



Dr. Ali-Akbar Ahmadi

Assistant Professor Electrical and Computer Engineering
Faculty of Engineering

Brief CV

Ali-Akbar Ahmadi received the B.S. degree in electrical engineering from Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran, in 2005, the M.Sc. degree in electrical engineering from Tarbiat Modares University, Tehran, in 2007, and the Ph.D. degree in electrical engineering from University of Tehran, Tehran, Iran in 2015. From 2015 to 2017, he was with the Tehran Regional Electric Company, as a member of distributed control systems committee. Since, September 2017, he has been with the School of Electrical and Computer Engineering, Faculty of Engineering, Kharazmi University, Tehran, Iran. His research interests include networked control systems, fault detection and diagnosis, fault tolerant control, cyber-physical systems and cyber-security, microgrids and industrial automation.

Research interests

#	Title	Start date
1	Networked control systems	
2	Fault diagnosis and fault tolerant control systems	
3	Cyber-security in control systems	
4	Process control and industrial automation	
5	Control of MicroGrids	

Theses supervised

#	Title	Persons
1	Robust power management system for a hybrid microgrid	Majid Haji Haji
2	Observer Design for Output Cyber Attack Detection in Power Systems	Seyed Mahdi Mirhadi
3	Cyber Attack Detector design in Power systems	Fateme Najafi-Karsami
4	Controller design for single-master multi-slave teleoperation systems	Painian Khanzadeh-Ghassab
5	Tracking problem in robotic teleoperation systems without force nor velocity measurement in the presence of time delay	Amirreza Mohabbatian
6	Robust Power Management System with Generation and Demand Prediction and Critical Loads in DC Microgrid	Mahdi Esmaili Sedaposhteh
7	Fault-Tolerant Formation Control for Quadrotors with Actuator Faults	Ghasem Salarpoor Ghoraba
8	Analysis and improvement of the conservatism of the time domain passivity approach in delayed Tele-Operation	Mohsen Salehi

Theses advised

#	Title	Persons
1	Robust fault-tolerant position control of a Quadrotor UAV	Mahsa Hasanshahi
2	Hybrid control vibrations of high-rise building using fuzzy logic type-2 due to support excitation Case study: 15-storey building of kharazmi university	Ebrahim Ebrahimi
3	Voltage control in island microgrids using Improved Droop control considering the operating costs	Amir-Mohsen Norouzi
4	Optimal Microgrid Operation scheduling Simultaneous with Home Energy Management Considering the Effect of Demand Response Programs	Aref Shalika

Course taught

#	Lesson Title	Place & Date of Lecture
1	Convex optimization	
2	Networked control systems	
3	Fault diagnosis and fault tolerant control systems	
4	Nonlinear control	
5	Industrial automation	
6	Digital control	
7	Electrical circuits	
8	Engineering mathematics	
9	Linear Algebra	

Published articles

#	Paper title	Writer	Magazine title	Publish year	Publish type	Article type
1	Cubic Observers for State Estimation of Nonlinear Systems	Mohammad Mahdi Share Pasand, Aliakbar Ahmadi	Journal of Control, Automation and Electrical Systems	2021	Full Text	
2	Performance evaluation and simulation of cubic observers	Mohammad Mahdi Share Pasand, Aliakbar Ahmadi	ISA TRANSACTIONS	2021	Full Text	
3	observer-based sensor fault-tolerant controller design for nonlinear fractional-order systems	Sindokht Ghobadian, Aliakbar Ahmadi		2020	Full Text	
4	Detection and isolation of actuator and sensor faults for networked control systems	Aliakbar Ahmadi, Farzad R. Salmasi	OPTIMAL CONTROL APPLICATIONS and METHODS	2017	Full Text	
5	Speed Sensorless and Sensor-Fault Tolerant Optimal PI Regulator for Networked DC Motor System With Unknown Time-Delay and Packet Dropout	Aliakbar Ahmadi, Tooraj Abbasian Najafabadi, Mojtaba Noori-Manzar, Farzad R. Salmasi	IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS	2014	Full Text	

Presented articles

#	Title	Writer	Conference	Date	Presentation type
1	Tracking problem in robotic teleoperation systems without force and velocity measurements in the presence of time delay	Amirreza Mohabati, Aliakbar Ahmadi	International Conference on Control, Instrumentation and Automation - Iran	1399/12/05	Oral
2	A novel solution for power transformer challenges in solar plants	MAJID HAJIHAJI, Abolfazl Nateghi, Aliakbar Ahmadi	International Transformer Conference and Exhibition - Iran	1398/09/19	Oral
3	Robust Fault Tolerant Position Tracking Control for a Quadrotor UAV in Presence of Actuator Faults	Mahsa Hasanshahi, Roya Amjadifard, Aliakbar Ahmadi	International conference on control, instrumentation, and automation - Iran	1398/08/08	Oral
4	Design of distributed generation resources and power management system for a hybrid microgrid in Alborz province	MAJID HAJIHAJI, Abolfazl Nateghi, Aliakbar Ahmadi	1st conference of Alborz engineering opportunities and challenges - Iran	1397/12/08	Oral
5	Actuator Fault Detection for Networked DC Motor Systems with Unknown Time-Delays and Packet Dropouts	Aliakbar Ahmadi	The 4th national conference on applied research in electrical, mechanical, computer and IT engineering - Iran	1397/07/12	Oral