

Nader Mokari Yamchi

Associate Professor in the Department of Electrical and Computer
Engineering Tarbiat Modares University

☎ (+98) 935 636 5967

☎ (+98) 21 8288 4937

✉ nader.mokari@modares.ac.ir,

nader.nmy@gmail.com

Publications

Selected Publications

Books

Saeedeh. Parsaeefard, Ahmad Reza Sharafat, Nader Mokari, *Robust Resource Allocation in Future Wireless Networks*, Springer, 2017.

ITU Publications

Ahmad Reza Sharafat, Nader Mokari, Mahdi Orooji, *ICT for Digital Health: Robotic Remote Surgery*, ITU-D Study Group 2, 2019.

A. Zakeri; N. Gholipoor; M. Tajallifar; S. Ebrahimi; M. R. Javan; N. Mokari; A. R. Sharafat, *Digital Transformation via 5G: Deployment Plans*, ITU Kaleidoscope 2020.

IEEE Selected Journal Articles

2020 **S. Rezvani, N. Mokari, M. R. Javan, Eduard A. Jorswieck**, *Fairness and Transmission-Aware Caching and Delivery Policies in OFDMA-Based HetNets*, IEEE Transactions on Mobile Computing, vol. 19, no. 2, 2020.

Maryam Moghimi; Abolfazl Zakeri; Mohammad Reza Javan; Nader Mokari; Derrick Wing Kwan Ng, *Joint Radio Resource Allocation and Cooperative Caching in PD-NOMA-Based HetNets*, IEEE Transactions on Mobile Computing, 2020.

Omid Abbasi; Halim Yanikomeroglu; Afshin Ebrahimi; Nader Mokari Yamchi, *Trajectory Design and Power Allocation for Drone-Assisted NR-V2X Network With Dynamic NOMA/OMA*, IEEE Transactions on Wireless Communications, 2020.

Mohammad Robot Mili ; Ata Khalili ; nader mokari ; Sabine Wittevrongel ; Derrick Wing Kwan Ng ; Heidi Steendam, *Tradeoff Between Ergodic Energy Efficiency and Spectral Efficiency in D2D Communications Under Rician Fading Channel*, IEEE Transactions on Vehicular Technology, 2020.

Moslem Forouzesh ; Paeiz Azmi ; Nader Mokari ; Dennis Goeckel, *Covert Communication Using Null Space and 3D Beamforming: Uncertainty of Willie's Location Information*, IEEE Transactions on Vehicular Technology, 2020.

Narges Gholipoor ; Hamid Saeedi ; Nader Mokari ; Eduard Jorswieck, *E2E QoS Guarantee for the Tactile Internet via Joint NFV and Radio Resource Allocation*, IEEE Transactions on Network and Service Management, 2020.

Hamid Khoshfekar Rudsari ; Mohammad Reza Javan ; Mahdi Orooji ; Nader Mokari ; Eduard A. Jorswieck , *Multiple-type Transmission Multiple-type Reception Framework on Molecular Communication*, IEEE Wireless Communications Letters, 2020.

Abedi Mohammad Reza ; Mohammad Reza Javan ; Nader Mokari ; Halim Yanikomeroglu , *3D-MIMO Dual Communications in SCMA-Based Secure HetNets*, IEEE Transactions on Vehicular Technology, 2020.

Arman Azizi ; Saeedeh Parsaeefard ; Mohammad Reza Javan ; Nader Mokari ; Halim Yanikomeroglu , *Profit Maximization in 5G+ Networks with Heterogeneous Aerial and Ground Base Stations*, IEEE Transactions on Mobile Computing, 2020.

2019 **Abulfazl Zakeri ; Mohammad Moltafet ; Nader Mokari** , *Joint Radio Resource Allocation and SIC Ordering in NOMA-Based Networks Using Submodularity and Matching Theory*, IEEE Transactions on Vehicular Technology, vol. 68, no. 10 2019.

Sepehr Rezvani ; Saeedeh Parsaeefard ; Nader Mokari ; Mohammad R. Javan ; Halim Yanikomeroglu , *Cooperative Multi-Bitrate Video Caching and Transcoding in Multicarrier NOMA-Assisted Heterogeneous Virtualized MEC Networks*, IEEE Access, vol. 7, no. 1, 2019.

Hamid Khoshfekar Rudsari; Nader Mokari; Mohammad Reza Javan; Eduard A. Jorswieck; Mahdi Orooji, *Drug Release Management for Dynamic TDMA-Based Molecular Communication*, IEEE Transactions on Molecular, Biological and Multi-Scale Communications, 2019.

Moslem Forouzesh ; Paeiz Azmi ; Nader Mokari ; Kai-Kit Wong ; Hossein Pishro-Nik, *Robust Physical Layer Security for Power Domain Non-Orthogonal Multiple Access-Based HetNets and HUDNs: SIC Avoidance at Eavesdroppers*, IEEE Access, vol. 7, no. 3, 2019.

Mohammad Moltafet ; Saeedeh Parsaeefard ; Mohammad Reza Javan ; Nader Mokari , *Robust Radio Resource Allocation in MISO-SCMA Assisted C-RAN in 5G Networks*, IEEE Transactions on Vehicular Technology, vol. 68, no. 6, 2019.

Ali Etemadi ; Paeiz Azmi ; Hamidreza Arjmandi ; Nader Mokari , *Compound Poisson Noise Sources in Diffusion-Based Molecular Communication*, IEEE Transactions on Communications, vol. 67, no. 6, 2019.

Ali Etemadi ; Hamidreza Arjmandi ; Paeiz Azmi ; Nader Mokari, *Capacity Bounds for Diffusive Molecular Communication Over Discrete-Time Compound Poisson Channels*, IEEE Communications Letters, vol. 23, no. 5, 2019.

Hamid Kordbacheh ; Hamid Dalili Oskouei ; Nader Mokari, *Robust Cross-Layer Routing and Radio Resource Allocation in Massive Multiple Antenna and OFDMA-Based Wireless Ad-Hoc Networks*, IEEE Access, vol. 7, no. 5, 2019.

Omid Abbasi; Afshin Ebrahimi; Nader Mokari, *NOMA Inspired Cooperative Relaying System Using an AF Relay*, IEEE Wireless Communications Letters, vol. 8, no. 1, 2019.

Ali Mokhdad; Paeiz Azmi; Nader Mokari; Mohammad Moltafet; Mohsen Ghaffari-Miab, *Cross-Layer Energy Efficient Resource Allocation in PD-NOMA based H-CRANs: Implementation via GPU*, IEEE Transactions on Mobile Computing, vol. 18, no. 6, 2019.

- 2018 **Mohammad Moltafet, Roghayeh Joda, Nader Mokari, Mohammad R. Sabagh, Michele Zorzi**, *Joint Access and Fronthaul Radio Resource Allocation in PD-NOMA Based 5G Networks Enabling Dual Connectivity and CoMP*, IEEE Transactions on Communications, vol. 66, no. 12, 2018.
- Mohammad Moltafet; Nader Mokari; Mohammad Reza Javan; Paeiz Azmi**, *Comparison Study between PD-NOMA and SCMA*, IEEE Transactions on Vehicular Technology, vol. 67, no.2, 2018.
- Mohammad Moltafet, Nader Mokari, Mohammad.R Javan, Hamid Saeedi, and Hossein Pishro-Nik**, *A New Multiple Access Technique for 5G: Power Domain Sparse Code Multiple Access (PSMA)*, IEEE Access, vol. 6, 2018.
- Masoud Farokhi ; Alireza Zolghadrasli ; Nader Mokari Yamchi**, *Mobility-Based Cell and Resource Allocation for Heterogeneous Ultra-Dense Cellular Networks*, IEEE Access, vol. 6, 2018.
- Mohammad Moltafet ; Paeiz Azmi ; Nader Mokari ; Mohammad Reza Javan ; Ali Mokdad**, *Optimal and Fair Energy Efficient Resource Allocation for Energy Harvesting-Enabled-PD-NOMA-Based HetNets*, IEEE Transactions on Wireless Communications, vol. 17, no. 3 2018.
- 2017 **N. Tavakoli, P. Azmi, Nader Mokari**, *Optimal Positioning of Relay Node in Cooperative Molecular Communication Networks*, IEEE Transactions on Communications, vol.65, no. 12, 2017.
- Mohammad Reza Abedi, Nader Mokari, Hamid. Saeedi and H. Yanikomeroğlu**, *Robust Resource Allocation to Enhance Physical Layer Security in Systems with Full-Duplex Receivers: Active Adversary*, IEEE Transactions on Wireless Communications, vol. 16, no. 2, Feb 2017.
- Faezeh Alavi, Nader Mokari, Mohammad R. Javan and Kanapathippillai Cumanan**, *Limited Feedback Scheme for Device to Device Communications in 5G Cellular Networks with Reliability and Cellular Secrecy Outage Constraints*, IEEE Transactions on Vehicular Technology, vol. 66, no. 1, Jan, 2017.
- N. Tavakoli, P. Azmi, Nader Mokari**, *Performance Evaluation and Optimal Detection of Relay-Assisted Diffusion-Based Molecular Communication with Drift*, IEEE Transactions on NanoBio-science, vol. 16, no. 1, Jan 2017.
- Mohammad R. Abedi, Nader Mokari, Mohammad R. Javan, and H. Yanikomeroğlu**, *Secure Communication in OFDMA Based Cognitive Radio Networks: An Incentivized Secondary Network Coexistence Approach*, IEEE Transactions on Vehicular Technology, vol. 66, no. 2, Feb 2017.
- Mohammad R. Javan, Nader Mokari, Faezeh Alavi, and Ali Rahmati**, *Resource Allocation in Decode-and-Forward Cooperative Communications Networks with Limited Rate Feedback Channel*, IEEE Transactions on Vehicular Technology, vol. 66, no. 1, 2017.
- 2016 **M. R. Abedi, N. Mokari, M. R. Javan, H. Yanikomeroğlu**, *Limited Rate Feedback Scheme for Resource Allocation in Secure Relay-Assisted OFDMA Networks*, IEEE Transactions on Wireless Communications, vol. 15, no. 4, 2016.
- Nader Mokari, F. Alavi, S. Parsaeefard, T. Le-Ngoc**, *Limited-Feedback Resource Allocation in Heterogeneous Cellular Networks*, IEEE Transactions on Vehicular Technology, vol. 65, no. 4, 2016.
- Nader Mokari, S. Parsaeefard, P. Azmi, H. Saeedi, and E. Hossein**, *Robust Ergodic Uplink Resource Allocation in Underlay OFDMA Cognitive Radio Networks*, IEEE Transactions on Mobile Computing, Vol. 15, no. 2, 2016.

- 2015 **Nader Mokari, S. Parsaeefard, P. Azmi, H. Saeedi, and E. Hossein**, *Secure Robust Ergodic Resource Allocation in Relay-Assisted Cognitive Radio Networks*, IEEE Transactions on Signal Processing, Vol. 63, no. 2, 2015.
- M. G. Khoshkholgh, Nader Mokari, K. Navaie, H. Yanikomeroglu, V. Leung, and K. G. Shin**, *On the downlink radio resource allocation in DS-CDMA/OFDM spectrum sharing systems: Optimality of OFDMA*, IEEE Journal on Selected Areas in Communications, 2015.
- M. Dashti, N. Mokari, and K. Navie**, *Uplink Radio Resource Allocation in AF and DF Relay-Assisted Networks with Limited Rate Feedback*, IEEE Transactions on Vehicular Technology, 2015.
- 2014 **Nader Mokari, H. Saeedi and P. Azmi**, *Quantized Ergodic Radio Resource Allocation in Cognitive Femto Networks with Controlled Collision and Power Outage Probabilities*, IEEE Journal on Selected Areas in Communications, Vol. 32, no. 11, 2014 .
- Nader Mokari, S. Parsaeefard, P. Azmi and H. Saeedi**, *A New Cooperative Paradigm for Secure Cognitive Radio Networks*, IEEE Transactions on Wireless Communications, Vol. 13, no. 2, 2014.
- Nader Mokari, P. Azmi, and H. Saeedi**, *Quantized Ergodic Radio Resource Allocation in Cognitive Networks with Guaranteed Quality of Service for Primary Network*, IEEE Transactions on Vehicular Technology, vol. 63, no. 8, 2014.
- 2013 **Nader Mokari, P. Azmi, and H. Saeedi**, *Quantized Ergodic Radio Resource Allocation in Cognitive DF Relay-Assisted Networks with Guaranteed Quality of Service for Primary Network*, IEEE Transactions on Wireless Communications, vol. 12 , no. 10, 2013.
- M. G. Khoshkholgh, Nader Mokari, and K. G. Shin**, *Ergodic Sum Capacity of Spectrum-Sharing Multiple Access with Collision Metric*, IEEE Journal on Selected Areas in Communications, vol. 31 no. 11 , 2013.
- Nader Mokari, H. Saeedi, and K. Navaie**, *Channel Coding Increases the Achievable Rate of the Cognitive Networks*, IEEE Communications Letters, Vol. 5, no. 8, 2013.
- 2011 **Nader Mokari, K. Navaie, and M. G. Khoshkholgh**, *Downlink Radio Resource Allocation in OFDMA Spectrum Sharing Environment with Partial Channel State Information*, IEEE Transactions on Wireless Communications, vol. 10, no. 10, 2011.
- 2010 **Nader Mokari, M. R. Javan, and K. Navaie**, *Cross-Layer Resource Allocation in OFDMA Systems for Heterogeneous Traffic With Imperfect CSI*, IEEE Transactions on Vehicular Technology, vol. 59, no. 2, 2010.

Refereed Conference Publications:

Mohammad R. Abedi ; Nader Mokari ; Mohammad R. Javan ; Eduard A. Jorswieck, *Robust and Secure Content Delivery in Energy and Spectrum Efficient Next-Generation Networks*, in Proceedings of IEEE Globecom Workshops (GC Wkshps), 2018 .

Mohammad Moltafet ; Nader Mokari ; Roghayeh Joda ; Mohammad R. Sabagh ; Michele Zorzi, *Joint Access and Fronthaul Resource Allocation in Dual Connectivity and CoMP Based Networks*, in Proceedings of IEEE International Conference on Communications (ICC), 2018.

Saeed Sheikhzadeh ; Mohammad R. Javan ; Nader Mokari, *Antenna selection for secure robust communication in MISO-OFDMA based heterogeneous cellular networks*, in Proceedings of IEEE Wireless Communications and Networking Conference (WCNC), 2018.

F Alavi, N Mokari, H Saeedi, *Secure resource allocation in OFDMA-based cognitive radio networks with two-way relays*, in Proceedings of Iranian Conference on Electrical Engineering (ICEE), 2015.

M. R Abedi, N. Mokari, H. Saeedi, H. Yanikomeroglu, *Secure Robust Resource Allocation using Full-Duplex Receivers*, in Proceedings of IEEE International Conference on Communication Workshop (ICCW), 2015.

Nader Mokari, M. R. Abedi, H. Saeedi, and P. Azmi, *Ergodic Radio Resource Allocation Based on Imperfect Channel Distribution Information*, in Proceedings of IEEE Wireless Communications and Networking Conference (WCNC), 2014.

H. Mamani, Nader Mokari, M. G. Khoshkholgh, and H. Saeedi, *Message Passing Based Algorithms for Resource Allocation in Spectrum Sharing OFDMA systems*, in Proceedings of IEEE Wireless Communications and Networking Conference (WCNC), 2014.

M. Javan, and Nader Mokari, *Resource Allocation for Maximizing Secrecy Rate in Presence of Active Eavesdropper*, in Proceedings of IEEE Iranian Conference on Electrical Engineering (ICEE 2014).

Nader Mokari, F. Arian, S. Parsaeefrad, T. Le-Ngoc , *Dynamic Secure Power Allocation over Multiple Access Channels*, IEEE Vehicular Technology Conference Fall (VTC 2014).

Nader Mokari, K. Navaie, and H. Saeedi, *Trellis Coded Modulation OFDMA for Spectrum Sharing in Cognitive Environment*, in Proceedings of IEEE Symposium on Computers and Communications (ISCC), 2012 .

Nader Mokari, and K. Navaie, *Radio resource allocation schemes for relay assisted OFDMA dynamic spectrum allocation systems*, in Proceedings of IEEE Wireless Advanced (WiAd), 2012 .

Nader Mokari, M. R. Javan, and K. Navaie, *Resource Allocation Based on Channel Distribution Information for Elastic and Streaming Traffic in OFDMA Networks: A Heuristic Algorithm*, in Proceedings of IEEE Vehicular Technology Conference (VTC), 2009-Fall .

Research Interests

- Wireless Communication
- Statistical and Modern Signal Processing
- Optimization Methods
- Vehicular Communication
- Network Planning
- Satellite Communication
- Molecular Communication
- Internet of Things
- Tele Medicine and Tele surgery

Professional Experiences

Some of my joint projects in MTN Irancell, .

2020-2021 **Cyber and Content Smart Monitoring and Analysis.**

- 2020-2021 **IoT-Tracker.**
- Joint international project between INFS and DFG, .**
- 2019-2022 **5G Software Defined RAN.**
- Some of my joint projects in mobile telecommunication company of Iran (MCI), .**
- 2009-2010 **Frequency planning software .**
- 2009-2010 **KPI evaluation via CDR Software .**
- 2011-2012 **Monitoring and adjusting BSS and NSS parameters software .**
- 2013-2014 **Traffic modelling in 3G and 4G .**
- 2018 **5G Road Map and Migration .**
- 2018 **5G Telesurgery Testbed .**
- Some of my joint projects in Iran telecommunication research center (ITRC), .**
- 2010-2011 **New methods for WimaX QoS measurements.**
- 2011-2012 **Satellite transponder .**
- 2014-2015 **QoS of satellite services .**
- 2014-2015 **Business plan of satellite operator in Iran .**
- 2018 **Massive MIMO.**
- 2018 **5G RAN.**
- Some of my joint projects in Tehran Province Gas Company, .**
- 2013-2014 **Tetra network planning .**
- 2019-2020 **IoT- Metering .**
- 2015 **Some of my joint projects in information technology organization of Iran (ITC), .**
National broadband network planning .

Editor

Area Editor- Physical Communication-Elsevier . ,
EURASIP Journal on Wireless Communications and Networking- springer nature.

Reviewer

- Journal **IEEE Transactions on Mobile Computing, IEEE Wireless Communications Letters, IEEE Wireless Communications, European Transactions on Telecommunications, IEEE Journal On Selected Areas In Communications, IEEE Transactions on Vehicular Technology, IEEE Transactions on Information Forensics and Security. ,**
- Conference **ICC, WCNC, VTC, PIMRC GLOBECOM.**

Teaching Experiences

Advanced Digital Communication.

Stochastic Processes.

Signals and Systems.

Introduction to 3G and 4G of mobile cellular network.

Data and Computer Communications.

Digital Signal Processing.

Green Communication.

Mobile Cellular Network Planning.
Introduction to 5G of mobile cellular network.
Resource Allocation.
Wireless Communications.
Network and Communication Layer of IoT.

Academic and Professional Membership

Since 2018 **IEEE Senior Member.**
Since 2009 **IEEE Communication Society.**
Since 2014 **TPC member of IEEE GLOBECOM, VTC, ICC .**

References

Professor **Ahmad Reza Sharafat**, Tarbiat Modares University , Iran.
Professor **Halim Yanikomeroglu**, Carleton University, Canada.
Professor **Paeiz Azmi**, Tarbiat Modares University, Iran.
Professor **Eduard Jorswieck**, TU Dresden, Germany.
Associate Professor **Hossein Pishro-Nik**, University of Massachusetts Amherst, United States of America.
Associate Professor **Hamid Saeedi**, Tarbiat Modares University, Iran .
Professor