Ali Kazemy

Curriculum Vitae

Department of Electrical Engineering
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Education

2007–2013 **Doctor of Philosophy**, *Iran University of Science and Technology*, Tehran, Iran.
Electrical Engineering, Control

2004–2007 **Master of Science**, *Iran University of Science and Technology*, Tehran, Iran.
Electrical Engineering, Control

PhD Dissertation

Title *Robust Stability of Continuous-Time Lur'e Systems with Multiple Constant Time-delays*

Supervisor Professor Mohammad Farrokhi

Masters Thesis

Title *Design and Simulation of Intelligent Image Control in Three-Degrees-of-Freedom Periscope with Implementation on an Experimental Setup*

Supervisor Professor Mohammad Farrokhi

Description This thesis was specifically defined on a submarine periscope and successfully implemented on an experimental setup at Malek-Ashtar University of Technology.

Employment History

2013–Present **Assistant Professor**, Department of Electrical Engineering, Tafresh University, Tafresh, Iran.

2014–Present **Head of Short-term Training Courses**, Tafresh University, Tafresh, Iran.

2017–Present **Head of Incubator Center**, Tafresh University, Tafresh, Iran.

Miscellaneous

2006–2013 **Chief Executive Officer (CEO)**, Bargh Afzar Farzam Company, Tehran, Iran.

2007–2008 **Lecturer**, Iran Petroleum Training Center, Tehran, Iran.

Visiting & Research Positions

2019 **Research Associate**, Three months from 20^{th} of May to 20^{th} Aug, at the invitation of Professor James Lam (grant 69000 HK$), The University of Hong Kong, Hong Kong.

Honors and Awards

2019 **The Best Researcher**, Markazi Province.

2019 **The Best Researcher**, Tafresh University.

2018 **The Best Researcher (Triennial)**, Tafresh University.

2018 **The Best Researcher (Yearly)**, Tafresh University.

2017 **Selected Researcher**, Tafresh University.

2016 **Selected Researcher**, Tafresh University.

Guest Professorship Appointments

2008–2018 **Guest Professor**, Department of Electrical Engineering, Islamic Azad University, Bushehr Branch, Bushehr, Iran.

2012–2018 **Guest Professor**, Department of Electrical Engineering, Islamic Azad University, Electronic Campus, Tehran, Iran.

Research Interests

- Time-delayed systems analysis and control
- Complex dynamical networks
- Multi-agent systems
- Active vibration control of structures
- Security Control

Reviewer and Editorial

2018 **Lead Guest Editor**, Advances in Mechanical Engineering, SC: Advances in Vibration Control of Structures and Machinery.

Reviewer of many high quality journals including:.

- IEEE Transactions on Cybernetics
- IEEE Transactions on Neural Networks and Learning Systems
- Journal of the Franklin Institute
- Journal of Sound and Vibration
- Neurocomputing
- Neural Computing and Applications
- International Journal of Control, Automation and Systems
- Transactions of the Institute of Measurement and Control

Journal Articles

1. N. Akbari, A. Sadr, and A. Kazemy, "Exponential synchronization of Markovian jump complex dynamical networks with uncertain transition rates and mode-dependent coupling delay," *Circuits, Systems, and Signal Processing*, Accepted. https://doi.org/10.1007/s00034-020-01346-5
2. A. Kazemy and H. Moodi, "Finite-frequency $\mathcal{H}_\infty$ control design for T–S fuzzy systems with state/input delay and physical constraints," *Engineering Applications of Artificial Intelligence*, vol.

85, pp. 607-618, 2019. https://doi.org/10.1016/j.engappai.2019.07.017
3. A. Kazemy, E. Gyurkovics, and T. Takacs, "Dynamic output feedback $\mathcal{H}_\infty$ design in finite-frequency domain for constrained linear systems," *ISA Transactions*, Corrected Proof. https://doi.org/10.1016/j.isatra.2019.06.005
4. A. Kazemy and Kh. Shojaei, "Adaptive synchronization of complex dynamical networks in presence of coupling connections with dynamical behavior," *Journal of Computational and Nonlinear Dynamics*, vol. 16, no. 6, pp: 061003, 2019. https://doi.org/10.1115/1.4043146
5. N. Akbari, A. Sadr, and A. Kazemy, "Robust exponential Synchronization of a Markovian Jump Complex Dynamical Network with Piecewise Homogeneous Markovian Parameters," *IMA Journal of Mathematical Control and Information*, Accepted.
6. Kh. Shojaei and A. Kazemy, "Adaptive Neural Feedback Linearizing Control of Type (m,s) Mobile Manipulators With a Guaranteed Prescribed Performance", *Robotica*, vol. 37, pp. 1937-1955, 2019. https://doi.org/10.1017/S0263574719000365
7. A. Kazemy, J. Lam and X.-W. Li, "Finite-frequency $\mathcal{H}_\infty$ Control for Offshore Platforms subject to Parametric Model Uncertainty and Practical Hard Constraints," *ISA Transactions*, vol. 83, pp. 53-65, 2018. https://doi.org/10.1016/j.isatra.2018.08.007
8. E. Gyurkovics, K. Kiss and A. Kazemy, "Non-fragile exponential synchronization of delayed complex dynamical networks with transmission delay via sampled-data control," *Journal of the Franklin Institute*, vol. 355, pp. 8934-8956, 2018. https://doi.org/10.1016/j.jfranklin.2018.10.005
9. N. Akbari, A. Sadr, and A. Kazemy, "Exponential synchronization of a Markovian jump complex dynamical network with piecewise-constant transition rates and distributed delay," *Transactions of the Institute of Measurement and Control*, vol. 41, no. 9, pp. 2535-2544, 2019. https://doi.org/10.1177/0142331218804005
10. A. Kazemy and E. Gyurkovics, "Sliding mode synchronization of a delayed complex dynamical network in presence of uncertainties and external disturbances," *Transactions of the Institute of Measurement and Control*, vol. 41, no. 9, pp. 2623-2636, 2019. https://doi.org/10.1177/0142331218805533
11. H. Moodi and A. Kazemy, "Robust Controller Design for Takagi-Sugeno Systems with Nonlinear Consequent Part and Time-Delay," *International Journal of Fuzzy Systems*, vol. 21, no. 3, pp. 745-754, 2019. https://doi.org/10.1007/s40815-018-0549-5
12. A. Kazemy and Kh. Shojaei, "Synchronization of complex dynamical networks with dynamical behavior links," *Asian Journal of Control*, vol. 22, no. 1, pp. 474-485, 2020. https://doi.org/10.1002/asjc.1910
13. A. Kazemy and Jinde Cao, "Consecutive synchronization of a delayed complex dynamical network via distributed adaptive control approach," *International Journal of Control, Automation and Systems*, vol. 16, no. 6, pp. 2656-2664, 2018, https://doi.org/10.1007/s12555-017-0718-6
14. A. Kazemy, "Global synchronization of neural networks with hybrid coupling: a delay interval segmentation approach", *Neural Computing and Applications*, vol. 30, no. 2, pp. 627-637, 2018. https://doi.org/10.1007/s00521-016-2661-5
15. A. Kazemy, "$\mathcal{H}_\infty$ filter design for offshore platforms via sampled-data measurements," *Smart Structures and Systems*, vol. 21, no. 2, pp. 87-194, 2018. https://doi.org/10.12989/sss.2018.21.2.187
16. A. Kazemy, X.-M. Zhang, and Q.-L. Han, "Dynamic output feedback control for seismic-excited buildings," *Journal of Sound and Vibration*, vol. 411, pp. 88-107, 2017. https://doi.org/10.1016/j.jsv.2017.08.017
17. A. Kazemy, "Robust mixed $\mathcal{H}_\infty$/passive vibration control of offshore steel jacket platforms with structured uncertainty," *Ocean Engineering*, vol. 139, pp. 95-102, 2017.

https://doi.org/10.1016/j.oceaneng.2017.04.045

18. A. Kazemy, "Synchronization criteria for complex dynamical networks with state and coupling time-delays," *Asian Journal of Control*, vol. 19, no. 2, pp. 131-138, 2017. https://doi.org/10.1002/asjc.1340
19. A. Kazemy and M. Farrokhi, "Synchronization of chaotic Lur'e systems with state and transmission line time delay: a linear matrix inequality approach," *Transactions of the Institute of Measurement and Control*, vol. 13, no. 11, pp. 1703-1709, 2017. https://doi.org/10.1177/0142331216644497
20. A. Kazemy and M. Siahi, "Equations of motion extraction for a three axes gimbal system," *Modares Journal of Electrical Engineering*, vol. 13, no. 4, pp. 37-43, 2014.
21. A. Kazemy and M. Farrokhi, "Delay-dependent robust absolute stability criteria for uncertain multiple time-delayed Lur'e systems," *Proc IMechE Part I: Journal of Systems and Control Engineering*, vol. 223, no. 3, pp. 286-297, 2013. https://doi.org/10.1177/0959651812467416
22. A. Kazemy and M. Farrokhi, "Robust absolute stability analysis of multiple time-delay Lur'e systems with parametric uncertainties," *Asian Journal of Control*, vol. 15, no. 1, pp. 203-213, 2013. https://doi.org/10.1002/asjc.503
23. A. Kazemy and M. Farrokhi, "Line-of-sight stabilization for submarine periscopes," *Journal of Control*, vol. 4, no. 1, pp. 1-11, 2010. (In Persian)

Conference Papers

1. R. Saravanakumar, A. Kazemy, H. Mukaidani, "Robust Dissipative Sampled-data Control of Offshore Steel Jacket Platforms," *The* 58^{th} *Annual Conference of the Society of Instrument and Control Engineers of Japan (SICE)*, Hiroshima, Japan, 10-13 September 2019.
2. N. Akbari, A. Sadr, and A. Kazemy, "Exponential synchronization of a complex dynamical network with piecewise-homogeneous Markovian jump structure and coupling delay," *The* 6^{th} *International Conference on Control, Instrumentation and Automation*, Sanandaj, Iran, 30-31 October 2019.
3. A. Kazemy, H. Moodi, B.-L. Zhang, X.-M. Zhang, "Controller Design for Takagi-Sugeno Fuzzy Systems with Nonlinear Consequent Part via Sampled-Data Measurements," *The* 27^{th} *IEEE International Symposium on Industrial Electronics (ISIE)*, Cairns, Australia, 13-15 June 2018.
4. A. Kazemy, "Complex Network Synchronization Analysis with Neural Network Nodes and Time-Delays," *The* 24^{th} *Iranian Conference on Electrical Engineering (ICEE)*, Shiraz, Iran, 10-12 May 2016.
5. A. Kazemy, "Complex Dynamic Network Synchronization with State and Coupling Time-Delays," *The Second Iranian International Conference on Systems Biology*, Tarbiat Modares University, Tehran, Iran, 23-24 December 2015.
6. A. Kazemy, "Synchronization for Complex Dynamic Networks with State and Coupling Time-Delays," on *International Power System Conference*, Niroo Research Institute, Tehran, Iran, 23-25 November 2015.
7. S. A. Hosseini, A. Kazemy and M. Farrokhi, "Presenting $\alpha - \beta - \gamma - \eta$ tracking filter for jerk movement model," The 6^{th} *Iranian Aerospace Society Conference*, Tehran, Iran, 2007. (In Persian)
8. A. Kazemy, S. A. Hosseini, and M. Farrokhi, "Image Stabilization in Submarine Periscope Against Sea Surface Movements," The 6^{th} *Iranian Aerospace Society Conference*, Tehran, Iran, 2007. (In Persian)
9. A. Kazemy and M. Farrokhi, "Robust Absolute Stability Criteria for Uncertain Lur'e Systems with Multiple Time-delays", on *International Conference of Control, Instrumentation, and Automation*, Tehran, Iran, 2010.

10. A. Kazemy and M. Farrokhi, "Delay-Independent Robust Absolute Stability Criteria of Uncertain Lur'e Systems with Multiple Time-delays," *The* 18^{th} *Iranian Conference on Electrical Engineering (ICEE)*, Isfahan, Iran, 11-13 May 2010.
11. A. Kazemy, S. A. Hosseini, and M. Farrokhi, "Modeling and Hybrid Intelligent Control of Submarine Periscope," The 7^{th} *Iranian Aerospace Society Conference*, Tehran, Iran, 2008.
12. A. Kazemy, S. A. Hosseini, and M. Farrokhi, "Steady-State Error Reduction with Fuzzy Gain Scheduling Integrator," The 4^{th} *IEEE Gulf International Convention and Exhibition Centre (GCC)*, Manama, Bahrain, 11-14 November 2007.
13. A. Kazemy, S. A. Hosseini, and M. Farrokhi, "Target-Based Line-Of-Sight Stabilization in Periscopes," The 15^{th} *IEEE Mediterranean Conference on Control and Automation*, Athens, Greek, 27-29 June 2007.
14. A. Kazemy, S. A. Hosseini, and M. Farrokhi, "On-Line Intelligent Control of Submarine Periscopes," The 16^{th} *IEEE International Symposium on Industrial Electronics (ISIE)*, pp. 245-250, Vigo, Spain, 4-7 June 2007.
15. A. Kazemy, S. A. Hosseini, and M. Farrokhi, "Second Order Diagonal Recurrent Neural Network," The 16^{th} *IEEE International Symposium on Industrial Electronics (ISIE)*, pp. 251-256, Vigo, Spain, 4-7 June 2007.
16. A. Kazemy and M. Farrokhi, "Line-Of-Sight Stabilization in Submarine Periscope Against Sea Surface Movements," The 15^{th} *Iranian Conference on Electrical Engineering (ICEE)*, Tehran, Iran, pp. 98-103, 21-22 April 2007.