

CURRICULUM VITAE

PERSONAL INFORMATION

Name: Mohammadreza Chamanbaz

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Current Position: Assistant Professor, Arak University of Technology

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POSITIONS

- Assistant Professor, Arak University of Technology (Jan 2017-Now)
- Postdoctoral Research Fellow, in iTrust Center for Research in Cyber Security, Singapore (Nov 2015-Jan 2017)
- Postdoctoral Research Fellow, Singapore University of Technology and Design, Singapore (Sep 2014-Nov 2015)
- Research Scholar, Data Storage Institute, Singapore (Jan 2010-Jan 2014)

EDUCATION

- **PhD:** In Control Science, *National University of Singapore*, under the supervision of Prof. T. Liew, Dr. V. Venkataramanan, Prof. Q-G. Wang (2010-2014) GPA: 4.75/5. (National University of Singapore is ranked 12th in [QS World University Ranking](#))
 - Thesis Title: Randomized Algorithms for Control of Uncertain Systems with Application to Hard Disk Drives.
- **BSc:** In Electrical Engineering, *Shiraz University of Technology (SUTECH)* under the supervision of Prof. M. Mahzoon (2005-2008) GPA: 16.12/20.
- **ASc:** In Electrical Engineering, *Shiraz University* (2003-2005) GPA: 17.64/20.
- **Diploma:** Physics and Mathematics, Shiraz, 2002, GPA: 17.26/20.

HONORS/AWARDS

- Dr. Kazemi Ashtiani research prize from Iran's National Elites Foundation (2017)
- Best Student Paper Award Finalist, IEEE Multi-Conference on Systems and Control (2013)
- Singapore International Graduate Award (SINGA, A-Star) (2010-2014)
- Ranked 3rd among Electrical Engineering Students
Electrical Engineering Department, SUTECH GPA: 17.54/20
Spring 2007
- Ranked 2nd among Electrical Engineering Students
Electrical Engineering Department, SUTECH GPA: 17.27/20
Spring 2006

- Ranked 2nd among Electrical Engineering Students
Electrical Engineering Department, Shiraz University, GPA: 17.64/20,
2003-2005

PUBLICATIONS

Journal Papers

1. **M. Chamanbaz**, F. Dabbene, C. Lagoa, “AC Optimal Power Flow in the Presence of Renewable Sources and Uncertain Loads”, IEEE Transactions on Power Systems, Submitted (<https://arxiv.org/abs/1702.02967>). (**Tier 1 Journal**)
2. B. Zoss, D. Mateo, G. Tokic, **M. Chamanbaz**, L. Goh, F. Vallerga. R. Bouffanais, D. Yue, “Distributed System of Autonomous Buoys for Scalable Deployment and Monitoring of Large Waterbodies”, Autonomous Robots, Submitted.
3. **M. Chamanbaz**, F. Dabbene, D. Peaucelle, C. Pittet, R. Tempo, “Randomized and Robust Methods for Uncertain Systems Using R-RoMulOC, with Applications to DEMETER Satellite Benchmark”, Aerospace Lab, To appear (<https://arxiv.org/abs/1612.07101>).
4. **M. Chamanbaz**, D. Mateo, B. Zoss, G. Tokic, E. Wilhelm, D. Yue, R. Bouffanais, “Swarm-Enabling Technology for Multi-Robot Systems”, Frontiers in Robotics and AI, Volume 4, April 2017, Pages 1-12, ISSN 2296-9144, <https://doi.org/10.3389/frobt.2017.00012> .
5. **M. Chamanbaz**, E. Keikha, V. Venkataramanan, A. Al Mamun and W. Qing-Guo, “Design of a Probabilistic Robust Track-Following Controller for Hard Disk Drive Servo Systems”, Mechatronics, Volume 24, Issue 6, September 2014, Pages 582-589, ISSN 0957-4158, <http://dx.doi.org/10.1016/j.mechatronics.2014.02.007>.
6. **M. Chamanbaz**, F. Dabbene, R. Tempo, V. Venkataramanan, and Q.-G. Wang, “A Statistical Learning Theory Approach for Uncertain Linear and Bilinear Matrix Inequalities,” , Automatica, Volume 50, Issue 6, June 2014, Pages 1617-1625, ISSN 0005-1098, <http://dx.doi.org/10.1016/j.automatica.2014.04.005>. (**Tier 1 Journal**)
7. **M. Chamanbaz**, V. Venkataramanan, and Q.-G. Wang, “Probabilistic Analytic Center Cutting Plane Method in Robust H₂ Track Following Control,” Journal of Microsystems Technology, Volume 19, 2013, Pages 1407-1413, ISSN 0946-7076, <http://dx.doi.org/10.1007/s00542-013-1827-7>.
8. **M. Chamanbaz**, F. Dabbene, R. Tempo, V. Venkataramanan, and Q.-G. Wang, “Sequential Randomized Algorithms for Convex Optimization in the Presence of Uncertainty,” IEEE Transactions on Automatic Control, 2014, <http://dx.doi.org/10.1109/TAC.2015.2494875> (**Tier 1 Journal**)

Conference Papers

1. **M. Chamanbaz**, G. Notarstefano, R. Bouffanais, “A Distributed Ellipsoid Algorithm for Uncertain Convex Problems: A Randomized Approach”, In Proc. 56th IEEE Conference on Decision and Control, Melbourne, Australia, (to appear).

2. **M. Chamanbaz**, G. Notarstefano, R. Bouffanais, “Randomized Constraints Consensus for Distributed Robust Linear Programming”, In Proc. 20th IFAC World Congress, Toulouse, France, (to appear).
3. **M. Chamanbaz**, F. Dabbene, D. Peaucelle and R. Tempo, “R-Romuloc: A unified tool for randomized and robust multiobjective control”, in Proc. 8th IFAC symposium on Robust Control Design, 2015, Bratislava, Slovak Republic, Pages 144-149, <http://dx.doi.org/10.1016/j.ifacol.2015.09.448> .
4. T.G. Karimpanal, M. Chamambaz, W.Z. Li, T. Jeruzalski, A. Gupta, E. Wilhelm, “Adapting Low-Cost Platforms for Robotics Research”, in Proc. of the workshop the Path to Success: Failures in rEal Robots co-located with IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2015), Hamburg Germany, Pages 20-26, <http://ceur-ws.org/Vol-1484/paper18.pdf>.
5. **M. Chamanbaz**, F. Dabbene, R. Tempo, V. Venkataramanan, and Q.-G. Wang, “Sequential Randomized Algorithms for Sampled Convex Optimization,” in Proc. 2013 IEEE Multi-Conference on Systems and Control, Hyderabad, India, 2013, Pages 182-187, <http://dx.doi.org/10.1109/CACSD.2013.6663480>. (**Best Student Paper Award Finalist**).
6. **M. Chamanbaz**, F. Dabbene, R. Tempo, V. Venkataramanan, and Q.-G. Wang, “On the Sample Complexity of Uncertain Linear and Bilinear Matrix Inequalities,” in Proc. IEEE 52nd Annual Conference on Decision and Control (CDC), 2013, Pages 1780-1785, <http://dx.doi.org/10.1109/CDC.2013.6760140>.
7. **M. Chamanbaz**, V. Venkataramanan, and Q.-G. Wang, “Robust H₂ Track Following Controller Based on Probabilistic Analytic Center Cutting Plane Method,” in Proc. 2012 ASME-ISPS / JSME-IIP Joint International Conference on Micromechatronics for Information and Precision Equipment (MIPE2012), California, USA.
8. **M. Chamanbaz**, F. Dabbene, R. Tempo, V. Venkataramanan, and Q.-G. Wang, “A robust stability methodology for track following servo systems,” in Proc. APMRC, 2012 Digest, Pages 1–2.
9. **M. Chamanbaz**, E. Keikha, V. Venkataramanan, Q.-G. Wang, and A. Al Mamun, “Probabilistic Robust Approach for Discrete Multi-objective Control of Track-Following Servo Systems in Hard Disk Drives,” in Proc. 7th IFAC Symposium on Robust Control Design, Denmark, 2012, Pages 653-658, <http://dx.doi.org/10.3182/20120620-3-DK-2025.00036>.
10. E. Keikha, **M. Chamanbaz**, A. Al-Mamun, C.S. Bhatia "Design of track following controller of dual actuated HDD servo for 10 Tb/in² magnetic recording," in Proc. 2nd International Conference on Control, Instrumentation and Automation (ICCIA), 2011, Pages 264-269, <http://dx.doi.org/10.1109/ICCIAutom.2011.6356667>.
11. **M. Chamanbaz**, E. Keikha, V. Venkataramanan, A. Al Mamun, W. Qing-Guo, and T. Liew, “H_∞ probabilistic robust control of Hard Disk Drive,” in Proc. 37th Annual Conference on IEEE Industrial Electronics Society, 2011, Pages 3394 –3399, <http://dx.doi.org/10.1109/IECON.2011.6119857>.
12. **M. Chamanbaz**, V. Venkataramanan, Q.-G. Wang, and Y. F. Liew, “Limitations to achieve high bandwidth control in hard disk drive servo systems,” in Proc. APMRC, 2010 Digest, 2010, Pages 1–2.

SELECTED TALKS

- “Randomized Algorithms for Control of Uncertain Systems with Application to Hard Disk Drives”, September 2013, Delft Center for Systems and Control (DCSC), Delft, Netherlands.
- “Randomized Algorithms for Optimization in the Presence of Uncertainty”, April 2013, Department of Mathematics, Shiraz University, Shiraz, Iran.
- “A Sequential Randomized Algorithm for Convex Optimization in the Presence of Uncertainty”, Feb 2013, ECE NUS Graduate Symposium, Singapore.
- “Hard Disk Drive Servo Systems: Randomized Algorithms and Robust Control”, Sep 2012, CNR-IEIIT, Torino, Italy.
- “An overview to probabilistic robust techniques and its application in Hard Disk Drive”, Sep 2011, 7th IEEE Singapore Control Systems Chapter Graduate Student Workshop on Control and Automation, NUS, Singapore.
- “Development of advanced servo techniques for 10 Tb/in²”, The 10 Tb/in² Seminar Series, DSI, Singapore.

PROFESSIONAL MEMBERSHIP

- Member of IEEE
- member of IEEE Technical Committee on Computational Aspects of Control System Design (CACSD)
- Member of IEEE Control System Society
- Member of SIAM (Society for Industrial & Applied Mathematics)

PROFESSIONAL CERTIFICATES

- Control & Instrumentation: Construction, Procurement, Installation and Commissioning
Certificate Issued By Ministry of Oil Gas and Petrochemical
Spring 2009
- English Diploma
Certificate Issued By Shiraz University
Spring 2009
- GSM Signaling
Certificate Issued by Ministry of Communication & Information technology
Fall 2008
- An Introduction to Principles Of second Generation Cellular Mobile network GSM
Certificate Issued by Ministry of Communication & Information technology
Winter 2006

SELECTED COURSES (PhD)

Subjects Taken	Grade
Multivariable Control Systems	A ⁻
Advanced Control Systems	A
Adaptive Control Systems	A ⁺
Computer Control Systems	A ⁺
Linear Systems	A

ACADEMIC VISITS

- CNR-IEIIT & Politecnico di Torino, Torino, Italy, April-October, 2012.
- Control Optimization and Robotics lab, Università del Salento, Lecce Italy, April-June, 2016.

RESEARCH INTERESTS

- Randomized Algorithms
- Robust Control
- Robust Optimization
- Monte Carlo Simulation
- Cyber-Physical Systems

REFEREES

- Prof. Qing-Guo Wang (elewgg@nus.edu.sg)
- Prof. Xu Jianxin (lexujx@nus.edu.sg)
- Dr. Fabrizio Dabbene (fabrizio.dabbene@polito.it)