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Positions

Assistant Professor, Department of Mechanical and Aerospace Engineering University of California, Irvine, CA	Jul 2014 - present
UC President's Postdoctoral Fellow University of California, San Diego, CA	Jan 2012 - Jun 2014
Senior Research Engineer SySense Inc., El Segundo, CA	Jun 2009 - Sep 2010

Education

Ph.D. in Mechanical and Aerospace Engineering University of California, Irvine, CA	Jun 2009
M.Sc. in Aerospace Engineering, Flight Dynamics and Control Sharif University of Technology, Iran	Feb 2004
B.S. in Aerospace Engineering Sharif University of Technology, Iran	Jun 2001

Research Interest

Distributed optimization, estimation and consensus algorithms in networked systems; Systems and control; Multi-agent systems; Cooperative control; Cooperative robotics; Aircraft dynamics and control; Controller design for systems with bounded actuators

Invited Talks

Nasa Jet Propulsion Laboratory, Robotic Section, Pasadena, CA	Mar. 2016
Center for Control, Dynamical-Systems, and Computation, University of California, Santa Barbara, CA	Jan. 2015
RSS Workshop: Distributed Control and Estimation for Robotic Vehicle Networks, University of California, Berkeley, CA	Jul. 2014
ME Seminar, University of Minnesota, Twin Cities, MN	Apr. 2014
ME Seminar, University of California, Merced, CA	Mar. 2014
MAE Seminar, University of California, Davis, CA	Mar. 2014
MAE Seminar, University of California, Irvine, CA	Jan. 2014
MAE Seminar, University of California, Irvine, CA	May. 2013
UC President's Postdoctoral Fellowship Academic Retreat, UCLA Lake Arrowhead	Oct. 2012

Invited Talks– cont’d

Southern California Control Workshop, University of California, San Diego, CA	Nov. 2012
Southern California Control Workshop, University of California, Irvine, CA	Nov. 2009
Zonta International Foundation, San Diego, CA	Jan. 2009
MAE Seminar, University of California, Irvine, CA	Feb. 2008
MAE Seminar, University of California, Irvine, CA	Jan. 2007

Publications

Manuscripts listed in inverse chronological order.

• Journal papers

- [J11] M. Zarei-Jalalabadi, Solmaz S. Kia, S. M. Malaek, (2017) “Distributed optimal in-network resource allocation algorithm design via a control theoretic approach”, Signal Processing, under review.
- [J10] Solmaz S. Kia, (2017) “Distributed optimal in-network resource allocation algorithm design via a control theoretic approach”, Control Systems & Control Letters, under review.
- [J9] Solmaz S. Kia, Steve Rounds, Sonia Martinez, (2016) “Cooperative localization for mobile agents: a recursive decentralized algorithm based on Kalman filter decoupling”, Control System Magazine, 36(2)-86-101.
- [J8] Solmaz S. Kia, Jorge Cortes, Sonia Martinez, (2015) “Distributed event-triggered communication for dynamic average consensus in networked systems”, Automatica, 59(9): 112–119
- [J7] Solmaz S. Kia, Jorge Cortes, Sonia Martinez, (2015) “Distributed Convex Optimization via Continuous-time Coordination Algorithms with Discrete-time Communication,” Automatica, 55(5): 254–264
- [J6] Solmaz S. Kia, Jorge Cortes, Sonia Martinez, (2015), “Dynamic Average Consensus under Limited Control Authority and Privacy Requirements,” International Journal of Robust and Nonlinear Control, 25:1941–1966
- [J5] Solmaz Sajjadi-Kia, Faryar Jabbari, (2013), “Controllers for Linear System with Bounded Actuators: Slab Scheduling and Anti-windup,” Automatica, 49(3):762–769
- [J4] Solmaz Sajjadi-Kia, Faryar Jabbari, (2012), “On Bounded Real Matrix Inequality Dilation,” International Journal of Control, 58(10):1593–1601
- [J3] Solmaz Sajjadi-Kia, Faryar Jabbari, (2012), “Modified Dynamic Anti-windup through Deferral of Activation,” International Journal of Robust and Nonlinear Control, 22(15):1661–1673
- [J2] Solmaz Sajjadi-Kia, Faryar Jabbari, (2011), “Multi-stage Anti-windup Compensation for Open-loop Stable Plants,” IEEE Transaction on Automatic Control, 56(9):2166–2172
- [J1] Solmaz Sajjadi-Kia, Faryar Jabbari, (2009), “Modified Anti-windup Compensators for Stable Plants,” IEEE Transaction on Automatic Control, 54(8):1934–1939

• Journal papers in preparation

- [P1] Solmaz S. Kia, and Sonia Martinez “A partially decentralized EKF scheme for cooperative localization over unreliable communication links”, under preparation for IEEE Tran. on Robotics (preprint available at <https://arxiv.org/pdf/1608.00609v1.pdf>)
- [P2] H. Moradian, Solmaz S. Kia, “Dynamic average consensus in the presences of commensurate communication delay”, under preparation for International Journal of Robust and Nonlinear Control
- [P3] Solmaz S. Kia, “Distributed optimal resource allocation subject to multiple demands”, under preparation for Automatica

• **Peer-reviewed conference papers**

- [C29] M. Sadeghi Reineh, Solmaz S. Kia, F. Jabbari (2017), “Anti-windup designs for systems with amplitude and rate bounded actuators”, 20th IFAC World Congress, submitted.
- [C278] H. Moradian, Solmaz S. Kia, (2017), “Dynamic average consensus in the presence of communication delay over directed graph topologies”, American Control Conference, Seattle, WA, submitted
- [C27] Solmaz S. Kia, (2017), “An augmented Lagrangian distributed algorithm for an in-network optimal resource allocation problem”, American Control Conference, Seattle, WA, submitted
- [C26] Jianan Zhu, Solmaz S. Kia (2017), “Consistent loosely coupled decentralized cooperative navigation for team of mobile agents”, ION’s International Technical Meeting , to appear.
- [C25] R. Asadi, Solmaz S. Kia, A. Regan (2016) “Cycle basis distributed ADMM solution for optimal network flow problem over bi-connected graphs”, 54th Annual Allerton Conference on Communication, Control, and Computing, Monticello, IL
- [C24] Solmaz S. Kia, (2016), “Distributed optimal resource allocation over networked systems and use of an epsilon-exact penalty function”, IEEE Control and Decision Conference, Riverside, CA
- [C23] M. Sadeghi Reineh, Solmaz S. Kia, F. Jabbari (2016), “Multi-stage anti-windup for LTI systems with actuator magnitude and rate saturation, “A distributed dynamical solver for an optimal resource allocation problem over networked systems”, Pro. of American Control Conference, Boston, MA
- [C22] Solmaz S. Kia, (2015), “A distributed dynamical solver for an optimal resource allocation problem over networked systems”, Pro. of IEEE Control and Decision Conference, Kyoto, Japan
- [C21] Vu Dinh, Solmaz S. Kia, (2015), “A Server-Client Based Distributed Processing for an Unscented Kalman Filter for Cooperative Localization”, Pro. IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems , San Diego, CA
- [C20] Solmaz S. Kia, Stephen Rounds, Sonia Martinez (2015), “Cooperative Localization under Message Dropouts via a Partially Decentralized EKF Scheme”, Pro. of IEEE International Conference on Robotics and Automation, Seattle, WA
- [C19] Solmaz S. Kia, Jorge Cortes, Sonia Martinez (2014), “Dynamic Average Consensus with Distributed Event-triggered Communication”, Pro. of IEEE Control and Decision Conference, Los Angeles, CA
- [C18] Solmaz S. Kia, and Sonia Martinez, (2014), “A Centralized-equivalent Decentralized Implementation of Extended Kalman Filters for Cooperative Localization”, Pro. of IEEE/RSJ International Conference on Intelligent Robots and Systems, Chicago, IL
- [C17] Solmaz S. Kia, Jorge Cortes, and Sonia Martinez, (2014), “Continuous-time Convex Optimization: Discrete-time Communication and Privacy Preservation,” Pro. of American Control Conference, Portland, OR (**best paper presentation in the session**)
- [C16] Solmaz S. Kia, Jorge Cortes, and Sonia Martinez, (2013), “Saturation-tolerant Average Consensus with Controllable Rates of Convergence,” Pro. of SIAM Conference on Control and Its Applications, San Diego, CA (**invited paper**)
- [C15] Solmaz S. Kia, Jorge Cortes, and Sonia Martinez, (2013), “Singularly Perturbed Algorithms for Dynamic Average Consensus,” Proc. of European Control Conference, Zurich, Switzerland
- [C14] Iman Alizadeh, Solmaz Sajjadi-Kia, and Benjamin Villac, (2011), “Low-Thrust Adaptive Guidance Scheme Accounting for Engine Performance Degradation,” Pro. of AAS/AIAA Astrodynamics Specialist Conference, Girdwood, AK
- [C13] Solmaz Sajjadi-Kia, Faryar Jabbari, (2011), “Anti-windup with Slab-Based Scheduling for Systems with Bounded Actuators,” Pro. of IFAC World Congress, Milan, Italy (**invited paper**)
- [C12] Solmaz Sajjadi-Kia, Sung M. Kang, Jason L. Speyer, (2010), “Adaptive Indirect Adaptive Control for Systems with Unknown or Varying Dynamics”, Pro. of AIAA Guidance, Navigation and Control Conference and Exhibit, Toronto, Canada
- [C11] Solmaz Sajjadi-Kia, Faryar Jabbari, (2010), “Multiple Stage Anti-windup Augmentation Synthesis for Open-loop Stable Plants,” Pro. of IEEE Conference on Decision and Control, Atlanta, GA

- [C10] Solmaz Sajjadi-Kia, Faryar Jabbari, (2010), “Scheduled Static Anti-windup Augmentation Synthesis for Open-loop Stable Plants,” Pro. American Control Conference, Baltimore, MD (**invited paper**)
- [C9] Solmaz Sajjadi-Kia, Faryar Jabbari, (2009), “Modified Anti-windup Compensators for Stable Plants: Dynamic Anti-windup Case,” Pro. of IEEE Conference on Decision and Control, Shanghai, P.R. China
- [C8] Faryar Jabbari, Solmaz Sajjadi-Kia, (2009), “Scheduled Controllers for Linear Systems with Bounded Actuators: Slab Condition,” Pro. of American Control Conference, St. Louis, MO
- [C7] Solmaz Sajjadi-Kia, Faryar Jabbari, (2008), “Modified Anti-windup Compensators for Stable Linear Systems,” Pro. of American Control Conference, Seattle, WA
- [C6] Solmaz Sajjadi-Kia, Faryar Jabbari, (2007), “Scheduling in Antiwindup Controllers: Output Feedback Case,” Pro. of IEEE Conference on Decision and Control, New Orleans, LA
- [C5] Solmaz Sajjadi-Kia, Faryar Jabbari, (2007), “Dilated Matrix Inequalities for Control Design in Systems with Bounded Actuators,” Pro. of IEEE Conference on Decision and Control, New Orleans, LA
- [C4] Solmaz Sajjadi-Kia, Faryar Jabbari, (2007), “Combining Anti-windup and Oversaturation,” Pro. of AIAA Guidance, Navigation and Control Conference and Exhibit, Hilton Head, SC
- [C3] Solmaz Sajjadi-Kia, Albert Farre-Gabernet, Faryar Jabbari, (2007), “Scheduled Anti-windup Controllers for Application to Aircraft in Unstable Operating Conditions,” Pro. of AIAA Guidance, Navigation and Control Conference and Exhibit, Hilton Head, SC
- [C2] Solmaz Sajjadi-Kia, Faryar Jabbari, (2007), “Use of Scheduling for Anti-windup Controller Design,” Pro. of American Control Conference, New York, NY, (**best paper in the session**)
- [C1] S. M. Malaek, Solmaz Sajjadi Kia, (2004), “Effects of Human Pilot Energy Expenditure on Pilot Evaluation of Aircraft Handling Qualities,” Pro. of AIAA Atmospheric Flight Mechanics Conference and Exhibit, Providence, RI

Research Awards and Honors

Samueli Faculty Career Development Professorship award, University of California Irvine	2014-2017
University of California Presidential Postdoctoral Fellowship	2012-2014
Zonta International Emelia Earhart Fellowship for Women in Aviation	2008
Graduate Dean’s Dissertation Fellowship, University of California at Irvine	2009
Holmes Endowed Fellowship, University of California Irvine	2008-2009
Irene Goldsmith Scholarship, Aerospace Engineering Department, University of Kansas	2004-2005
Honored B.S. Student Award, Sharif University of Technology (Rank 1 st in Aerospace Eng. Dept.)	2001

Professional Service

- **Technical Manuscript Reviewer:** IEEE Transaction on Automatic Control; IEEE Transaction on Control of Network Systems; IEEE Transaction on Information Theory; IEEE Control Systems Magazine; Automatica, the Journal of IFAC, the International Federation of Automatic Control; International Journal of Robust and Nonlinear Control; Systems & Control Letters; European Journal of Control; International Journal of Control; IET Control Theory & Applications; American Control Conference; IEEE Conference on Decision and Control; IEEE International Conference on Robotics and Automation; IEEE/RSJ International Conference on Intelligent Robots and Systems; IEEE International Conference on Multi-sensor Fusion and Integration for Intelligent Systems; World Congress of the International Federation of Automatic Control (IFAC); IFAC Symposium on Robust Control Design; European Control Conference; International Symposium on Mathematical Theory of Networks and Systems; IEEE Multi-Conference on Systems and Control; Indian Control Conference

- **Grant Proposal Reviewer:** National Science Foundation (NSF) –Civil, Mechanical and Manufacturing Innovation (CMMI).
- **Program and scientific committees:** Associate Editor for Contributed Papers to the IEEE Control System Society; Organizing committee member of 2016, 2017 SoCal Robotics Symposium; ACM/IEEE International Conference on Cyber-Physical Systems, 2015, 2016; RSS Workshop: Distributed Control and Estimation for Robotic Vehicle Networks, 2014.
- **Session chair:** IEEE Conference on Decision and Control, 2015; IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems, 2015; Southern California Nonlinear Control Workshop, fall 2014, 2015; SIAM Conference on Control and Its Applications, 2013; American Control Conference, 2010.

University and Department Service

- Member of Graduate Admissions Working Group, Graduates studies Committee (2015-present)
- Member of Undergraduate Studies Committee (2014–present)
- MAE Seminar Coordinator (2014 – 2015)
- Graduate Committee Service:

. Seyyed Ahmad Razavi Majomard	UC Irvine, CS	Ph.D. Qualifying Exam Committee, 2016
. Reza Asadi	UC Irvine, CS	Ph.D. Qualifying Exam Committee, 2016
. Sujit Rokka Chhetri	UC Irvine, ECE	Ph.D. Qualifying Exam Committee, 2016
. Ryan Muoio	UC Irvine, MAE	M.Sc. Thesis Committee, 2016
. Maryam Sadeghi Reineh	UC Irvine, MAE	Ph.D. Qualifying Exam Committee, 2016
. Kai Ding	UC Irvine, MAE	Ph.D. Qualifying Exam Committee, 2015
. Marc Julia Carrillo	UC Irvine, MAE	M.Sc. Thesis Committee, 2015
. Adria Segarra Torne	UC Irvine, MAE	M.Sc. Thesis Committee, 2015
. Alessandro Bobmelli	UC Irvine, MAE	Ph.D. Qualifying Exam Committee, 2014

Outreach Activities

- Faculty mentor for University of California Presidential Postdoctoral Fellowship (UCPPF) Program, summer 2014-present
- Board member for University of California Louis Stokes Alliance for Minority participation (CAMP), winter 2015-present
- Panelist on UCI ADVANCE office workshop on the UC President’s Postdoctoral Fellowship Program, fall 2015
- Mentor/advisor for Summer Training Academy for Research in the Sciences (STARS) program, 2012, 2013.
- Mentor/advisor for national FIRST Robotic competition group of Mission Bay high school, San Diego, winter 2013.
- Volunteer mentor in UCI Graduate International Mentoring Program; helping five new international graduate students in transition to the UCI campus and Irvine communities, 2008

Teaching Activities

Graduate courses: MAE 270A Linear systems I (UCI, fall 14, 15); MAE 274 Optimal control (UCI, spring 16).
Undergraduate courses : MAE 80 Dynamics (UCI, winter 15, 16, summer 08, 09, 10, 11).

Student Supervision

Graduate students

- Hossein Moradian (UCI MAE, Ph.D. student, fall 2016-present)
- Amirhossein Karimi (UCI MAE, Ph.D. student, summer 2016-present)
- Navid Rezazadeh (UCI MAE, Ph.D. student, summer 2016-present)
- Jianan Zhu (UCI MAE, Ph.D. student, spring 2016-present)
- Reza Asadi (UCI CS, Ph.D. student, fall 2015-present) [joint with Prof. Amelia Regan]
- Maryam Sadeghi Reineh (UCI MAE, Ph.D. student, fall 2014-present) [joint with Prof. Frayar Jabbari]
- Pan Wang (UCI MAE, M.Sc. student, winter 2016-present)
- Tianxi He (UCI MAE, M.Sc. student, winter 2016-present)
- Xiaogang Ni (UCI MAE, M.Sc. student, winter 2016-present)
- Shant Danielian (UCI MAE, Ph.D. rotation student, summer 2015)
- Zeinab Shadram (UCI MAE, Ph.D. rotation student, summer 2015)
- Michael Kiiru (UCI MAE, M.Sc. student, fall 2014-summer 2015)
- Marc-Arnold Haupt (UCI MAE, M.Sc. student, fall 2014-summer 2015)
- Vu Dinh (UCI MAE, M.Sc. student, fall 2014-spring 2015)
- Songphol Songwasin (UCI MAE, M.Sc. student, fall 2014)

Undergraduate students

- Andre Ismailyan (UCI Computer Science, summer 2016-present)
- David Gogokhiya (UCI Computer Science, summer 2016-present)
- Dongheng Jing (UCI Mechanical and Aerospace Engineering, summer 2016-present)
- Victoria Palhares (intern from Brazil Scientific Mobility Program, summer 2016)
- Kouros Hedayatie (UCI Mechanical and Aerospace Engineering, winter 2016-spring 2016)
- Antonio Estrada-Zaragoza (UCI Mechanical and Aerospace Engineering, fall 2015-spring 2016)
- Kyle John Bendickson (UCI Computer Science, summer 2015-winter 2016)
- Ji Yeon Kim (UCI Computer Science and Engineering, spring 2015-spring 2016)
- Michael M. Ishimoto (UCI Computer Science and Engineering, spring 2015-spring 2016)
- Kehmena J. Ockiya (UCI Computer Science, winter 2014-spring 2015)
- Minhoh Han (UCI Mathematics, fall 2014-spring 2015)
- Daniel Heideman (UCSD MAE, fall 2012-fall 2013)
- Vu Dinh (UC Merced, Summer Training Academy for Research (STAR) at UCSD, 2013)
- Caris Moses (Cornell University, STAR at UCSD, 2012)

Visiting students

- Mahboobeh Zarei (Visiting Ph.D. student from Sharif University of Technology, Iran, Jan. 2016- Jul. 2016)