



## Mahdi Majidi

Assistant Professor

College: Faculty of Electrical and Computer Engineering

Department: Electrical Engineering - Telecommunication

Mahdi Majidi

### Education

Degree	Graduated in	Major	University
BSc	2004	Electrical Engineering	Isfahan University of Technology
MSc	2006	Electrical Engineering, Communication systems	Amirkabir University of Technology (Tehran Polytechnic)
Doctoral	2013	Electrical Engineering, Communication systems	Amirkabir University of Technology (Tehran Polytechnic)

### Employment Information

Faculty/Department	Position/Rank	Employment Type	Cooperation Type	Grade
Electrical and Computer Engineering	Assistant Professor	Tenured	Full Time	9

### Awards

- Admission to the National Organization for Development of Exceptional Talents in high school and also guidance school.
- Ranked 900<sup>th</sup> among more than 410,000 participants in the 2000 nationwide university entrance exam for undergraduate studies, 2000.

- Ranked 1<sup>st</sup> in the 1<sup>st</sup> Robotics Competition at Pathfinder in the Electrical Eng. Dep. of Isfahan University of Technology, 2002.
- Ranked 10<sup>th</sup> among 170 Electrical Engineering students in the Isfahan University of Technology and ranked 4<sup>th</sup> among Electronic Engineering students.
- Ranked 85<sup>th</sup> in Iranian National Entrance Exam for graduate study in Electrical Engineering among 50,000 participants, 2004.
- Ranked 1<sup>st</sup> among all Ph.D. students in Communications (field and system) who were admitted in 2008, Electrical Engineering Department, Amirkabir University of Technology.
- The **best assistant professor** in the field of education in the communication group of Electrical and Computer engineering department of the University of Kashan in 2017.
- The **best assistant professor** in the field of education in Electrical and Computer engineering department of the University of Kashan in 2020.
- The **outstanding researcher** of Electrical and Computer engineering department, University of Kashan, 2022.

## Subjects Taught

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- Graduate Courses:
  - Convex Optimization
  - Advanced Communication Theory
  - Spread Spectrum Communications
  - Stochastic Processes
  - Communication Networks
- Undergraduate Courses:
  - Digital Communications
  - Principles of Electrical Engineering
  - Communication Networks
  - Signals and Systems
  - Digital Communications Laboratory

## Papers in Conferences

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1. Ehsan Nazemorroaya , Mohsen Shafieirad , Mahdi Majidi ,Consensus-based algorithm for distributed convex optimization ,4th International Conference on Computational Algebra, Computational Number Theory and Applications (CACNA) ,pp. 1-4 ,University of Kashan ,2023 06 04.
2. Pouya Shiri ,& Mahdi Majidi ,Real-Time Implementation of Software Defined Radio FMCW Radar

- using BladeRF ,3rd Conference on Applied Research in Electrical Engineering ,pp. 1-5 ,Shahid Chamran University of Ahvaz ,2023 02 08.
3. Fatemeh Ghalgarzadeh , Mahdi Majidi , Rashid Mirzavand ,Phase Shift Design for Intelligent Reflecting Surfaces under Practical Reflection Models in NOMA Network ,8th Iranian Conference on Signal Processing and Intelligent Systems (ICSPIS 2022) ,pp. 1-6 ,University of Science and Technology of Mazandaran ,2022 12 28.
  4. Zahra Memarian ,& Mahdi Majidi ,Multiple Signals Direction Finding of IoT Devices Through Improved Correlative Interferometer Using Directional Elements ,6'th International Conference on Smart Cities, Internet of Things and Applications (SCIoT) ,pp. 1-6 ,Ferdowsi University of Mashhad ,2022 09 14.
  5. Erfan mansoori , Alireza Siavashi , M. Majidi ,Sensing, Wireless Transmission, and Smart Processing of Heart Signals ,Fifth International Conference on Internet of Things and Applications (IoT 2021) ,University of Isfahan ,2021 05 19.

### Papers in Journals

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1. T. Analooei , S. M. Saberali , M. Majidi,Maximum likelihood based detector for PD-NOMA with statistical CSI: more efficient and lower complexity compared to SIC,Wireless Networks,pp. 1-8,2024-01.
  2. Fatemeh Saeidnejad و Mahdi Majidi,A survey on security of communication networks used in power distribution networks.Soft Computing Journal.۵۴-۲۰,۲۰۲۲-۱ شماره صفحات ۱۵۳-۱۶۰,ISC.
  3. N. Khatami ,& M. Majidi,Resource Allocation for Full-Duplex Wireless Information and Power Transfer in Wireless Body Area Network,Journal of Electrical and Computer Engineering Innovations (JECEI),2021-11.
  4. S. Dehghanpour و M. Majidi,Simultaneous Wireless Information and Power Transfer in a Network of On-body and Implantable Sensors With Temperature Constraint and Intelligent Channel Prediction.Scientific Journal of Computational Intelligence in Electrical Engineering.۲۰۲۱-۱۰.
  5. T. Analooei , S. M. Saberali , Mahdi Majidi,Multi-Threshold Detector With Fair Power Allocation Coefficients for NOMA Signals With Statistical CSI,IEEE Communications Letters,Vol. 25,No. 12,pp. 3970 - 3974,2021-12.
  6. B. Alinezhad Seyyedmahalleh , S. M.ad Saberali , F. Parvaresh , M. Majidi,ECF-Based Estimator for the LOS Power in Uplink NOMA System with Unknown Impulsive Noise,IEEE Signal Processing Letters,Vol. 28,pp. 1868 - 1872,2021-08.
  7. A. Torabzadeh , M. Majidi , M. Baghani.Energy Efficiency Improvement in Dynamic Orthogonal and Non-Orthogonal Multiple Access Uplink Networks (in Persian).Journal of Advanced Signal Processing (JASP).مجلد ۴,شماره صفحات ۱۷-۲۰,۲۰۲۲.
  8. B. Alinezhad Seyyedmahalleh , S. M.ad Saberali , F. Parvaresh , M. Majidi,On the performance of ECF-based multi-threshold receiver in NOMA systems for vehicular communications with unknown impulsive noise,Vehicular Communications,Vol. 29,2021-06.
  9. M. Majidi , A. Mohammadi , A. Abdipour , M. Valkama,Characterization and Performance Improvement of Cooperative Wireless Networks with Nonlinear Power Amplifier at Relay,IEEE Transactions on Vehicular Technology,pp. 1-12,2020-01,JCR.
  10. H. Moazzen , M. Majidi , A. Mohammadi,Accurate modelling of power amplifier energy consumption for resource allocation in wireless networks,Electronics Letters,pp. 1-2,2019-11,ISI.
  11. H. Moazzen , M. Majidi , A. Mohammadi,Linearization of M-LINC systems using GMP and particle swarm optimization for wireless communications,AUT Journal of Modeling and Simulation,2019-09.
  12. Sina Bakhshandeh Babarsad , S. Mohammad Saberali , Mahdi Majidi,Analytic performance investigation of signal level estimator based on empirical characteristic function in impulsive noise,Digital Signal Processing,Vol. 92,pp. 20-25,2019-09,ISI.
  13. Hamidreza Moazzen , Abbas Mohammadi , Mahdi Majidi,Performance analysis of linear precoded

- MU-MIMO-OFDM systems with nonlinear power amplifiers and correlated channel,IEEE Transactions on Communications,Vol. 67,No. 10,pp. 6753 - 6765,2019-09,ISI.
14. M. Baghani , A. Mohammadi , M. Majidi,Optimum power allocation in OFDM systems under power amplifier nonlinearity,Analog Integrated Circuits and Signal Processing,Vol. 99,No. 1,pp. 33-38,2019-04,ISI.
  15. M. Baghani , A. Mohammadi , M. Majidi and M. Valkama,Downlink resource allocation in OFDMA wireless networks under power amplifier non-linearity,IET Communications,Nov. 2017,ISI.
  16. M. Baghani , Abbas Mohammadi , Mahdi Majidi,An accurate analysis of the nonlinear power amplifier effects on SC-FDMA signals,WIREL NETWORKS,2017-09,ISI.
  17. Mina Baghani , Abbas Mohammadi , Mahdi Majidi , Mikko Valkama,Uplink resource allocation in multiuser multicarrier cognitive radio networks under power amplifier nonlinearity,Transactions on Emerging Telecommunications Technologies,2017-3,ISI.
  18. M. Baghani , A. Mohammadi , M. Majidi , M. Valkama,Analysis and rate optimization of OFDM-based cognitive radio networks under power amplifier nonlinearity,IEEE Transactions on Communications,Vol. 62,No. 10,pp. 3410-3419,2014-10,ISI.
  19. M. Majidi , M. Mohammadi , A. Abdipour,Analysis of the power amplifier nonlinearity on the power allocation in cognitive radio networks,IEEE Transactions on Communications,Vol. 62,No. 2,pp. 467-477,2014-02,ISI.
  20. P. Rastegari , M. Majidi , M. Khalilian,Analysis of WiMAX performance improvement using serial and parallel concatenated convolutional codes,International Journal of Computer Theory and Engineering (IJCTE),Vol. 5,pp. 326-330,2013-04.
  21. M. Majidi , M. Mohammadi , A. Abdipour,Accurate analysis of spectral regrowth of nonlinear power amplifier driven by cyclostationary modulated signals,Springer Journal on Analog Integrated Circuits & Signal Processing,Vol. 74,No. 2,pp. 425-437,2013-02,ISI.