Tractable Supply Chain Production Planning Modeling Non-Linear Lead Time and Quality of Service Constraints” (with O. Anli and M. C. Caramanis), *Journal of Manufacturing Systems*, Special issue on Distributed Control of Manufacturing Systems, Volume 26 (2007), No. 2, pages 116–134.

- [J61] “Asymptotically Optimal Transmission Policies for Large-Scale Low-Power Wireless Sensor Networks” (with W. Lai and D. Starobinski), *IEEE/ACM Transactions on Networking*, Vol. 15 (2007), No. 1, pages 105–118.
- [J62] “Enforcing Service-Level Constraints in Supply Chains with Assembly Operations” (with C. Del Vecchio), *IEEE Transactions on Automatic Control*, Vol. 51 (2006), No. 12, pages 2000–2005.
- [J63] “Statistical Location Detection with Sensor Networks” (with S. Ray and W. Lai), *IEEE Transactions on Information Theory, Joint special issue with IEEE/ACM Transactions on Networking focusing on “Networking and Information Theory”*, Vol. 52 (2006), No. 6, pages 2670–2683.
- [J64] “Importance Sampling for the Estimation of Buffer Overflow Probabilities via Trace-Driven Simulations” (with S. Vassilaras), *IEEE/ACM Transactions on Networking*, Vol. 12 (2004), No. 5, pages 907–919.
- [J65] “Target-Pursuing Scheduling and Routing Policies for Multiclass Queueing Networks” (with C. Su and M.C. Caramanis), *IEEE Transactions on Automatic Control*, Vol. 49 (2004), No. 10, pages 1709–1722.
- [J66] “Inventory Control for Supply Chains with Service Level Constraints: A Synergy between Large Deviations and Perturbation Analysis” (with Y. Liu, C.G. Cassandras, and C. Panayiotou), *Annals of Operations Research* (Special Volume on Stochastic Models of Production-Inventory Systems), Vol. 126 (2004), pages 231–258.
- [J67] “Large Deviations-based Asymptotics for Inventory Control in Supply Chains” (with Y. Liu), *Operations Research*, Vol. 51 (2003), No. 3, pages 437–460.
- [J68] “Pricing in Multiservice Loss Networks: Static Pricing, Asymptotic Optimality, and Demand Substitution Effects” (with Y. Liu), *IEEE/ACM Transactions on Networking*, Vol. 10 (2002), No. 3, pages 425–438.
- [J69] “On the Estimation of Buffer Overflow Probabilities from Measurements” (with S. Vassilaras), *IEEE Transactions on Information Theory*, Vol. 47 (2001), No. 1, pages 178–191.
- [J70] “Probabilistic Service Level Guarantees in Make-to-Stock Manufacturing Systems” (with D. Bertsimas), *Operations Research*, Vol. 49 (2001), No. 1, pages 119–133.
- [J71] “Congestion-Dependent Pricing of Network Services” (with J.N. Tsitsiklis), *IEEE/ACM Transactions on Networking*, Vol. 8 (2000), No. 2, pages 171–184.
- [J72] “Class-Specific Quality of Service Guarantees in Multimedia Communication Networks”, *Automatica* (Special Issue on Control Methods for Communication Networks), V. Anantharam and J. Walrand Eds., Vol. 35 (1999), No. 12, pages 1951–1969.
- [J73] “Large Deviations Analysis of the Generalized Processor Sharing Policy” (with D. Bertsimas and J.N. Tsitsiklis), *Queueing Systems*, Vol 32 (1999), pages 319–349.
- [J74] “Asymptotic Buffer Overflow Probabilities in Multiclass Multiplexers: An Optimal Control Approach” (with D. Bertsimas and J.N. Tsitsiklis), *IEEE Transactions on Automatic Control*, Vol 43 (1998), No. 3, pages 315–335.
- [J75] “On the Large Deviations Behaviour of Acyclic Networks of G/G/1 Queues” (with D. Bertsimas and J.N. Tsitsiklis), *The Annals of Applied Probability*, Vol. 8 (1998), No. 4, pages 1027–1069.
- [J76] “Branching Bandits and Klimov’s Problem: Achievable Region and Side Constraints” (with D. Bertsimas and J.N. Tsitsiklis), *IEEE Transactions on Automatic Control*, Vol. 40 (1995), No. 12, pages 2063–2075.
- [J77] “Optimization of Multiclass Queueing Networks: Polyhedral and Nonlinear Characterizations of Achievable Performance” (with D. Bertsimas and J.N. Tsitsiklis), *The Annals of Applied Probability*, Vol. 4 (1994), No. 1, pages 43–75.

- [J78] “Congestion Avoidance for ATM Networks” (with E.D. Sykas, K.M. Vlakos, and G.K. Mourtzinou), *Computer Communications*, Vol. 17 (1994), No. 9, pages 657–662.

Editorials and Magazine Articles

- [E1] “How Machine Learning Is Helping Us Predict Heart Disease and Diabetes”, *Harvard Business Review*, May 30, 2017,
<https://hbr.org/2017/05/how-machine-learning-is-helping-us-predict-heart-disease-and-diabetes>.
- [E2] “The Inaugural Issue of the IEEE Transactions on Control of Network Systems” (with M. Egerstedt), *IEEE Transactions on Control of Network Systems*, Vol. 1 (2014), No. 1 (March), pages 1–3,
doi: [dx.doi.org/10.1109/TCNS.2014.2309714](https://doi.org/10.1109/TCNS.2014.2309714).
- [E3] “Guest Editorial, Special Issue on Wireless Sensor and Actuator Networks” (with J. Chen, K. H. Johansson, S. Olariu, I. Stojmenovic), *IEEE Transactions on Automatic Control*, Vol. 56 (2011), No. 10 (October), pages 2244–2246,
doi: [dx.doi.org/10.1109/TAC.2011.2164287](https://doi.org/10.1109/TAC.2011.2164287).

Conference Proceedings (refereed)

- [P1] “Data Center Demand Response Pricing Using Inverse Optimization” (with Thanasis Tsiligkaridis and Ayse Coskun), *10th International Conference on Future Energy Systems (ACM e-Energy)*, June 25–28, 2019, Phoenix, Arizona.
- [P2] “Data Center Participation in Demand Response Programs with Quality-of-Service Guarantees” (with Yijia Zhang and Ayse Coskun), *10th International Conference on Future Energy Systems (ACM e-Energy)*, June 25–28, 2019, Phoenix, Arizona.
- [P3] “Learning models for writing better doctor prescriptions” (with Tingting Xu), *European Control Conference*, June 25–28, 2019, Napoli, Italy.
- [P4] “Prescriptive Cluster-Dependent Support Vector Machines with an Application to Reducing Hospital Readmissions” (with Taiyao Wang), *European Control Conference*, June 25–28, 2019, Napoli, Italy.
- [P5] “Learning Parameterized Prescription Policies and Disease Progression Dynamics using Markov Decision Processes” (with Henghui Zhu and Tingting Xu), *American Control Conference*, July 10–12, 2019, Philadelphia, Pennsylvania.
- [P6] “A Hebbian learning algorithm for training a neural circuit to perform context-dependent associations of stimuli” (with Henghui Zhu and Michael Hasselmo), *American Control Conference*, July 10–12, 2019, Philadelphia, Pennsylvania.
- [P7] “Clinical Concept Extraction with Contextual Word Embedding”, (with Henghui Zhu and Amir Tahmasebi), *NIPS Machine Learning for Health Workshop*, December 8, 2018, Montreal, Canada.
- [P8] “Learning Optimal Personalized Treatment Rules Using Robust Regression Informed K-NN”, (with Ruidi Chen), *NIPS Machine Learning for Health Workshop*, December 8, 2018, Montreal, Canada.
- [P9] “Context-Driven Concept Annotation in Radiology Reports: Anatomical Phrase Labeling”, (with Henghui Zhu and Amir Tahmasebi), *AMIA 2019 Informatics Summit*, March 25–28, 2019, San Francisco, California.

- [P10] “Context-based bidirectional-LSTM model for sequence labeling in clinical reports” (with Henghui Zhu and Amir Tahmasebi), *SPIE Medical Imaging Symposium*, February 6–21, 2019, San Diego, California, doi: <https://doi.org/10.1117/12.2512103>.
- [P11] “A Distributionally Robust Optimization Approach for Outlier Detection” (with R. Chen), *Proceedings of the 57th IEEE Conference on Decision and Control*, pages 352–357, December 17–19, 2018, Miami, Florida, doi: [dx.doi.org/10.1109/CDC.2018.8619435](https://doi.org/10.1109/CDC.2018.8619435).
- [P12] “Experiments on Data Center Participation in Demand Response Programs”, (with Yijia Zhang, Ozan Tuncer, Athanasios Tsiligkaridis, Michael Caramanis, and Ayse K. Coskun), *IEEE High Performance Extreme Computing Conference (HPEC)*, September 25–27, 2018, Waltham, Massachusetts.
- [P13] “Fully Asynchronous Push-Sum With Growing Intercommunication Intervals”, (with Alex Olshevsky and A. Spiridonoff), *Proceedings of the American Control Conference*, pages 591–596, June 27–29, 2018, Milwaukee, Wisconsin, doi: [dx.doi.org/10.23919/ACC.2018.8431414](https://doi.org/10.23919/ACC.2018.8431414).
- [P14] “Data-Driven Estimation of Travel Latency Cost Functions via Inverse Optimization in Multi-Class Transportation Networks”, (with Jing Zhang), *Proceedings of the 56th IEEE Conference on Decision and Control*, pages 6295–6300, December 12–15, 2017, Melbourne, Australia, doi: [dx.doi.org/10.1109/CDC.2017.8264608](https://doi.org/10.1109/CDC.2017.8264608).
- [P15] “Feature Extraction in Q-Learning using Neural Networks”, (with Henghui Zhu and Michael Hasselmo), *Proceedings of the 56th IEEE Conference on Decision and Control*, pages 3330–3335, December 12–16, 2017, Melbourne, Australia, doi: [dx.doi.org/10.1109/CDC.2017.8264148](https://doi.org/10.1109/CDC.2017.8264148).
- [P16] “Strategic Equilibrium Bidding for Electricity Suppliers in A Day-Ahead Market Using Inverse Optimization”, (with Ruidi Chen and Michael Caramanis), *Proceedings of the 56th IEEE Conference on Decision and Control*, pages 220–225, December 12–16, 2017, Melbourne, Australia, doi: [dx.doi.org/10.1109/CDC.2017.8263669](https://doi.org/10.1109/CDC.2017.8263669).
- [P17] “Outlier Detection Using Robust Optimization with Uncertainty Sets Constructed from Risk Measures”, (with Ruidi Chen), *Proceedings of 35th International Symposium on Computer Performance, Modeling, Measurements and Evaluation (IFIP Performance)*, November 13–17, 2017, New York, New York.
- [P18] “Data-driven Estimation of Origin-Destination Demand and User Cost Functions for the Optimization of Transportation Networks”, (with Jing Zhang, Sepideh Pourazarm, Christos G. Cassandras), *Proceedings of the 20th IFAC World Congress*, pages 9680–9685, July 9–14, 2017, Toulouse, France, doi: [dx.doi.org/10.1016/j.ifacol.2017.08.2049](https://doi.org/10.1016/j.ifacol.2017.08.2049).
- [P19] “Optimal Allocation of Metabolic Functions among Organisms in a Microbial Ecosystem”, (with Qi Zhao, Daniel Segrè), *Proceedings of the 55th IEEE Conference on Decision and Control*, pages 7063–7068, December 12–14, 2016, Las Vegas, Nevada, doi: [dx.doi.org/10.1109/CDC.2016.7799357](https://doi.org/10.1109/CDC.2016.7799357).
- [P20] “A joint sparse clustering and classification approach with applications to hospitalization prediction”, (with Tingting Xu, Theodora Brisimi, Taiyao Wang, Wuyang Dai), *Proceedings of the 55th IEEE Conference on Decision and Control*, pages 4566–4571, December 12–14, 2016, Las Vegas, Nevada, doi: [dx.doi.org/10.1109/CDC.2016.7798964](https://doi.org/10.1109/CDC.2016.7798964).
- [P21] “Learning Parameterized Policies for Markov Decision Processes through Demonstrations”, (with Manjesh Kumar Hanawal, Hao Liu, Henghui Zhu), *Proceedings of the 55th IEEE Conference on Decision and Control*, pages 7087–7092, December 12–14,

2016, Las Vegas, Nevada,
doi: [dx.doi.org/10.1109/CDC.2016.7799361](https://doi.org/10.1109/CDC.2016.7799361).

- [P22] “Price of Anarchy in Transportation Networks by Estimating User Cost Functions from Actual Traffic Data”, (with Jing Zhang, Sepideh Pourazarm, Christos G. Cassandras), *Proceedings of the 55th IEEE Conference on Decision and Control*, pages 789–794, December 12–14, 2016, Las Vegas, Nevada,
doi: [dx.doi.org/10.1109/CDC.2016.7798364](https://doi.org/10.1109/CDC.2016.7798364).
- [P23] “Cooperative Multi-Quadrotor Pursuit of an Evader in an Environment with No-Fly Zones”, (with Alyssa Pierson, Armin Ataei, and Mac Schwager), *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*, pages 320–326, May 16–21, 2016, Stockholm, Sweden,
doi: [dx.doi.org/10.1109/ICRA.2016.7487151](https://doi.org/10.1109/ICRA.2016.7487151).
- [P24] “A Joint Clustering and Classification Approach for Healthcare Predictive Analytics”, (with Wuyang Dai, Theodora Brisimi, Tingting Xu, Taiyao Wang, Venkatesh Saligrama), *2nd Workshop on Data Mining for Medical Informatics (DMMI 2015)*, November 14th, 2015, San Francisco, California.
- [P25] “An Improved Composite Hypothesis Test for Markov Models with Applications in Network Anomaly Detection” (with Jing Zhang), *Proceedings of the 54th IEEE Conference on Decision and Control*, pages 3810–3815, December 15–18, 2015, Osaka, Japan,
doi: [dx.doi.org/10.1109/CDC.2015.7402811](https://doi.org/10.1109/CDC.2015.7402811).
- [P26] “Learning Cellular Objectives from Fluxes by Inverse Optimization” (with Qi Zhao, Arion Stettner, Ed Reznik, Daniel Segrè), *Proceedings of the 54th IEEE Conference on Decision and Control*, pages 1271–1276, December 15–18, 2015, Osaka, Japan,
doi: [dx.doi.org/10.1109/CDC.2015.7402386](https://doi.org/10.1109/CDC.2015.7402386).
- [P27] “Quadrotor Deployment for Emergency Response in Smart Cities: A Robust MPC Approach” (with Armin Ataei), *Proceedings of the 54th IEEE Conference on Decision and Control*, pages 5130–5135, December 15–18, 2015, Osaka, Japan,
doi: [dx.doi.org/10.1109/CDC.2015.7403022](https://doi.org/10.1109/CDC.2015.7403022).
- [P28] “Sensing and Classifying Roadway Obstacles: The Street Bump Anomaly Detection and Decision Support System” (with T. S. Brisimi, S. Ariaifar, Y. Zhang, and C. G. Cassandras), *Proceedings of the IEEE Int. Conf. on Automation Science and Engineering (CASE)*, August 24–28, 2015, Gothenburg, Sweden,
doi: [dx.doi.org/10.1109/CoASE.2015.7294276](https://doi.org/10.1109/CoASE.2015.7294276).
- [P29] “Optimization on the space of rigid and flexible motions: an alternative manifold optimization approach” (with Pirooz Vakili, Hanieh Mirzaei, Shahrooz Zarbafian, Dima Kozakov, Sandor Vajda), *Proceedings of the 53rd IEEE Conference on Decision and Control*, December 15–17, 2014, Los Angeles, California.
- [P30] “A Subspace Semi-Definite programming-based Underestimation (SSDU) method for stochastic global optimization in protein docking” (with F. Nan, M. Moghadasi, P. Vakili, S. Vajda, D. Kozakov), *Proceedings of the 53rd IEEE Conference on Decision and Control*, pages 4623–4628, December 15–17, 2014, Los Angeles, California.
- [P31] “A Hessian Actor-Critic Algorithm” (with J. Wang), *Proceedings of the 53rd IEEE Conference on Decision and Control*, pages 1131–1136, December 15–17, 2014, Los Angeles, California,
doi: [dx.doi.org/10.1109/CDC.2014.7039533](https://doi.org/10.1109/CDC.2014.7039533).
- [P32] “Botnet detection using social graph analysis” (with Jing Wang), *Proceedings of the 52nd Annual Allerton Conference on Communication, Control, and Computing*, October 1–3, 2014, Monticello, Illinois.
- [P33] “Adaptive Control of Bivalirudin in the Cardiac Intensive Care Unit”, (with Q. Zhao and T. Edrich), *Proceedings of the 19th IFAC World Congress*, pages 8427–8432, August 24–29, 2014, Cape Town, South Africa.

- [P34] “Robust Anomaly Detection in Dynamic Networks”, (with J. Wang), *Proceedings of the 22nd Mediterranean Conference on Control and Automation (MED 14)*, pages 428–433, June 16–19, 2014, Palermo, Italy.
- [P35] “Smart Building Real Time Pricing for Offering Load-Side Regulation Service Reserves” (with E. Bilgin and M. C. Caramanis), *Proceedings of the 52nd IEEE Conference on Decision and Control*, pages 4341–4347, December 10-13, 2013, Florence, Italy.
- [P36] “A Predictive Model for the Anticoagulant Bivalirudin Administered to Cardiac Surgical Patients” (with Q. Zhao and T. Edrich), *Proceedings of the 52nd IEEE Conference on Decision and Control*, pages 121–126, December 10-13, 2013, Florence, Italy.
- [P37] “Network Anomaly Detection: A Survey and Comparative Analysis of Stochastic and Deterministic Methods” (with J. Wang, D. Rossell, and C. G. Cassandras), *Proceedings of the 52nd IEEE Conference on Decision and Control*, pages 182–187, December 10-13, 2013, Florence, Italy.
- [P38] “A New Distributed Algorithm for Side-Chain Positioning in the Process of Protein Docking” (with M. Moghadasi, D. Kozakov, P. Vakili, and S. Vajda), *Proceedings of the 52nd IEEE Conference on Decision and Control*, pages 739–744, December 10-13, 2013, Florence, Italy.
- [P39] “Flexible Refinement of Protein-Ligand Docking on Manifolds” (with H. Mirzaei, E. Villar, S. Mottarella, D. Beglov, S. Vajda, D. Kozakov, and P. Vakili), *Proceedings of the 52nd IEEE Conference on Decision and Control*, pages 1392–1397, December 10-13, 2013, Florence, Italy.
- [P40] “Distributed Scheduling of Wireless Networks: A Message Passing Approach” (with F. Huang, W. Lai), *Proceedings of the 21st Mediterranean Conference on Control and Automation (MED 13)*, pages 922–929, June 25–28, 2013, Chania, Greece.
- [P41] “A New Approach to Rigid Body Minimization with Application to Molecular Docking” (with H. Mirzaei, D. Kozakov, D. Beglov, S. Vajda, and P. Vakili), **Invited**, *Proceedings of the 51st IEEE Conference on Decision and Control*, pages 2983–2988, December 10-13, 2012, Maui, Hawaii.
- [P42] “A Message Passing Approach to Side Chain Positioning with Applications in Protein Docking Refinement” (with M. Moghadasi, D. Kozakov, A. Mamonov, P. Vakili, and S. Vajda), *Proceedings of the 51st IEEE Conference on Decision and Control*, pages 2310–2315, December 10-13, 2012, Maui, Hawaii.
- [P43] “Provision of Regulation Service Reserves by Flexible Distributed Loads” (with Caramanis, M.C., Cassandras, C.G., Bilgin, E., and Ntakou, E.), **Invited**, *Proceedings of the 51st IEEE Conference on Decision and Control*, pages 3694–3700, December 10-13, 2012, Maui, Hawaii,
doi: [dx.doi.org/10.1109/CDC.2012.6426025](https://doi.org/10.1109/CDC.2012.6426025).
- [P44] “Animal-Inspired Optimal Foraging via a Distributed Actor-Critic Algorithm” (with Y. Lin), *Proceedings of the 20th Mediterranean Conference on Control and Automation (MED 12)*, pages 1223–1228, July 3–6, 2012, Barcelona, Spain,
doi: [dx.doi.org/10.1109/MED.2012.6265807](https://doi.org/10.1109/MED.2012.6265807).
- [P45] “Temporal Logic Motion Control using Actor-Critic Methods” (with X.-C. Ding, J. Wang, M. Lahijanjan, and C. Belta), *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*, pages 4687–4692, May 14-18, 2012, St. Paul, Minnesota,
doi: [10.1109/ICRA.2012.6225290](https://doi.org/10.1109/ICRA.2012.6225290).
- [P46] “Stochastic Localization of CBRN Releases” (with R.T. Locke), *Proceedings of the 37th International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, March 25-30, 2012, Kyoto, Japan.

- [P47] “Posture Detection with Body Area Networks” (with W. Dai, D. Guo, Y. Lin, K. Li, B. Li), *Proceedings of the Body Area Networks (BodyNets) Conference*, November 7-8, 2011, Beijing, China.
- [P48] “A Market-Based Mechanism for Providing Demand-Side Regulation Service Reserves” (with B. Li and M. C. Caramanis), **Invited**, *Proceedings of the 50th IEEE Conference on Decision and Control and European Control Conference*, December 12-15, 2011, Orlando, Florida, doi: 10.1109/CDC.2011.6160541.
- [P49] “Least Squares Temporal Difference Actor-Critic Methods with Applications to Robot Motion Control” (with R. Moazzez Estanjini, X. C. Ding, M. Lahijanian, J. Wang, and C. Belta), *Proceedings of the 50th IEEE Conference on Decision and Control and European Control Conference*, December 12-15, 2011, Orlando, Florida, doi: 10.1109/CDC.2011.6160485.
- [P50] “Modeling the Effects of Bivalirudin in Cardiac Surgical Patients” (with Thomas Edrich, Gyorgi Frenzl, and Jim Rawn), *Proceedings of the 33rd Annual International IEEE Conference of the Engineering in Medicine and Biology Society (EMBS)*, pages 120–123, August 30–Sept. 3, 2011, Boston, Massachusetts.
- [P51] “On Energy Optimized Network Construction for Distributed Averaging in a Dynamic Environment” (with B. Li), *Proceedings of the 18th IFAC World Congress*, pages 14958–14963, August 28 – September 2, 2011, Milan, Italy.
- [P52] “Mobile Agent Coordination via a Distributed Actor-Critic Algorithm” (with Y. Lin), *Proceedings of the 19th Mediterranean Conference on Control and Automation (MED 11)*, June 20–23, 2011, Corfu, Greece, doi: 10.1109/MED.2011.5983038.
- [P53] “Improved Delay-Minimized Data Harvesting with Mobile Elements in Wireless Sensor Networks” (with R. Moazzez-Estanjini), *Proceedings of the 9th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)*, pages 49–54, May 9-13, 2011, Princeton, NJ.
- [P54] “Cyber-Physical Systems for Next Generation Intelligent Buildings” (with A. Savvides, M.C. Caramanis), *Proceedings of the 2nd ACM/IEEE International Conference on Cyber-Physical Systems (ICCPS)*, April 12-14, 2011, Chicago, Illinois.
- [P55] “The Capacity of Sparse Ad Hoc Networks under Controlled Mobility” (with R. Moazzez-Estanjini), **Invited**, *Proceedings of the 49th IEEE Conference on Decision and Control*, pages 5610–5615, December 2010, Atlanta, Georgia.
- [P56] “On Distributed Multiple Access Control for Wireless Sensor Networks” (with W. Lai and F. Huang), **Invited**, *Proceedings of 48th Annual Allerton Conference on Communication, Control, and Computing*, pages 1597–1604, September 29– October 1, 2010, Monticello, Illinois.
- [P57] “On Energy Optimized Averaging in Wireless Sensor Networks” (with B. Li), **Invited**, *Proceedings of the 48th IEEE Conference on Decision and Control*, pages 3763–3768, December 2009, Shanghai, China.
- [P58] “An Actor-Critic Method Using Least Squares Temporal Difference Learning with an Application to Warehouse Management” (with K. Li, R. Moazzez-Estanjini), *Proceedings of the 48th IEEE Conference on Decision and Control*, pages 2564–2569, December 2009, Shanghai, China.
- [P59] “Production Planning and Quality of Service Allocation Across the Supply Chain in a Dynamic Lead Time Model” (with M. C. Caramanis, C.-C. Wu), *Proceedings of the 48th IEEE Conference on Decision and Control*, pages 7137–7144, December 2009, Shanghai, China.

- [P60] “Intelligent forklift dispatching in warehouses using a sensor network” (with K. Li, R. Moazzez-Estanzjini, Y. Lin, and D. Guo), *Proceedings of the 17th Mediterranean Conference on Control and Automation (MED 09)*, pages 112–114, June 24–26, 2009, Thessaloniki, Greece.
- [P61] “A Control and Optimization Science Base for Sensor Networks in Adverse and Stochastic Environments: Selected Advances of 2008” (with R. Gao, A. Deshmukh, W. Gong, J. Baillieul, C. G. Cassandras, D. Castanon), *Proceedings of 2009 NSF Civil, Mechanical and Manufacturing Innovation (CMMI) Grantees Conference*, June 22–25, 2009, Honolulu, Hawaii.
- [P62] “Anomaly Detection in Sensor Networks based on Large Deviations of Markov Chain Models” (with Yin Chen), **Invited**, *Proceedings of the 47th IEEE Conference on Decision and Control*, pages 2338–2343, December 2008, Cancun, Mexico.
- [P63] “On Robust Maximum Lifetime Routing in Wireless Sensor Networks” (with Ruomin Wu), *Proceedings of the 47th IEEE Conference on Decision and Control*, pages 1684–1689, December 2008, Cancun, Mexico.
- [P64] “Landmark-based position and movement detection of wireless sensor network devices” (with Keyong Li and Dong Guo), **Invited**, *Proceedings of 46th Annual Allerton Conference on Communication, Control, and Computing*, pages 7–14, September 23–26, 2008, Monticello, Illinois.
- [P65] “A Robust Approach to Markov Decision Problems with Uncertain Transition Probabilities” (with Seong-Cheol Kang), *Proceedings of the 17th IFAC World Congress*, pages 408–413, July 6–11, 2008, Seoul, Korea.
- [P66] “Distribution-Dependent Robust Linear Optimization with Asymmetric Uncertainty and Application to Optimal Control” (with Seong-Cheol Kang and Keyong Li), *Proceedings of the 17th IFAC World Congress*, pages 10069–10074, July 6–11, 2008, Seoul, Korea.
- [P67] “A decomposition method for transmission scheduling in multi-channel wireless sensor networks” (with W. Lai and X. Song), *Proceedings of the IEEE INFOCOM Conference*, April 2008, Phoenix, Arizona.
- [P68] “A Control and Optimization Science Base for Sensor Networks in Adverse and Stochastic Environments: Selected Advances of 2007” (with J. Baillieul, C. G. Cassandras, D. Castanon, R. Gao, A. Deshmukh, W. Gong), *Proceedings of 2008 NSF Civil, Mechanical and Manufacturing Innovation (CMMI) Grantees Conference*, January 2008, Knoxville, Tennessee.
- [P69] “Robust and Distributed Localization in Sensor Networks” (with D. Guo), **Invited**, *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 933–938, December 2007, New Orleans, Louisiana.
- [P70] “Optimizing Noisy Funnel-like Functions on the Euclidean Group with Applications to Protein Docking” (with Y. Shen, P. Vakili, S. Vajda), **Invited**, *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 4545–4550, December 2007, New Orleans, Louisiana.
- [P71] “Solving Sensor Network Coverage Problems by Distributed Asynchronous Actor-Critic Methods” (with P. Pennesi), *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 5300–5305, December 2007, New Orleans, Louisiana.
- [P72] “Optimal Transmission Scheduling Policies for Wireless Sensor Networks with Frequency Diversity” (with W. Lai and X. Song), *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 512–517, December 2007, New Orleans, Louisiana.
- [P73] “Some Results on the Analysis of Stochastic Processes with Uncertain Transition Probabilities and Robust Optimal Control” (with Keyong Li and Seong-Cheol Kang),

Proceedings of 45th Annual Allerton Conference on Communication, Control, and Computing, September 26–28, 2007, Monticello, Illinois.

- [P74] “Sensor Network Minimal Energy Routing with Latency Guarantees” (with W. Lai), *Proceedings of the ACM MobiHoc 2007 Conference*, pages 199–208, September 9–14, 2007, Montreal, Canada.
- [P75] “A Large Deviations Approach to Statistical Traffic Anomaly Detection” (with G. Smaragdakis), *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 1900–1905, December 2006, San Diego, California.
- [P76] “Routing through noise and sleeping nodes in sensor networks: latency vs. energy trade-offs” (with W. Lai), **Invited**, *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 2716–2721, December 2006, San Diego, California.
- [P77] “Protein-Protein Docking with Reduced Potentials by Exploiting Multi-Dimensional Energy Funnels” (with Y. Shen, P. Vakili, S. Vajda), *Proceedings of the 28th IEEE International Conference of the Engineering in Medicine and Biology Society (EMBS)*, August 30–Sept. 3, 2006, New York City, New York.
- [P78] “On the benefits of distributional information in robust linear optimization” (with Seong-Cheol Kang), **Invited**, *Proceedings of the 5th IFAC Symposium on Robust Control Design*, July 2006, Toulouse, France.
- [P79] “Distributed multi-agent actor-critic algorithms with applications to stochastic path finding problems” (with Paris Pennesi and Yimin Yu), *Proceedings of the 5th IFAC Symposium on Robust Control Design*, July 2006, Toulouse, France.
- [P80] “Combining MPC and LD Analysis in Supply Chain Inventory Control Problem” (with P. Pennesi and G. Conte), *Proceedings of the 14th Mediterranean Conference on Control and Automation*, June 2006, Ancona, Italy.
- [P81] “Robust Linear Programming with Tight Probabilistic Guarantees and Applications in Inventory Control” (with Seong-Cheol Kang), *Proceedings of 2006 NSF Design, Service, and Manufacturing Grantees and Research Conference*, January 2006, St. Louis, Missouri.
- [P82] “A Control and Optimization Science Base for Sensor Networks in Adverse and Stochastic Environments: New Advances” (with C. G. Cassandras, J. Baillieul, D. Castanon, R. Gao, A. Deshmukh, W. Gong), *Proceedings of 2006 NSF Design, Service, and Manufacturing Grantees and Research Conference*, January 2006, St. Louis, Missouri.
- [P83] “Robust Linear Optimization: On the benefits of distributional information and applications in inventory control” (with Seong-Cheol Kang), *Proceedings of the 44th IEEE Conference on Decision and Control*, pages 4416–4421, December 2005, Seville, Spain.
- [P84] “A Semi-Definite programming-based Underestimation method for global optimization in molecular docking” (with Yang Shen, Sandor Vajda, Pirooz Vakili), *Proceedings of the 44th IEEE Conference on Decision and Control*, pages 3675–3680, December 2005, Seville, Spain.
- [P85] “Optimizing transmissions and routing in sensor networks is polynomially solvable” (with Wei Lai and D. Starobinski), **Invited**, *Proceedings of the Intelligent Systems in Design and Manufacturing Conference, SPIE Symposium*, October 2005, Boston, Massachusetts.
- [P86] “Supply Contracts with Service Level Requirements” (with Carmen Del Vecchio), *Proceedings of the IFAC Congress*, July 2005, Prague, The Czech Republic.
- [P87] “Deployment Optimization of Sensornet-Based Stochastic Location-Detection Systems” (with Saikat Ray and Wei Lai), *Proceedings of the IEEE INFOCOM Conference*, pages 2279–2289, March 2005, Miami, Florida.

- [P88] “Asymptotically Optimal Transmission Policies for Low-Power Wireless Sensor Networks” (with Wei Lai and D. Starobinski), *Proceedings of the IEEE INFOCOM Conference*, pages 2458–2469, March 2005, Miami, Florida.
- [P89] “A Control and Optimization Science Base for Sensor Networks in Adverse and Stochastic Environments” (with C. G. Cassandras, J. Baillieul, D. Castanon, R. Gao, A. Deshmukh, W. Gong), *Proceedings of the 2005 NSF DMII Grantees Conference*, January 2005, Scottsdale, Arizona.
- [P90] “Optimizing location detection services in wireless sensor networks” (with S. Ray), **Invited**, *Proceedings of the 43rd IEEE Conference on Decision and Control*, December 2004, pages 1478–1483, Paradise Island, Bahamas.
- [P91] “On maximizing the utility of uplink transmissions in sensor networks under explicit fairness constraints” (with Wei Lai and D. Starobinski), *Proceedings of the 43rd IEEE Conference on Decision and Control*, pages 1010–1015, December 2004, Paradise Island, Bahamas.
- [P92] “Integrated Operational and Financial Simulation of Multi-Tier, Demand Driven Supply Networks Using a Collaborative Demand Planning and Inventory Optimization Approach” (with M. C. Caramanis, K. Egilmez, K. Nitschke), *11th ASIM Dedicated Conference on Simulation in Production and Logistics*, October 2004, Berlin, Germany.
- [P93] “Production Coordination and Control of Supply Chains: Preliminary Results and Proof of Concept” (with M. C. Caramanis, O. M. Anli), *Proceedings of the NSF DMII Grantees Conference*, January 2004, Dallas, Texas.
- [P94] “Supply Chain Production Scheduling with Dynamic Lead Time and Quality of Service Constraints” (with M. C. Caramanis, O. M. Anli), *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 5478–5485, December 2003, Maui, Hawaii.
- [P95] “Enforcing Service-Level Constraints in Supply Chains with Assembly Operations” (with C. del Vecchio), *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 5490–5495, December 2003, Maui, Hawaii.
- [P96] “New Scheduling Policies for Multiclass Queueing Networks: Applications to Peer-To-Peer Systems” (with C. Su and M.C. Caramanis), *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 1604–1609, December 2003, Maui, Hawaii.
- [P97] “Target-Pursuing Policies for Open Multiclass Queueing Networks” (with C. Su and M.C. Caramanis), *Proceedings of the IEEE INFOCOM Conference*, pages 196–206, April 2003, San Francisco, California.
- [P98] “Distributed Resource Allocation in Multiservice Communication Networks Using Pricing” (with Y. Liu), **Invited**, *Proceedings of the 41st IEEE Conference on Decision and Control*, pages 2023–2028, December 2002, Las Vegas, Nevada.
- [P99] “Threshold-Based Control for Make-to-Stock Models: A Synergy between Large Deviations and Perturbation Analysis” (with Y. Liu, C.G. Cassandras, and P. Zhang), *Proceedings of the 40th IEEE Conference on Decision and Control*, pages 4523–4528, December 2001, Orlando, Florida.
- [P100] “Quick simulation of a queue fed by arbitrary traffic traces” (with S. Vassilaras), **Invited**, *Proceedings of the 39th Annual Allerton Conference on Communication, Control, and Computing*, pages 172–181, October 2001, Monticello, Illinois.
- [P101] “Model-Based Estimation of Buffer Overflow Probabilities from Measurements” (with S. Vassilaras), *Proceedings of the ACM SIGMETRICS 2001/Performance 2001 conference*, pages 154–163, June 16–20th, 2001, Cambridge, Massachusetts.
- [P102] “Large Deviations-based Asymptotics for Inventory Control in Supply Chains” (with Y. Liu), **Invited**, *Proceedings of the 39th IEEE Conference on Decision and Control*, pages 528–533, December 2000, Sydney, Australia.

- [P103] “Congestion–Dependent Pricing of On-line Internet Services” (with J.N. Tsitsiklis), **Invited**, *Proceedings of the 38th IEEE Conference on Decision and Control*, pages 4026–4031, December 1999, Phoenix, Arizona.
- [P104] “Controlling Make-to-Stock Manufacturing Systems: A Large Deviations Approach” (with D. Bertsimas), **Invited**, *Proceedings of the 38th IEEE Conference on Decision and Control*, pages 462–467, December 1999, Phoenix, Arizona.
- [P105] “A Framework for the Decentralized Control of Manufacturing Enterprises” (with M. Caramanis and O. Anli), **Invited**, *Proceedings of DARPA-JFACC Symposium on Advances in Enterprise Control*, pages 99–109, November 1999, San Diego, California.
- [P106] “On Estimating Buffer Overflow Probabilities under Markov-modulated Inputs” (with S. Vassilaras), **Invited**, *Proceedings of 37th Annual Allerton Conference on Communication, Control, and Computing*, pages 306–315, September 1999, Monticello, Illinois.
- [P107] “Performance Analysis and Admission Control in Multimedia Communication Networks”, **Invited**, *Proceedings of the 36th IEEE Conference on Decision and Control*, pages 1786–1791, December 1997, San Diego, California.
- [P108] “Buffer Overflow Probabilities in Multiclass ATM Switches” (with D. Bertsimas and J.N. Tsitsiklis), *Proceedings of 34th Annual Allerton Conference*, pages 712–721, October 1996, Monticello, Illinois.
- [P109] “Branching Bandits and Klimov’s Problem: Achievable Region and Side Constraints” (with D. Bertsimas and J.N. Tsitsiklis), *Proceedings of the 33rd IEEE Conference on Decision and Control*, Vol. 1, pages 174–179, December 1994, Lake Buena Vista, Florida.
- [P110] “Scheduling of Multiclass Queueing Networks: Bounds on Achievable Performance” (with D. Bertsimas and J.N. Tsitsiklis), **Invited**, *Proceedings of the Workshop on hierarchical control for real-time scheduling of manufacturing systems*, 1992, Lincoln, New Hampshire.
- [P111] “Congestion Avoidance in ATM Networks” (with E.D. Sykas, G.K. Mourtzinou, and K.M. Vlakos), *Proceedings of the IEEE INFOCOM Conference*, pages 905–914, May 4-8, 1992, Florence, Italy.

Abstracts Presented in Conferences

- [A1] “From Data to Models and Proposed Solutions”, **Invited Talk**, *Workshop on Control for Networked Transportation Systems (CNTS)*, July 9, 2019, Philadelphia, Pennsylvania.
- [A2] “Distributionally Robust Learning with Applications to Health Analytics”, **Invited Talk**, *2nd Information Modeling & Control of Complex Systems (IMaCCS) Workshop*, June 3–4, 2019, Ohio State University, Columbus, Ohio.
- [A3] “Using Machine Learning to Build a Highly Specific Prediction Model of Conception” (with Tingting Xu and Shruthi Mahalingaiah), *New England Fertility Society Annual Meeting*, May 3–4, 2019, Omni Mt. Washington, Bretton Woods, New Hampshire.
- [A4] “Congestion Maps: A visual interactive data-driven platform tracking annual traffic conditions in the Eastern Massachusetts area” (with Salomon Wollenstein Betech and Christos Cassandras), *Boston Area Research Initiative Spring Conference*, April 26, Boston, Massachusetts.
- [A5] “Automatic Extraction of Incidental Pulmonary Nodule Findings in Radiology Reports” (with Henghui Zhu, Amir M. Tahmasebi), *Annual Meeting of the Society for Imaging Informatics in Medicine (SIIM)*, June 26 – June 28, 2019, Denver, Colorado.

- [A6] “Algorithmic Approaches to Personalized Health Care” (with R. Chen, T. Xu, H. Zhu), *NSF PI Meeting*, Smart Health & Wellbeing Program, September 24–26, 2018, Arlington, Virginia.
- [A7] “Automatic Inference of Anatomy from Context in Radiology Reports using Deep Learning” (with Henghui Zhu, Sandeep Dalal, Amir M. Tahmasebi), *3rd Annual Scientific Conference on Machine Intelligence in Medical Imaging (C-MIMI)*, September 9 – September 10, 2018, San Francisco, California.
- [A8] “Robust Regression under the Wasserstein Metric”, (with Ruidi Chen), **Invited Talk**, *American Mathematical Society Northeast Meeting*, April 21–22, 2018, Northeastern University, Boston, Massachusetts.
- [A9] “Inverse Equilibrium Problems and Price-of-Anarchy Estimation in Transportation Networks”, **Invited Talk**, *2nd Information Modeling & Control of Complex Systems (IMaCCS) Workshop*, June 1–2, 2017, Ohio State University, Columbus, Ohio.
- [A10] “A Decentralized Primal Dual Method for Large-Scale Sparse Support Vector Machines”, (with T. Brisimi, W. Shi, A. Olshevsky), **Invited Talk**, *SIAM Conference on Optimization*, May 22–25, 2017, Vancouver, Canada.
- [A11] “From Data to Less Congested Boston Roads”, (with Jing Zhang, Sepideh Pourazarm, Christos G. Cassandras), *Boston Area Research Initiative Spring Conference*, March 10, 2017, Boston, Massachusetts.
- [A12] “Data-Driven Model Estimation in Biochemical Networks from Observed Equilibria”, **Invited Talk**, *Workshop on Control and Observability of Network Dynamics*, Mathematical Biosciences Institute, Ohio State University, April 11–15, 2016, Columbus, Ohio.
- [A13] “Predictive Health Analytics”, **Invited Talk**, *Academy of Finland/US NSF Joint Programme on Personalised Health - From Genes to Society*, March 17–18, 2016, Helsinki, Finland.
- [A14] “Sensor Data and Analytics Enabling Smarter Cities”, *NSF Morocco/ US Workshop on Sensors and Wireless Networks for Smart Cities*, **Invited Talk**, January 5–7, 2016, Rabat, Morocco.
- [A15] “Show me the Data! Smart-Analytics Enabling Inference and Predictions”, **Invited Talk**, *NSF Workshop on Smart Cities*, December 3–4, 2015, Arlington, Virginia.
- [A16] “Classification in the Presence of Hidden Clusters with an Application in Hospitalization Prediction” (with Wuyang Dai, Theodora Brisimi, Tingting Xu, Taiyao Wang, Venkatesh Saligrama), *NIPS 2015 Workshop on Machine Learning in Healthcare*, December 11, 2015, Montreal, Canada.
- [A17] “Data-Driven Model Estimation in Network Systems from Observed Equilibria” (with D. Bertsimas, V. Gupta, Q. Zhao, A. Stettner, D. Segrè), **Invited Talk**, Symposium in Honor of Erol Gelenbe, September 2015, Imperial College, London, United Kingdom.
- [A18] “Algorithmic Approaches to Personalized Health Care” (with W. Adams, T. Brisimi, T. Xu, T. Wang), **Invited Talk**, PI Meeting, NSF Smart and Connected Health Program, June 30–July 1, 2015, Washington, DC.
- [A19] “Data-Driven Cyber-Physical Model Estimation from Observed Equilibria” (with D. Bertsimas, V. Gupta, Q. Zhao, A. Stettner, D. Segrè), **Invited Talk**, Oberwolfach Mathematical Institute, February 2015, Oberwolfach, Germany.
- [A20] “Reverse Engineering Bacterial Metabolism via Inverse Optimization” (with Q. Zhao, A. Stettner, E. Reznik, and D. Segrè), **Invited talk**, INFORMS Conference, November 9–12, 2014, San Francisco, CA.

- [A21] “Predicting Hospital Admissions for Cardiac Conditions at the Boston Medical Center” (with W. Dai, T. Brisimi, V. Saligrama, T. Mela, and W. Adams), **Invited talk**, *BU-U. of Warwick Workshop on Improving Health Care System Efficiency*, November 21-22, 2013, Boston, MA.
- [A22] “A cyberphysical infrastructure for the ‘smart city’” (with C. G. Cassandras, A. Bestavros, A. Kfoury, R. X. Gao, W. B. Gong), *NSF CPS PI Meeting*, October 17-18, 2013, Washington, DC.
- [A23] “Graph-theoretic conflict resolution with applications in wireless networks and protein docking”, **Invited talk**, *Systems Control and Optimization: a workshop in honor of Professor John Tsitsiklis*, Sympi, Greece, July 2013.
- [A24] “Medication dosage control for Cardiac Surgical Patients” (with Q. Zhao), **Invited Talk**, *Control and Adaptation: A 30-Year Journey, A Workshop in honor of Petros Ioannou*, University of Cyprus, Cyprus, June 2013.
- [A25] “Algorithmic Approaches to Personalized Health Care” (with T. Brisimi, W. Dai, Q. Zhao), *NSF PI Meeting*, Smart Health & Wellbeing Program, June 4–5, 2013, Washington, DC.
- [A26] “A new distributed algorithm for side-chain repacking in protein-protein association” (with M. Moghadasi, D. Kozakov, A. Mamonov, P. Vakili, and S. Vajda), *17th Annual International Conference on Research in Computational Molecular Biology (RE-COMB)*, April 7–10, 2013, Beijing, China.
- [A27] “A new message-passing algorithm for the maximum weighted independent set with applications in wireless networks and protein docking”, *Information Theory and Applications Workshop*, February 10–15, 2013, San Diego, California.
- [A28] “Composite Hypothesis Testing Error Exponents with Applications to CBRN Release Localization” (with R. T. Locke), *Stochastic Networks Conference*, June 18–22, 2012, Cambridge, Massachusetts.
- [A29] “Inverse Optimization: A New Perspective on the Black-Litterman Model” (with V. Gupta and D. Bertsimas), *INFORMS Annual Meeting*, November 13–16, 2011, Charlotte, North Carolina.
- [A30] “Tachyphylaxis in post-cardiac surgical patients receiving bivalirudin – a retrospective dynamic study using a PKPD model” (with Thomas Edrich, Gyorgi Frenzl, and Jim Rawn), *Proceedings of the 41st Critical Care Congress, Society of Critical Care Medicine*, February 4 – 8, 2011, Houston, Texas.
- [A31] “Optimizing the Transportation System’s Response Capabilities”, (with C.G. Cassandras), DHS Science Conference, March 30–April 1, 2011, Washington, DC.
- [A32] “A Least Squares Temporal Difference Actor-critic Algorithm with Applications to Warehouse Management”, (with R. Moazzez-Estanjini), **Invited**, INFORMS Northeast Regional Conference, May 6–7, 2011, Amherst, Massachusetts.
- [A33] “Distributed Wireless Sensor Networks for Long-term surveillance missions”, (with C.G. Cassandras), **Invited**, *DOE NNSA University and Industry Technical Interchange Review Meeting (UITI 2010)*, December 7 – 9, 2010, Knoxville, Tennessee.
- [A34] “Wireless Sensor Networks for Localization and Coverage Control”, (with C.G. Cassandras), **Invited**, *DOE NNSA University and Industry Technical Interchange Review Meeting (UITI 2009)*, December 2 – 3, 2009, Clearwater Beach, Florida.
- [A35] “New Results on Distributed wireless sensor networks for long-term deployments” (with C.G. Cassandras), **Invited**, *DOE NNSA University and Industry Technical Interchange Review Meeting (UITI 2008)*, December 2 – 4, 2008, The Canyons, Utah.
- [A36] “Localization in Sensor Nets: Adventures in Decision Theory and Facility Location” (with D. Guo), **Invited**, *INFORMS Annual Meeting*, October 12–15, 2008, Washington, D.C.

- [A37] “Event-driven Sensing for Enterprise Reconfigurability and Optimization” (with C. Cassandras, A. Bestavros, R. Gao, and W. Gong), **Invited**, *INFORMS Annual Meeting*, October 12–15, 2008, Washington, D.C.
- [A38] “Integrated understanding of the metabolic and gene regulatory systems of *Shewanella oneidensis* MR-1” (with Qasim Beg, David Byrne, Michael Driscoll, Frank Juhn, Yang Shen, Jeremiah Faith, Timothy Gardner, and Daniel Segre), *108th General Meeting of the American Society of Microbiology*, June 1–5, 2008, Boston, Massachusetts.
- [A39] “Systematic identification of regulatory mapping and optimal metabolic engineering strategies in *Shewanella oneidensis* MR-1” (with D. K. Byrne, Q. K. Beg, M. E. Driscoll, F. S. Juhn, Y. Shen, J. J. Faith, D. Segre., T. S. Gardner), *Genomics: Annual Contractor-Grantee Workshop*, Department of Energy, February 10-13, 2008, Bethesda, Maryland.
- [A40] “Robust sensor network localization via composite hypothesis testing”, **Invited**, *Information Theory and Applications Workshop*, January 27 - February 1, 2008, University of California, San Diego, California.
- [A41] “Distributed wireless sensor networks for long-term deployments” (with C.G. Cassandras), **Invited**, *DOE NNSA University Conference*, November 27 - 28, 2007, Central Florida Research Park, Orlando, Florida.
- [A42] “Docking refinement by the underestimation of free energy funnels” (with Y. Shen, P. Vakili, and S. Vajda), *4th Conference on Modeling of Protein Interactions (MPI 2007)*, Sep. 30 - Oct. 2, 2007, Lawrence, Kansas.
- [A43] “A multistep approach to protein-protein docking” (with D. Kozakov, Y. Shen, R. Brenke, D. Beglov, P. Vakili, S. Vajda), *234th American Chemical Society National Meeting*, August 19-23, 2007, Boston, Massachusetts.
- [A44] “New Approaches to Protein-Protein Docking” (with D. Kozakov, R. Brenke, Y. Shen, S.R. Comeau, P. Vakili, S. Vajda), *3DSIG Structural Bioinformatics and Computational Biophysics Meeting*, in conjunction with the *Conference of the International Society for Computational Biology*, July 19-20, 2007, Vienna, Austria.
- [A45] “Statistical Anomaly Detection in Internet Traffic and Sensor Network Topology”, **Invited Plenary**, *National Colloquium for Information Systems Security Education*, June 5, 2007, Boston, MA.
- [A46] “Refinement of rigid-body protein docking predictions using semi-definite underestimation” (with Y. Shen, P. Vakili, and S. Vajda), *3rd Critical Assessment PRedicted Interaction (CAPRI) Evaluation Meeting*, April 20-21, 2007, Toronto, Canada. (Poster presentation, **awarded 1st prize**).
- [A47] “New approaches to protein-protein docking” (with S. Vajda, D. Kozakov, R. Brenke, S. R. Comeau, Y. Shen, P. Vakili), *232nd American Chemical Society National Meeting*, September 10-14, 2006, San Francisco, California.
- [A48] “Sensor Networks: Localization, Transmission Scheduling, and Energy-Aware Routing with QoS Guarantees”, **Invited**, *Workshop on Challenges and Opportunities in Distributed Sensor Networks*, Center for Nonlinear Studies, Los Alamos National Laboratory, March 9–10, 2006, Los Alamos, New Mexico.
- [A49] “Joint Transmission Scheduling and Routing for Low-Power Wireless Sensor Networks is Polynomially Solvable”, **Invited**, *Computer Communications Workshop*, October 2005, Huntington Beach, California.
- [A50] “A semi-definite programming based underestimation method for global optimization in molecular docking” (with Y. Shen, S. Vajda, and P. Vakili), *3rd Conference on Protein Interactions in Genomics*, June 26-28, 2005, Lawrence, Kansas.
- [A51] “Statistical Location Detection in Sensor Networks”, **Invited**, *Workshop on Rare events in communication networks*, EURANDOM, February 2005, Eindhoven, The Netherlands.

- [A52] “Multiservice Loss Networks: From pricing to distributed resource allocation”, **Invited**, *EURO/INFORMS International Joint Meeting*, July 6–10, 2003, Istanbul, Turkey.
- [A53] “Pricing and Congestion Control in Multiservice Loss Networks” (with Y. Liu), **Invited**, *17th IEEE Annual Computer Communications Workshop*, October 2002, Santa Fe, New Mexico.
- [A54] “Pricing of Real-Time Services in Multiservice Communication Networks” (with Y. Liu), **Invited**, *Workshop on Computer-Aided Modeling, Analysis, and Design of Communication Links and Networks (CAMAD)*, May 2002, New York City, New York.
- [A55] “Revenue Management in Multiservice Communication Networks” (with Y. Liu), **Invited**, *INFORMS Conference*, November 2001, Miami, Florida.
- [A56] “New scheduling policies for multiclass queueing networks” (with M. Caramanis and C. Su), **Invited**, *INFORMS Conference*, November 2001, Miami, Florida.
- [A57] “Target-pursuing policies for multiclass queueing networks” (with M. Caramanis and C. Su), *INFORMS 11th Applied Probability Conference*, July 2001, New York, New York, page 21.
- [A58] “Importance Sampling for the Estimation of Buffer Overflow Probabilities in Large Communication Switches” (with S. Vassilaras), *INFORMS 11th Applied Probability Conference*, July 2001, New York, New York, page 19.
- [A59] “Static Pricing in Multiservice Communication Networks” (with Y. Liu), *INFORMS 11th Applied Probability Conference*, July 2001, New York, New York, page 23.
- [A60] “Inventory Control in Supply Chains: A Large Deviations Approach” (with Y. Liu), **Invited**, *INFORMS Conference*, November 2000, San Antonio, Texas.
- [A61] “Large Deviations-based Asymptotics for Inventory Control in Make-to-Stock Manufacturing Systems and Supply Chains”, *Conference on Stochastic Networks*, University of Wisconsin-Madison, June 2000, Madison, Wisconsin.
- [A62] “On the Estimation of Effective bandwidths from Measurements” (with S. Vassilaras), **Invited**, *INFORMS Conference*, November 1999, Philadelphia, Pennsylvania.
- [A63] “Revenue Management and the Internet” (with J.N. Tsitsiklis), **Invited**, *INFORMS Conference*, November 1998, Seattle, Washington.
- [A64] “Optimal control of make-to-stock systems: A large deviations approach” (with D. Bertsimas), *INFORMS Conference*, April 1998, Montreal, Canada.
- [A65] “Revenue Management in Network Services” (with J.N. Tsitsiklis), **Invited**, *Proceedings of the Fourth INFORMS Telecommunications Conference*, March 1998, Boca Raton, Florida.
- [A66] “Congestion Probabilities and Admission control”, *Proceedings of the 9TH INFORMS Applied Probability Conference*, June 1997, Cambridge, Massachusetts, page 169.
- [A67] “On the Large Deviations Behaviour of Acyclic Single Class Networks and Multiclass Queues” (with D. Bertsimas and J.N. Tsitsiklis), **Invited**, *Royal Statistical Society Workshop on Stochastic Networks*, August 1-11, 1995, Edinburgh, U.K.
- [A68] “Branching Bandits and Klimov’s Problem” (with D. Bertsimas and J.N. Tsitsiklis), **Invited**, *Proceedings of the 8TH INFORMS Applied Probability Conference*, June 1995, Atlanta, Georgia.
- [A69] “On the Large Deviations Behaviour of Acyclic Networks of G/G/1 Queues” (with D. Bertsimas and J.N. Tsitsiklis), *Proceedings of the Third INFORMS Telecommunications Conference*, March 1995, Boca Raton, Florida.
- [A70] “Branching Bandits and Klimov’s Problem: Achievable Region and Side Constraints” (with D. Bertsimas and J.N. Tsitsiklis), *ORSA/TIMS conference*, April 1994, Boston, Massachusetts.

- [A71] “Scheduling of Multiclass Queueing Networks: Bounds on Achievable Performance” (with D. Bertsimas and J.N. Tsitsiklis), *ORSA/TIMS* conference, November 1992, San Francisco, California.

Technical Reports

- [R1] “Performance Benchmarks for Sensor Networks”, Technical Report, The Sensor Network Consortium, February 2005.
- [R2] “Efficient Resource Allocation and Yield Management in Internet Services” (with P. Kavassalis, and J.N. Tsitsiklis), Technical Report, *Internet Telephony Consortium, MIT*, 1997, Cambridge, MA.
- [R3] “Large Deviations in High Speed Communication Networks”, Technical report (Ph.D. Thesis), Laboratory for Information and Decision Systems, 1996, MIT, Cambridge, MA.
- [R4] “Scheduling of Multiclass Queueing Networks: Bounds on Achievable Performance”, Technical report (M.S. Thesis), Laboratory for Information and Decision Systems, 1993, MIT, Cambridge, MA.

Selected Invited Courses and Tutorials

- [C1] “Intro to Math Programming” (6.251/15.081), **Invited Course**, *Massachusetts Institute of Technology*, Fall 2017.
- [C2] “Introduction to Linear Programming”, **Invited Guest Lecture to Computational Biology Students**, Boston University, Boston, Massachusetts, April 2015.
- [C3] “Production Models”, **Invited Mini-Course**, Athens University of Economics and Business, Summer Session, *Executive M.S. program*, Andros, Greece, July 2000.
- [C4] “Queueing Network Models”, **Invited Mini-Course**, Athens University of Economics and Business, *Executive M.S. program*, Athens, Greece, May 1999.
- [C5] “QoS and Admission Control: Large deviations-based admission control”, **Invited Tutorial**, *Workshop on Control Methods in Communication Networks* (with V. Anantharam, T. Basar, and R. Srikant), 37th IEEE Conference on Decision and Control, December 1998, Tampa, Florida.

Selected Invited Lectures in Academia

- [L1] “Distributionally Robust Learning with Applications to Health Analytics”, **Invited Lecture**, *Workshop on Modeling, Analysis, and Control of Complex Networks and Cyber-Physical Systems (MACC)*, June 30, 2019, Ischia, Italy.
- [L2] “Distributionally Robust Learning with Applications to Health Analytics”, **Invited Seminar**, *Yale Institute for Network Science, Yale University*, April 17, 2019, New Haven, Connecticut.
- [L3] “From Data to Models and Proposed Solutions” **Invited Panel Presentation**, *Institute on Cities, Boston University*, March 26, 2019, Boston, Massachusetts.
- [L4] “Learning from Medical Data to Predict and Intervene”, **Invited Talk**, *Research on Tap, Boston University*, March 20, 2019, Boston, Massachusetts.
- [L5] “Health Analytics for Personalized Predictions and Prescriptions”, **Invited Talk**, *Boston University Data Science Day*, February 6, 2019, Boston, Massachusetts.
- [L6] “Learning Predictive Models from Observed Network Equilibria: From Transportation to Metabolic Networks”, **Invited Talk**, *Huazhong University of Science and Technology*, July 17, 2018, Wuhan, China.

- [L7] “Distributionally Robust Learning and Applications to Predictive and Prescriptive Health Analytics”, **Invited Talk**, *Huazhong University of Science and Technology*, July 17, 2018, Wuhan, China.
- [L8] “Learning Predictive Models from Observed Network Equilibria: From Transportation to Metabolic Networks”, **Invited Talk**, *Department of Automation*, Shanghai Jiatong University, July 16, 2018, Shanghai, China.
- [L9] “Distributionally Robust Learning and Applications to Predictive Health Analytics”, **Invited Talk**, *Channing Laboratory, Harvard Medical School*, May 25, 2018, Boston, Massachusetts.
- [L10] “Health Analytics for Personalized Predictions and Prescriptions”, **Invited Talk**, *Boston University Medical School*, March 28, 2018, Boston, Massachusetts.
- [L11] “Predictive and Prescriptive Analytics for Hospital Readmissions after General Surgery”, **Invited Talk**, *Digital Health Initiative*, Boston University, March 22, 2018, Boston, Massachusetts.
- [L12] “Predictive Health Analytics”, **Invited Talk**, *School of Public Health*, Boston University, November 8, 2017, Boston, Massachusetts.
- [L13] “Inverse Equilibrium Problems and Price-of-Anarchy Estimation in Transportation Networks”, **Invited Lecture**, *University of Grenoble-Alpes*, September 4, 2017, Grenoble, France.
- [L14] “Data-Driven Model Estimation from Observed Equilibria: What transportation networks and bacterial cells have in common?”, **Invited Lecture**, *School of Computing, Informatics, and Decision Systems Engineering*, Arizona State University, May 5, 2017, Phoenix, Arizona.
- [L15] “Data-Driven Price-of-Anarchy Estimation in Transportation Networks”, **Invited Lecture**, *Department of Electrical and Computer Engineering and Institute for Transportation Studies*, University of California, Berkeley, January 27, 2017, Berkeley, California.
- [L16] “Predictive Health Analytics”, **Invited Talk**, *Center for Future Technologies in Cancer*, Boston University, January 19, 2017, Boston, Massachusetts.
- [L17] “What do bacterial cells actually want and how can they collaborate with other species?”, **Invited Lecture**, *Department of Mechanical Engineering*, Massachusetts Institute of Technology, June 28, 2016, Cambridge, Massachusetts.
- [L18] “Data-Driven Model Estimation from Observed Equilibria: What transportation networks and bacterial cells have in common?”, **Invited Lecture**, *Department of Electrical and Systems Engineering*, University of Pennsylvania, June 15, 2016, Philadelphia, Pennsylvania.
- [L19] “Data-Driven Model Estimation in Biochemical Networks from Observed Equilibria”, **Invited Lecture**, *Department of Electrical and Computer Engineering*, Georgia Institute of Technology, March 8, 2016, Atlanta, Georgia.
- [L20] “Predictive Health Analytics”, **Invited Lecture**, *Department of Industrial and Systems Engineering*, Georgia Institute of Technology, March 7, 2016, Atlanta, Georgia.
- [L21] “Predictive Health Analytics”, **Invited Lecture**, *Sloan School of Management*, Massachusetts Institute of Technology, February 8, 2016, Cambridge, Massachusetts.
- [L22] “Predictive Health Analytics”, **Invited Lecture**, *LIDS Student Conference*, Massachusetts Institute of Technology, January 29, 2016, Cambridge, Massachusetts.
- [L23] “Predictive Health Analytics”, **Invited Lecture**, *LIDS Student Conference*, Massachusetts Institute of Technology, January 29, 2016, Cambridge, Massachusetts.
- [L24] “Predictive Health Analytics”, **Invited Talk**, *Boston University Data Science Symposium*, Boston University, January 22, 2016, Boston, Massachusetts.

- [L25] “Analytics Enabling “Smarter” Health Care”, **Invited Lecture**, *Department of Control*, Zhejiang University, China, April 24, 2014.
- [L26] “Conflict resolution using graphs with applications in wireless networks and protein docking”, **Invited Lecture**, *Department of Automation*, Tsinghua University, China, April 21, 2014.
- [L27] “Graph-theoretic conflict resolution with applications in wireless networks and protein docking”, **Invited Lecture**, *Institute of Informatics and Telecommunications*, National Center for Scientific Research (DEMOKRITOS), Greece, February 2014.
- [L28] “Analytics Enabling ‘Smarter’ Health Care”, **Invited Lecture**, *Department of Biomedical Engineering*, Boston University, Boston, Massachusetts, January 2014.
- [L29] “Graph-theoretic conflict resolution with applications in wireless networks and protein docking”, **Invited Lecture**, *Coordinated Sciences Laboratory*, University of Illinois, Urbana-Champaign, September 2013.
- [L30] “Graph-theoretic conflict resolution with applications in wireless networks and protein docking”, **Invited Lecture**, *KIOS Research Center*, University of Cyprus, Cyprus, June 2013.
- [L31] “Conflict resolution as an Independent Set Problem with Applications in Wireless Networks and Protein Docking”, **Invited Lecture**, *Department of Applied Analysis and Complex Dynamical Systems*, Graduate School of Informatics, Kyoto University, Kyoto, Japan, May 2013.
- [L32] “Optimization Techniques for Protein Docking”, **Invited Lecture**, *Department of Chemistry*, Boston University, Boston, Massachusetts, November 2012.
- [L33] “The Maximum Weighted Independent Set Problem and Applications”, **Invited Lecture**, *Department of Informatics*, Athens University of Economics and Business, Athens, Greece, June 28, 2012.
- [L34] “On the Maximum Weighted Independent Set with Applications in Wireless Networks and Protein Docking”, **Invited Lecture**, *Department of Electrical and Computer Engineering*, The Ohio State University, Columbus, Ohio, March 6, 2012.
- [L35] “Optimization Techniques for Protein Docking”, **Invited Lecture**, *Department of Computer Science and Telecommunications*, University of Athens, Athens, Greece, January 13, 2011.
- [L36] “Detection and Optimization Problems in Wireless Sensor Networks”, **Invited Lecture**, *Operations Research Center*, Massachusetts Institute of Technology, Cambridge, Massachusetts, February 25, 2010.
- [L37] “Design and Optimization of Wireless Sensor Networks”, **Invited Lecture**, *Department of Electrical and Computer Engineering*, National Technical University of Athens, Athens, Greece, January 20, 2010.
- [L38] “Mathematics of Statistical Localization in Wireless Sensor Networks and Related Problems”, **Invited Lecture**, *Department of Mathematics*, University of Athens, Athens, Greece, June 16, 2009.
- [L39] “A New Statistical Localization Framework for Wireless Sensor Networks”, **Invited Lecture**, *Department of Electrical and Computer Engineering*, The Ohio State University, May 29, 2009.
- [L40] “Localization with Wireless Sensor Networks” **Invited Lecture**, *Department of Mechanical Engineering*, Worcester Polytechnic Institute, March 27, 2008.
- [L41] “Protein docking by optimizing noisy funnel-like functions”, **Invited Lecture**, University of Bridgeport, Bridgeport, Connecticut, November 8, 2007.
- [L42] “Optimization of Wireless Sensor Networks”, **Invited Lecture**, *Athens Information Technology (AIT) Center*, Athens, Greece, March 12, 2007.

- [L43] “Optimization for Protein-Protein Docking”, **Invited Lecture**, *Operations Research Center*, Massachusetts Institute of Technology, November 30, 2006.
- [L44] “Optimization of Wireless Sensor Networks”, **Invited Lecture**, *Department of Electrical and Computer Engineering*, Boston University, Boston, Massachusetts, November 2006.
- [L45] “Optimization of Wireless Sensor Networks”, **Invited Lecture**, *Department of Mathematical Engineering*, Université catholique de Louvain, Louvain-la-Neuve, Belgium, October 2006.
- [L46] “Wireless Sensor Networks: A playground for optimization methodologies”, **Invited Lecture**, *Dipartimento di Ingegneria*, Univerisità degli Studi del Sannio, Benevento, Italy, September 2006.
- [L47] “Optimization Adventures in the Wonderland of Wireless Sensor Networks”, **Invited Lecture**, *Department of Electrical and Computer Engineering*, University of Connecticut, November 2005.
- [L48] “Optimizing Wireless Sensor Networks”, **Invited Lecture**, *Graduate School of Business*, Stanford University, April 2004.
- [L49] “Multi-service Communication Networks: What’s the “right” time-scale for pricing and resource allocation decisions ?”, **Invited Lecture**, *School of Business*, Columbia University, November 2003.
- [L50] “Supply Chain Inventory Control Lessons: Distributional Information Matters !”, **Invited Lecture**, *School of Business*, Columbia University, November 2003.
- [L51] “Resource Allocation in Sensor Networks”, **Invited Lecture**, *Department of Electrical and Computer Engineering*, Northwestern University, October 2003.
- [L52] “Supply Chain Inventory Control with Quality of Service Guarantees”, **Invited Lecture**, *Graduate School of Business*, University of Chicago, October 2003.
- [L53] “Multi-service Communication Networks: Resource Allocation through Pricing”, **Invited Lecture**, *Department of Electrical Engineering*, Yale University, April 2003.
- [L54] “Multi-service Communication Networks: What’s the “right” time-scale for pricing and resource allocation decisions ?”, **Invited Lecture**, *Information Systems Laboratory, Department of Electrical Engineering*, Stanford University, March 2003.
- [L55] “On the Pricing of Differentiated Internet Services: A Revenue Management Perspective”, **Invited Lecture**, *Graduate School of Industrial Administration*, Carnegie Mellon University, March 2002.
- [L56] “Inventory Control for Supply Chains with Service Level Constraints: A Large Deviations Approach”, **Invited Lecture**, *Department of Mechanical, Industrial and Manufacturing Engineering*, Northeastern University, February 2002.
- [L57] “Near-optimal charging mechanisms for multiservice communication networks”, **Invited Lecture**, *Department of Electrical and Computer Engineering*, Purdue University, October 2001.
- [L58] “Quality of Service: A Unifying Theme”, **Invited Lecture**, *Division of Engineering and Applied Sciences*, Harvard University, November 2000.
- [L59] “Estimating Effective Bandwidths”, **Invited Lecture**, *Department of Electrical and Computer Engineering*, University of Massachusetts at Amherst, November 1999.
- [L60] “QoS Provisioning in Multimedia Communication Networks”, **Invited Lecture**, *Department of Industrial Engineering and Management Sciences*, Northwestern University, June 1999.
- [L61] “Probabilistic Service Level Guarantees in Make-to-Stock Manufacturing Systems”, **Invited Lecture**, *Operations Management Seminar*, Massachusetts Institute of Technology, March 1999.

- [L62] “Congestion-Dependent Pricing of Internet Services”, **Invited Lecture**, *Operations Research Seminar*, Massachusetts Institute of Technology, March 1999.
- [L63] “Revenue Management in the Internet”, **Invited Lecture**, *Finance Seminar*, School of Management, Boston University, March 1999.
- [L64] “Admission Control in High Speed Communication Networks”, **Invited Lecture**, *Computer Science Department*, Boston University, December 1998.
- [L65] “Providing Statistical QoS in Multimedia Networks (Effective bandwidths and beyond)”, **Invited Lecture**, *Center for Satellite and Hybrid Communication Networks*, University of Maryland at College Park, April 1998, Maryland.
- [L66] “Large Deviations and their applications in the traffic management of High-Speed Communication Networks”, **Invited Lecture**, *Networking Seminar, Department of Electrical and Computer Engineering*, University of Michigan, October 1996, Ann Arbor, Michigan.

Selected Invited Lectures in Industry and Government Agencies

- [L67] “Data-Driven Models of Human Behavior in Transportation Systems”, (with C.G. Cassandras), **Invited Talk**, NSF CPS PI Meeting, November 14, 2017, Arlington, Virginia.
- [L68] “Predictive Health Analytics”, **Invited Talk**, *Philips Innovation Research Center*, January 18, 2017, Cambridge, Massachusetts.
- [L69] “Optimal Selection of Cell Metabolic Functionality”, **Invited Talk**, ARO Metabolic MURI Meeting, University of Texas, Austin, October 2016.
- [L70] “Predicting hospitalizations based on Electronic Health Records”, **Invited Talk**, to a French Delegation in the U.S. from the French National Assembly and the health care system, led by the European Social Protection Observatory (OEPS), July 13, 2016, Boston Medical Center, Boston, Massachusetts.
- [L71] “Predictive Health Analytics”, **Invited Lecture**, *Edith Nourse Rogers Memorial Veterans Hospital*, March 4, 2016, Bedford, Massachusetts.
- [L72] “Learning and Optimizing Animal Policies for Navigating Forest-like Terrains”, **Invited Talk**, ONR MURI Meeting, University of Washington, Seattle, October 2015.
- [L73] “Optimization Techniques for Animal-Inspired Trajectories”, **Invited Talk**, ONR MURI Meeting, University of Maryland, College Park, September 2014.
- [L74] “Anomaly detection methods for cyber-security awareness”, **Invited Talk**, Army Research Laboratory, September 2014, Adelphi, Maryland.
- [L75] “Inverse FBA: Learning Cellular Objectives from Fluxes”, **Invited Talk**, ARO Metabolic MURI Meeting, University of Texas, Austin, May 2014.
- [L76] “Turning Constraint-Based Modeling on Its Head: Learning Cellular Objectives from Fluxes”, **Invited Talk**, ARO Metabolic MURI Meeting, University of Texas, Austin, June 2013.
- [L77] “Algorithmic approaches to personalized health care”, **Invited Talk**, Brigham and Women’s Hospital, Boston, MA, May 2013.
- [L78] “Large-Scale Methods for Bio-Inspired Robot Motion Planning and Control”, **Invited Talk**, ONR Airfoils MURI Meeting, ONR, Washington, DC, April 2013.
- [L79] “Predicting Hospitalization from Electronic Health Records”, **Invited Talk**, Boston Medical Center, Boston, November 2012.
- [L80] “Predicting Bacterial Growth Conditions via Inverse Optimization and Machine Learning Techniques”, **Invited Talk**, ARO MURI Meeting, University of Texas, Austin, October 2012.

- [L81] “A BU Toolbox for Cyber Anomaly Detection”, **Invited Talk**, Army Research Laboratory, October 2012, Adelphi, Maryland.
- [L82] “Data Harvesting using Mobile Wireless Sensor Networks”, **Invited Talk**, Oak Ridge Laboratory, September 2012, Oak Ridge, Tennessee.
- [L83] “Energy Management of Wireless Sensor Networks”, **Invited Talk**, Oak Ridge Laboratory, September 2012, Oak Ridge, Tennessee.
- [L84] “A Market-Based Mechanism Enabling Buildings to Provide Demand Side Regulation Service”, **Invited Talk**, Oak Ridge Laboratory, September 2012, Oak Ridge, Tennessee.
- [L85] “Optimized Strategies for Bio-Inspired Robot Motion Planning and Control”, **Invited Talk**, ONR MURI Meeting, University of Maryland, College Park, June 2012.
- [L86] “A Coordinated Approach to Cyber-Situation Awareness based on Traffic Anomaly Detection”, **Invited Talk**, Army Research Laboratory, November 2011, Adelphi, Maryland.
- [L87] “Anomaly Detection for Data Security and Algorithms for Disease Prevention and Management”, EMC Corp.-Boston University Meeting, January 2011, Boston, Massachusetts.
- [L88] “AIRFOILS: Real-time Optimization for Animal Inspired Agile Flight”, **Invited Talk**, ONR MURI Kickoff Meeting, University of Washington, Seattle, October 7, 2010.
- [L89] “On Energy Management in Sensor Networks”, **Invited Talk**, Ember Inc.-Boston University Meeting, May 2010, Boston, Massachusetts.
- [L90] “Statistical Anomaly Detection with Applications in Cybersecurity”, **Invited Lecture**, *Information Science & Technology Center*, Los Alamos National Laboratory, March 24, 2010, Los Alamos, New Mexico.
- [L91] “On Statistical Anomaly Detection of Cyber-Security Threats”, **Invited Talk**, Army Research Laboratory, October 2009, Adelphi, Maryland.
- [L92] “Wireless Sensor Networks: Promises and Challenges”, **Invited Talk**, NECINA Wireless Special Interest Group, June 2008, Waltham, Massachusetts.
- [L93] “Localization of Hazardous Sources in Sensor Fields”, DOE Review meeting, June 2008, Boston, Massachusetts.
- [L94] “Next Generation Localization in Wireless Sensor Networks”, *The Sensor Network Consortium*, May 2008, Boston, Massachusetts.
- [L95] “Control and Optimization of Wireless Sensor Networks”, **Invited Lecture**, *Los Alamos National Laboratory*, March 2008, Los Alamos, New Mexico.
- [L96] “Minimal Energy Routing with Latency QoS Guarantees”, *The Sensor Network Consortium*, November 2006, Boston, Massachusetts.
- [L97] “Sensor networks and applications in homeland security”, **Invited Talk**, Symposium on “UK Technologies for Security” organized by the United Kingdom government, October 30, 2006, *UK Consulate*, Boston, Massachusetts.
- [L98] “The Center for Information and Systems Engineering and the Sensor Networks Consortium”, **Invited Talk**, *Holst Centre*, IMEC Netherlands, October 2006, Eindhoven, Netherlands.
- [L99] “Systems-level opportunities for much needed efficiency gains in sensor networks”, **Invited Talk**, *ARRM06 Industry & IMEC Review Meeting*, October 2006, Leuven, Belgium.
- [L100] “Localization with Sensor Networks and related challenges”, **Invited Talk**, *United Technologies Research Center*, October 2006, Hartford, Connecticut.

- [L101] “Energy-Aware Sensor Network Routing with QoS Guarantees”, **Invited Talk**, *MITRE Corp.*, June 2006, Bedford, Massachusetts.
- [L102] “The role of optimization in sensor networks: Localization and energy-aware routing”, **Invited Talk**, *Netted Sensors Workshop*, October 2005, MITRE Corp., McLean, Virginia.
- [L103] “Research Challenges in RFIDs and Sensor Networks”, **Invited Panelist**, *IDC RFID Update Conference*, June 2005, Boston, Massachusetts.
- [L104] “Localization for Sensor Networks: Accurate or Robust (or both) ?”, *The Sensor Network Consortium*, May 2005, Boston, Massachusetts.
- [L105] “Performance evaluation of Sensor Networks”, *The Sensor Network Consortium*, May 2005, Boston, Massachusetts.
- [L106] “Statistical Location Detection and Optimal Routing in Sensor Networks”, **Invited Talk**, *General Electric Labs*, January 2005, Niskayuna, New York.
- [L107] “Establishing the Sensor Network Consortium”, *Inaugural Meeting, The Sensor Network Consortium*, November 2004, Boston, Massachusetts.
- [L108] “Sensor Networks Applications in Robot Navigation”, **Invited Talk**, *Aberdeen Proving Ground*, May 2004, Aberdeen, Maryland.
- [L109] “Military Supply Chains: A 10,000-Foot View of Algorithmic and Methodological Challenges”, **Invited Lecture**, *Manufacturing Engineering Emerging Technologies Seminar, Boston University*, November 2002, Boston, Massachusetts.
- [L110] “Inventory Control in Supply Chains”, **Invited Lecture**, *Solectron*, August 2002, North Andover, Massachusetts.
- [L111] “Pricing Differentiated Internet Services”, **Invited Lecture**, *Sun Microsystems Labs*, April 2002, Burlington, Massachusetts.
- [L112] “Optimizing Multiservice Communication Networks”, Genuity-BU meeting, March 2002, Boston, Massachusetts.
- [L113] “Pricing the Internet: Can simplicity induce optimality ?”, **Invited Lecture**, *IBM T.J. Watson Research Center, Mathematical Sciences*, March 2001, Yorktown Heights, New York.
- [L114] “Quality of Service in Communication and Manufacturing Systems”, **Invited Lecture**, *Scientific Computing Group, Los Alamos National Laboratory*, February 2001, Los Alamos, New Mexico.
- [L115] “Quick Simulation for the Estimation of the Cell Loss Probability in Large Switches”, **Invited Talk**, *Nokia Research Center*, February 2001, Boston, Massachusetts.
- [L116] “Leaky Bucket Control”, **Invited Talk**, *Nokia Research Center*, June 2000, Boston, Massachusetts.
- [L117] “Resource Allocation Issues in Multiservice Communication Networks”, **Invited Talk**, *Nokia Research Center*, May 1999, Boston, Massachusetts.
- [L118] “Customer-oriented Supply Chain Management”, *Industrial Advisory Board Meeting, Dept. of Manufacturing Engineering, Boston University*, September 1998, Boston, Massachusetts.
- [L119] “Resource and Revenue Management in Internet Services”, **Invited Talk**, *Workshop of the MIT Internet Telephony Consortium*, June 1998, Helsinki, Finland.
- [L120] “Quality of Service Provisioning in Multimedia Communication Networks”, **Invited Talk**, *Basic Research Institute in the Mathematical Sciences (BRIMS), Hewlett-Packard Labs*, June 1997, Bristol, U.K.
- [L121] “Efficient Resource Allocation and Revenue Management of Internet Services”, **Invited Talk**, *Workshop of the MIT Internet Telephony Consortium*, June 1997, Bristol, U.K.

- [L122] “Right on Schedule”, *Industrial Advisory Board Meeting*, Dept. of Manufacturing Engineering, Boston University, March 1997, Boston, Massachusetts.
- [L123] “Yield Management and Internet Telephony”, *MIT Internet Telephony Consortium*, MIT, November 1996, Cambridge, Massachusetts.

Other Selected Presentations

- [L124] “More Data, More Problems?”, **Invited Panelist**, *MEDSTART Conference*, Tufts Medical School, December 2, 2017, Boston, Massachusetts.
- [L125] “Detecting Data Exfiltration from a Networked Infrastructure” (with Jing Zhang), *Advanced Cyber Security Center, Annual Conference*, November 2016, Boston, Massachusetts.
- [L126] “Algorithmic Approaches to Personalized Health Care” (with T. Brisimi, W. Dai, T. Wang, T. Xu), *2016 New England Machine Learning day*, Poster Presentation, Microsoft Research, May 2016, Cambridge, Massachusetts.
- [L127] “Predicting hospital re-admissions for surgical patients” (with T. Wang, T. Xu, T. Brisimi, G. Kasotakis), *5th Annual Translational Research Symposium*, “In Memory of David C. Seldin”, Poster Presentation, Boston University, March 28, 2016.
- [L128] “Botnet Detection Using Social Graph Analysis” (with J. Wang), Poster presentation, 12th Annual National Academies Keck Futures Initiative (NAKFI) conference, “Collective Behavior: From Cells to Societies”, National Academies, November 2014, Irvine, California.
- [L129] “Turning Constraint-Based Modeling on Its Head: Learning Cellular Objectives from Fluxes” (with Q. Zhao, D. Segre, A. Stettner), Poster presentation, Scholars Day, April 2014, (**awarded the CISE 1st Prize**).
- [L130] “Robust Anomaly Detection in Dynamic Networks” (with J. Wang), Poster presentation, Scholars Day, April 2014, (**awarded the CISE 2nd Prize**).
- [L131] “A multi-stage Monte Carlo minimization-based approach to the protein docking refinement problem” (with M. Moghdasi, A. Mamonov, P. Vakili, S. Vajda, D. Kozakov), Poster presentation, Scholars Day, April 2014, (**awarded a CISE honorable mention**).
- [L132] “Modeling and Prediction of Heart-Related Hospitalization Using Electronic Health Records Data” (with W. Dai, T. Brisimi, and V. Saligrama), Poster presentation, Scholars Day, April 2014, (**awarded a CISE honorable mention**).
- [L133] “Flexible Refinement of Protein-Ligand Docking on Manifolds” (with H. Mirzaei, D. Kozakov, S. Vajda, P. Vakili), Poster presentation, Boston University Science and Engineering Day, April 2013 (**awarded a CISE 2nd Prize**).
- [L134] “A New Approach to Rigid-Body Minimization with Applications to Molecular Docking” (with H. Mirzaei, D. Kozakov, S. Vajda, P. Vakili), Poster presentation, Boston University Science and Engineering Day, April 2012 (**awarded a CISE Honorable Mention**).
- [L135] “The Capacity of Sparse Ad Hoc Networks under Controlled Mobility” (with Reza Moazzez-Estanjini), Poster presentation, Boston University Science and Engineering Day, March 2010 (**awarded a CISE Honorable Mention**).
- [L136] “SDU: Protein docking by the underestimation of binding free energy funnels” (with Y. Shen, S. Vajda, P. Vakili), Poster presentation, *4th Conference on Modeling of Protein Interactions (MPI 2007)*, Sep. 30 - Oct. 2, 2007, Lawrence, Kansas.
- [L137] “A Semi-Definite programming-based Underestimation method for global optimization in molecular docking” (with Y. Shen, S. Vajda, P. Vakili), Poster presentation, Boston University Science and Engineering Day, March 2005 (**awarded the CISE first prize**).

- [L138] “Pricing and Resource Allocation in Multiservice Broadband Communication Networks”, **Invited Talk**, NSF PI Workshop, Networking Research Program, November 2000, NSF Division of Advanced Networking Infrastructure and Research, Irvine, California.
- [L139] “Controlling Congestion in Multimedia Networks”, **Invited Talk**, 1997 George E. Nicholson paper competition (**awarded 2nd prize**), *INFORMS* conference, May 1997, San Diego, California.

Theses Supervised

- Ph.D. Theses:

- [TP1] Jing Zhang, “Detection and Optimization Problems with Applications in Smart Cities”, Ph.D. in Systems Engineering, Boston University, September 2017.
- [TP2] Theodora Brisimi, “Centralized and Distributed Learning Methods for Predictive Health Analytics”, Ph.D. in Electrical and Computer Engineering, Boston University, September 2017.
- [TP3] Qi Zhao, “Control and Optimization Methods in Biomedical Systems: From Cells to Humans”, Ph.D. in Systems Engineering, Boston University, May 2016.
- [TP4] Mohammad Moghadasi, “Optimization methods for side-chain positioning and macromolecular docking”, Ph.D. in Systems Engineering, Boston University, May 2015.
- [TP5] Wuyang Dai, “Detection and prediction problems with applications in personalized health care”, Ph.D. in Electrical and Computer Engineering, Boston University, January 2015.
- [TP6] Jing Wang, “Anomaly detection and dynamic decision making for stochastic systems”, Ph.D. in Systems Engineering, Boston University, January 2015.
- [TP7] Fuzhuo Huang, “On the maximum weighed independent set problem with applications in wireless sensor networks”, Ph.D. in Systems Engineering, Boston University, January 2013.
- [TP8] Yingwei Lin, “Optimized dynamic vehicle routing policies with applications”, Ph.D. in Electrical and Computer Engineering, Boston University, May 2012.
- [TP9] Ronald Taylor Locke, “Anomaly detection with applications in environmental and cyber security”, Ph.D. in Systems Engineering, Boston University, May 2012.
- [TP10] Reza Moazzez Estanjini, “Vehicle Scheduling and Routing For Data Transport in Wireless Sensor Networks”, Ph.D. in Systems Engineering, Boston University, May 2011.
- [TP11] Binbin Li, “Optimizing Energy Consumption: From Wireless Sensor Networks to Large “Smart” Buildings”, Ph.D. in Systems Engineering, Boston University, May 2011.
- [TP12] Yin Chen, “From Networks to Proteins: Modeling and Optimization with Markovian Models”, Ph.D. in Systems Engineering, Boston University, January 2011.
- [TP13] Ruomin Wu, “Maximum lifetime routing and resource allocation in wireless sensor networks”, Ph.D. in Systems Engineering, Boston University, January 2011.
- [TP14] Xiangdong Song, “Scheduled Multiple Access Control for Wireless Sensor Networks”, Ph.D. in Systems Engineering, Boston University, January 2010.
- [TP15] Dong Guo, “A New Statistical Localization Framework for Wireless Sensor Networks”, Ph.D. in Systems Engineering, Boston University, May 2009.
- [TP16] Seong-Cheol Kang, “Robust Linear Optimization under Distributional Information”, Ph.D. in Systems Engineering, Boston University, January 2008.
- [TP17] Yang Shen, “Global Optimization Methods for Protein Interaction Prediction”, Ph.D. in Systems Engineering, Boston University, January 2008.
- [TP18] Wei Lai, “Optimizing Wireless Sensor Networks”, Ph.D. in Systems Engineering, Boston University, January 2007.

- [TP19] Jian Shao, “Optimal Resource allocation in multi-class service systems using pricing”, Ph.D. in Systems Engineering, Boston University, January 2005.
- [TP20] Chang Su, “Target-pursuing policies for scheduling and routing in multiclass queuing networks”, Ph.D. in Systems Engineering, Boston University, May 2004.
- [TP21] Yong Liu, “Pricing and Resource Allocation in Communication Networks and Supply Chains”, Ph.D. in Systems Engineering, Boston University, May 2002.
- [TP22] S. Vassilaras, “Measurement-based Quality of Service Provisioning in Multimedia Telecommunication Networks”, Ph.D. in Electrical and Computer Engineering, Boston University, January 2002.
- M.S. Theses:
 - [TM1] Yimin Yu, “On transmission scheduling in wireless networks and route discovery for a fleet of robots”, M.S. in Manufacturing Engineering, Boston University, September 2004.
 - [TM2] Ying Liu, “Analysis of Regulation Mechanisms in Communication Networks”, M.S. in Manufacturing Engineering, Boston University, January 2003.
 - [TM3] H. Huang, “Yield Management in the Manufacturing and Service Industries”, M.S. in Manufacturing Engineering, Boston University, January 1998.

Postdoctoral Students
Supervised

- [PD1] Chuangchuan Sun, 2018–present.
- [PD2] Shi Pu, 2018–present.
- [PD3] Panagiotis Andrianesis, 2017–present.
- [PD4] Xiangyu Meng, 2017–2019.
- [PD5] Manjesh Kumar Hanawal, 2013–2015.
- [PD6] Armin Ataei, 2013–2015.
- [PD7] Artem Mamonov, 2012–2014.
- [PD8] Ebrahim Nasrabadi, 2012–2013.
- [PD9] Rezaul Alam Chowdhury, 2012–2013.
- [PD10] Keyong Li, 2007–2010.
- [PD11] Yang Shen, 2008.