

# *Curriculum Vitae*

## **Masoumeh Nasiri-Kenari**

Professor of Electrical Engineering Department  
Sharif University of Technology (SUT)  
P.O. Box 11365-9363, Tehran, IRAN

[mnasiri@sharif.ac.ir](mailto:mnasiri@sharif.ac.ir)

Tel: +98-21-66164344

Fax: +98-21-66023261

<http://ee.sharif.ir/~mnasiri>

### **Research Interest:**

#### **Various areas of Wireless Communications including:**

- Nano-networks and Molecular Communications
- Smart Radio Environments and Reconfigurable AI Meta Surface
- Green Communications
- Cooperative and Cognitive Communications
- Wireless Body Area Networks

### **Education:**

**Ph.D.** in Electrical Engineering, 1994

*University of Utah, U.S.A*

Dissertation: Coding and Signaling for Input Constraint Channel

Thesis advisor: Prof. Craig, K, Rushforth,

**M.Sc.** in Electrical Engineering (Communications), 1988

*Isfahan University of Technology, IRAN*

Dissertation: Adaptive Clutter Cancellation in Radar

Thesis Advisor: Prof. Golestani

**B.S.** in Electrical Engineering (Electronics), 1986

*Isfahan University of Technology, IRAN*

### **Professional Experience:**

#### **Academic Position**

- **Professor**, Elec. Eng. Dept., *Sharif University of Technology*, 2004- Present
- **Associate Professor**, Elec. Eng. Dept., *Sharif University of Technology*, 2000-2004
- **Assistant Professor**, Elec. Eng. Dept., *Sharif University of Technology*, 1994- 2000
- **Technical Instructor**, Elec. Eng. Dept., *Isfahan University of Technology*, 1988-1989

## Other Affiliation and Roles

- **Editor of IEEE Trans. on Communications, *Molecular Communications and Cognitive radio***, 2014- present
- **Editor of IEEE Trans. on MBMC**, 2016-present
- **Member (Minister representative) of assessment and promotion committee, *Tehran University***, Aug. 2017-present
- **Invited Member of Electrical and Computer Engineering Group, *Iran Academic of Science, Engineering branch***, 2018-present
- **Member of Women in Engineering task group, *Iran Academic of Science, Engineering branch***, 2015-present
- **Member of Women Research Promotion work group, *Iran National Science Foundation***, 2018-present
- **Member of EE Department Assessment and Promotion Committee, *Sharif University of Technology***, 2003-Present
- **Member of University Assessment and Promotion Committee, *Sharif University of Technology***, 2003-2010, and 2014-present
- **Member of EE Department Hiring Committee, *Sharif University of Technology***, Sept. 2006-present
- **Member of University Honor Students Affairs Committee, *Sharif University of Technology***, Sept. 2003- 2007
- **Director of Center of Excellence in Communications, *Sharif University of Technology***, Sept. 1997- 2001
- **Director of Mobile Communication Group, *Advanced Communication Research Center (ACRI), Sharif University of Technology***, 2004-present
- **Vice-President of Graduate education Affairs, *Elec. Eng. Department, Sharif University of Technology***, June 2004-2006 and June 2010-June 2011
- **Member of INSF Engineering Committee/Workgroup**, Jan. 2012- Present
- **Member of Engineering Committee, *National Elites Foundation***, 2012-2013
- **Director of Telecommunication Group, *EE. Dept., Sharif Univ. of Technology***, 1998-2002
- **Director of Wireless Research Lab., *EE Dept., Sharif Univ. of Technology***, 1999-present
- **Director of Mobile Test Lab., *EE Dept., Sharif Univ. of Technology***, 2009-Present:
- **Co-Director of Advanced and Wideband CDMA Lab at Iran Telecom Research Center (ITRC)**, 1999-June 2001
- **Chair of Women in Engineering (WIE) Committee, *IEEE Iran Section***, Jan. 2013-2016

## Awards

- **Distinguished professor in engineering from Iran Academy of Science**, 2018.
- **The 2014 Premium Award for Best Paper in IET Communications** (for the best research papers published during last two years)
- **Distinguished Researcher of EE Department, *Sharif University of Technology***, 2005

- **Distinguished Lecturer of EE Department, Sharif University of Technology, 2007**
- **Distinguished Scientist of Mazandaran Province, Mazandaran Governor, 2010**

## **Grants and Funded Research (in Last 8 years)**

- **INSF International Research chair on Nano Communication Networks**, for 5 years starting Sept. 2015 (Rials 3,000,000,000)
- **Green Communication in Multi-Relay Wireless Networks**, (total \$90000) for 2015-2017, Swedish Research Council
- **Molecular Communications**, (\$10000), 2013 Viterbi School of Engineering Research Innovation Fund Grant, University of Southern California, USA
- **Cooperative Communications for Wireless Communications**, (Rials 400,000,000), SUT, 2004-2007
- **Cognitive Communications and Resource Allocations**, (Rials 450,000,000), SUT, 2008-2012
- **Design of DS-CDMA Receivers**, (Rials 500,000,000), SAIRAN, 2009-2010
- **Efficient Modulation and Detection for UWB Communications**, (Rials 250,000,000), INSF, 2003-2005
- **Spectrum Sensing at low SNR Regime** (Rials 500,000,000), Advanced Data Corp. 2005-2006
- **Establishing a Test lab. for wireless Mobile Communication**, (Rials 23,000,000,000), ITRC, 2007-2012

## **Ph.D Thesis Supervised:**

- **“Medium-Based Communication and Modulation in Molecular Communication Networks,”** Maryam Farahnak-Ghazani, 2021.
- **“Modeling and Analysis of Random clustered networks,”** Seyed Mohammad Azimi, 2020.
- **“Multiple access techniques for 5G wireless networks,”** Fatemeh Mokhtari, 2019.
- **“Efficient Methods for Transmission and Reception of Information in Molecular Communication Systems,”** Reza Mosayebi, 2018.
- **“Capacity bounds on Molecular Communications,”** Gholamali Aminian, 2017.
- **“Harnessing Interference in Cooperative and Cognitive Communication Networks”** Mohsen Hejazi, 2016.
- **“Information Transfer in Molecular Bio-Nano Communication Networks,”** Hamidreza Arjmandi, 2016.
- **“Interference Management in Two Tier Femtocell Networks,”** Azam Sadat Hosseinzadeh-Salati, 2015.
- **“Multiple Access Schemes for Infrared Wireless Network with Diffusion Links,”** Mazda Hamdi, 2013.
- **“Information Theoretic Analysis of Cognitive Radio Networks”**, Hossein Charmchi, 2012.
- **“Cooperative Communication in Free-Space Optical Networks”**, Mehdi Karimi, 2011.

- **“Performance Analysis of Ultra-Wide Band (UWB) Communication with a Relay Node”**, Zolfa Zeinalpour-Yazdi, 2010.
- **“Spectrum Sensing in Cognitive Radio Networks”**, Abbas Taherpour, 2009.
- **“Coded Cooperative Communications”**, Azizollah Jamshidi, 2007.
- **“Advanced Coding and Decoding Schemes for Optical CDMA Communication Systems”**, Paeiz Azmi, 2002.
- **“Multiuser Detection in DS/CDMA Systems Using Artificial Intelligence,”** Mahrokh G. Shayesteh, 2002.

## **Current Ph.D. Students**

- Arian Abbasian
- Ali Haji Abdollahi Bafghi
- Seyed Jalal Doaei

## **More than 50 M.Sc. Thesis Supervised**

**More than 20 invited Talks and Workshops:** in different national conferences in electrical engineering, and in industries and universities.

## **Selected Invited talks and Tutorials:**

- **“Molecular Communications: Opportunities and Challenges”**, ICEE 2017, Iran
- **“An Introduction on Molecular Communications”**, Iran Academy of Science, 2015
- **“On Bounded Memory Decoders for Molecular Communications”**, ITA 2014, San Diego, USA
- **“Diffusion Based Molecular Communications: Efficient Modulator and simple near optimal Decoder”**, EE Department, USC, 2014, USA
- **“Diffusion Based Molecular Communications”**, IWCIT 2014, Tehran, IRAN
- **“Cognitive Radio”**, ICEE, 2013, Mashhad, IRAN
- **“Cooperative and Cognitive Communications”**, SUT, 2012
- **“UWB Communications”**, SUT, 2009
- Talk on **“Women in Engineering: Opportunities and Challenges”** in several places including in Iran Academy of Science

## **Courses lectured:**

Coding theory, Advanced Communication Theory, Digital Signal Processing, Signals and Systems, Probability and Statistics, Communications, Seminar for M.Sc.

## **Publications**

### **Book:**

- Chapter entitled “*Cyclostationary Spectrum Sensing in Cognitive Radios at Low SNR Regimes*,” written by M. Derakhshani, M. Nasiri-Kenari, and Le-Ngoc, in book, “*Software-Defined and Cognitive Radio Technologies for Dynamic Spectrum Access and Management*”, Published by IGI Global 2014.
- Chapter entitled “*A serendipitous journey*,” of the book “*Rising to the Top*,” Global women engineering leaders, vol. III, 2022, please see the electronic version attached.

### **Refereed Journals**

1. A. Nasri, A. H. A. Bafghi, and M Nasiri-Kenari, “Wireless Localization in The Presence of Intelligent Reflecting Surface,” *IEEE Wireless Communications Letters*, 2022.
2. A. H. A. Bafghi, V. Jamali, Masoumeh Nasiri-Kenari, and Robert Schober, “Degrees of Freedom of the K-User Interference Channel Assisted by Active and Passive IRSs,” *IEEE Transactions on Communications*, 2022.
3. H. Abin, A. Gohari, and M. Nasiri-Kenari, “An analytical model for molecular communication over a non-linear reaction-diffusion medium,” *IEEE Transactions on Communications*, 2021.
4. M. C. Gursoy, M. Nasiri-Kenari, and U. Mitra, “Towards high data-rate diffusive molecular communications: A review on performance enhancement strategies,” *Digital Signal Processing*, 2021.
5. A. Amerizadeh, A. Mashhadian, M. Farahnak-Ghazani, H. Arjmandi, M. Alsadat Rad, A. Shamloo, M. Vosoughi, and M. Nasiri-Kenari, “Bacterial Receiver Prototype for Molecular Communication Using Rhamnose Operon in a Microfluidic Environment,” *IEEE Transactions on NanoBioscience*, 2021.
6. L. Khaloopour, M. Mirmohseni, M. Nasiri-Kenari, “Theoretical Concept Study of Cooperative Abnormality Detection and Localization in Fluidic-Medium Molecular Communication,” *IEEE Sensors Journal*, 2021.
7. M. Farahnak-Ghazani, M. Mirmohseni, and M. Nasiri-Kenari, “On molecular flow velocity meters,” accepted at the *IEEE Transactions on Molecular, Biological and Multi-Scale Communications*, IEEE, 2020
8. S. M. Azimi-Abarghouyi, M. Nasiri-Kenari, and M. Debbah, “Stochastic design and analysis of user-centric wireless cloud caching networks,” *IEEE Transactions on Wireless Communications*, 2020.
9. S. Aeenehz, N. Zlatanovz, A. Gohari, M. Nasiri-Kenari, and M. Mirmohseni, “Timing modulation for macro-scale molecular communication,” *IEEE Wireless Communications Letters*, 2020.
10. A. H. A. Bafghi, M. Mirmohseni, F. Ashtiani, and M. Nasiri-Kenari, “Joint optimization of power consumption and transmission delay in a cache-enabled c-ran,” *IEEE Wireless Communications Letters*, 2020.
11. L. Khaloopour, S. V. Rouzegar, A. Azizi, A. Hosseinian, M. Farahnak-Ghazani, N. Bagheri, M. Mirmohseni, H. Arjmandi, R. Mosayebi, and M. Nasiri-Kenari, “An experimental

- platform for macro-scale fluidic medium molecular communication,” *IEEE Transactions on Molecular, Biological and Multi-Scale Communications*, vol. 5, no. 3, pp. 163–175, 2019.
12. N. Ghoroghchian, M. Mirmohseni, and M. Nasiri-Kenari, “Abnormality detection and monitoring in multi-sensor molecular communication,” *IEEE Transactions on Molecular, Biological and Multi-Scale Communications*, vol. 5, no. 2, pp. 68–83, 2019.
  13. L. Khaloopour, M. Mirmohseni, and M. Nasiri-Kenari, “Adaptive release duration modulation for limited molecule production and storage,” *IEEE Transactions on Molecular, Biological and Multi-Scale Communications*, vol. 5, no. 2, pp. 139–152, 2019.
  14. E. Sadeghabadi, S. M. Azimi-Abarghouyi, B. Makki, M. Nasiri-Kenari, and T. Svensson, “Asynchronous downlink massive mimo networks: A stochastic geometry approach,” *IEEE Transactions on Wireless Communications*, vol. 19, no. 1, pp. 579–594, 2019.
  15. F. Mokhtari, M. R. Mili, F. Eslami, F. Ashtiani, B. Makki, M. Mirmohseni, M. Nasiri-Kenari, and T. Svensson, “Download elastic traffic rate optimization via noma protocols,” *IEEE Transactions on Vehicular Technology*, vol. 68, no. 1, pp. 713–727, 2018.
  16. H. G. Bafghi, A. Gohari, M. Mirmohseni, G. Aminian, and M. Nasiri-Kenari, “Diffusion-based molecular communication with limited molecule production rate,” *IEEE Transactions on Molecular, Biological and Multi-Scale Communications*, vol. 4, no. 2, pp. 61–72, 2018.
  17. H. Ghourchian, G. Aminian, A. Gohari, M. Mirmohseni, and M. Nasiri-Kenari, “On the capacity of a class of signal-dependent noise channels,” *IEEE Transactions on Information Theory*, vol. 64, no. 12, pp. 7828–7846, 2018.
  18. S. M. Azimi-Abarghouyi, B. Makki, M. Nasiri-Kenari, and T. Svensson, “Stochastic Geometry Modeling and Analysis of Finite Millimeter Wave Wireless Networks,” *IEEE Transactions on Vehicular Technology*, 2018
  19. M. Farahnak-Ghazani, G. Aminian, M. Mirmohseni, A. Gohari, and M. Nasiri-Kenari, “On Medium Chemical Reaction in Diffusion-Based Molecular Communication: a Two-Way Relaying Example,” *IEEE Transactions on Communications*, 2018
  20. S. M. Azimi-Abarghouyi, B. Makki, M. Haenggi, M. Nasiri-Kenari, and T. Svensson, “Stochastic geometry modeling and analysis of single-and multi-cluster wireless networks,” *IEEE Transactions on Communications*, 2018
  21. R. Mosayebi, A. Ahmadzadeh, W. Wicke, V. Jamali, R. Schober, and M. Nasiri-Kenari, “Early Cancer Detection in Blood Vessels Using Mobile Nanosensors,” *IEEE Transactions on Nanobioscience*, 2018
  22. R. Mosayebi, V. Jamali, N. Ghoroghchian, R. Schober, and M. Nasiri-Kenari, “Cooperative abnormality detection via diffusive molecular communications,” *IEEE transactions on nanobioscience*, 16 (8), 828–842, 2017
  23. R. Mosayebi, A. Gohari, M. Mirmohseni, and M. Nasiri-Kenari, “Type Based Sign Modulation and its Application for ISI mitigation in Molecular Communication”, *IEEE Trans. Communications*, 66 (1), 2017
  24. M. Haghifam, M. R. Mili, B. Maki, M. Nasiri-Kenari, T. Swenson, “Joint Sum Rate and Error Probability Optimization: Finite Block length Analysis,” *IEEE Wireless Communications Letters*, 2017

25. B. Maki, C. Fang, T. Swenson, M. Nasiri-Kenari, and M. Zorzi, "Delay Sensitive Area Spectral Efficiency: A Performance Metric for Delay Constrained Green Networks, *IEEE Trans. Communications*, 2017
26. **A. Gohari, M. Mirmohseni, M. Nairi-Kenari, "Information Theory of Molecular Communications: Directions and Challenges," IEEE TMBMC, 2016 (Invited paper)**
27. H. Arjmandi, M. Movahednasab, A. Gohari, M. Nasiri-kenari, and F. Fekri, "On ISI Avoiding Modulations for Diffusion-based Molecular Communication," *IEEE Transactions on Molecular, Biological and Multi-Scale Communications*, 2016.
28. S. M. Azimi-Abarghouyi, M. Hejazi, B. Makki, M. Nasiri-Kenari, and T. Svensson, "Decentralized Compute-and-Forward for Ad Hoc Networks," *IEEE Wireless Communications Letters*, 2016.
29. H. Arjmandi, A. Ahmadzadeh, R. Schonberg, and M. Nasiri-Kenari, "Ion Channel Based Bio-Synthetic Modulator for Diffusive Molecular Communication," *IEEE Trans. Nanobioscience*, 2016
30. S. M. Azimi-Abarghouyi, M. Nasiri-Kenari, B. Maham, and M. Hejazi, "Integer Forcing-and-Forward Transceiver Design for MIMO Multi-Pair Two-Way Relaying," *IEEE Transactions on Vehicular Technology*, 2018.
31. M. Movahednasab, M. Soleimanifar, A. Gohari, M. Nasiri-Kenari, and U. Mitra, "Adaptive Transmission Rate with a Fixed Threshold Decoder for Diffusion-Based Molecular Communication," *IEEE Transactions on Communications*, vol. 64, no. 1, pp. 236-248, Jan. 2016.
32. G. Aminian, H. Arjmandi, A. Gohari, M. Nasiri-Kenari, and U. Mitra, "Capacity of Diffusion-Based Molecular Communication Networks Over LTI-Poisson Channels," *IEEE Transactions on Molecular, Biological and Multi-Scale Communications*, vol. 1, no. 2, pp. 188-201, June 2015.
33. S. M. Azimi-Abarghouyi, M. Hejazi, and M. Nasiri-Kenari, "Compute-and-forward two-way relaying," *IET Communications*, vol. 9, no. 4, pp. 451-459, 3 5 2015.
34. F. Sheikholeslami, M. Nasiri-Kenari, and F. Ashtiani, "Optimal Probabilistic Initial and Target Channel Selection for Spectrum Handoff in Cognitive Radio Networks," *IEEE Transactions on Wireless Communications*, vol. 14, no. 1, pp. 570-584, Jan. 2015.
35. M. Hejazi, S. m. Azimi-Abarghouyi, B. Makki, M. Nasiri-Kenari, and T. Svensson, "Robust Successive Compute-and-Forward over Multi-User Multi-Relay Networks," *IEEE Transactions on Vehicular Technology*, 2015.
36. G. Aminian, M. Farahnak-Ghazani, M. Mirmohseni, M. Nasiri-Kenari, and F. Fekri, "On the Capacity of Point-to-Point and Multiple-Access Molecular Communications with Ligand-Receptors," *IEEE Transactions on Molecular, Biological and Multi-Scale Communications*, vol. 1, no. 4, pp. 331-346, Dec. 2015.
37. B. Makki, T. Svensson, T. Eriksson, and M. Nasiri-Kenari, "On the Throughput and Outage Probability of Multi-Relay Networks With Imperfect Power Amplifiers," *IEEE Transactions on Wireless Communications*, vol. 14, no. 9, pp. 4994-5008, Sept. 2015.

38. R. Mosayebi, H. Arjmandi, A. Gohari, M. Nasiri Kenari, and U. Mitra, "Receivers for Diffusion Based Molecular Communication: Exploiting Memory and Sampling Rate," *IEEE Journal on Selected Areas in Communications*, Vol. 32, no. 12, pp. 2368 - 2380, 2014.
39. A. Karbalay-Ghareh, M. Nasiri-Kenari, and M. Hejazi, "Convolutional Network-Coded Cooperation in Multi-Source Networks with a Multi-Antenna Relay," *Wireless Communications, IEEE Transactions on*, Vol. 13, no. 8, pp. 4323 - 4333, 2014.
40. A. Salaty and M. Nasiri-Kenari, "Aggregate Interference Modeling and Static Resource Allocation in Closed and Open Access Femtocells," *Communications, IET*, Vol. 7, no. 8, pp. 1007 - 1016, 2014.
41. H. Arjmandi, A. Gohari, M. Nasiri Kenari, and F. Bateni, "Diffusion-Based Nanonetworking: A New Modulation Technique and Performance Analysis," *Communications Letters, IEEE*, vol.17, no.4, pp.645,648, April 2013.
42. M. Hejazi and M. Nasiri-Kenari, "Simplified compute-and-forward and its performance analysis," *Communications, IET*, vol.7, no.18, pp.2054,2063, December 17, 2013.
43. H. Shokri-Ghadikolaei, F. Sheikholeslami, and M. Nasiri-Kenari, "Distributed Multiuser Sequential Channel Sensing Schemes in Multichannel Cognitive Radio Networks," *Wireless Communications, IEEE Transactions on*, vol. PP, pp. 1-13, 2013.
44. H. Charmchi, G. A. Hodtani, and M. Nasiri-Kenari, "A New Outer Bound for a Class of Interference Channels with a Cognitive Relay and a Certain Capacity Result," *Communications Letters, IEEE*, vol. 17, pp. 241-244, 2013.
45. H. Shokri-Ghadikolaei, Y. Abdi, and M. Nasiri-Kenari, "Analytical and learning-based spectrum sensing time optimisation in cognitive radio systems," *Communications, IET*, vol. 7, pp. 480-489, 2013.
46. S. Ayoughi, M. Nasiri-Kenari, and B. Hossein Khalaj, "On Degrees of Freedom of the Cognitive MIMO Two Interfering Multiple Access Channels," *Vehicular Technology, IEEE Transactions on*, vol. PP, pp. 1-1, 2013.
47. Z. Zeinalpour-Yazdi, M. Nasiri-Kenari, and B. Aazhang, "Performance of UWB Linked Relay Network with Time-Reversed Transmission in the Presence of Channel Estimation Error," *Wireless Communications, IEEE Transactions on*, vol. 11, pp. 2958-2969, 2012.
48. H. Shokri-Ghadikolaei and M. Nasiri-Kenari, "Sensing matrix setting schemes for cognitive networks and their performance analysis," *Communications, IET*, vol. 6, pp. 3026-3035, 2012.
49. A. Sharifi, F. Ashtiani, H. Keshavarz, and M. Nasiri-Kenari, "Impact of Cognition and Cooperation on MAC Layer Performance Metrics, Part I: Maximum Stable Throughput," *Wireless Communications, IEEE Transactions on*, vol. 11, pp. 4252-4263, 2012.
50. M. Karimi and M. Nasiri-Kenari, "Free Space Optical Communications via Optical Amplify-and-Forward Relaying," *IEEE Lightwave Technology, Journal of*, vol. 29, pp. 242-248, 2011.



51. M. Derakhshani, T. Le-Ngoc, and M. Nasiri-Kenari, "Efficient Cooperative Cyclostationary Spectrum Sensing in Cognitive Radios at Low SNR Regimes," *Wireless Communications, IEEE Transactions on*, vol. 10, pp. 3754-3764, 2011.
52. Z. Zeinalpour-Yazdi, M. Nasiri-Kenari, and B. Aazhang, "Bit error probability analysis of UWB communications with a relay node," *Wireless Communications, IEEE Transactions on*, vol. 9, pp. 802-813, 2010.
53. A. Taherpour, M. Nasiri-Kenari, and S. Gazor, "Multiple antenna spectrum sensing in cognitive radios," *Wireless Communications, IEEE Transactions on*, vol. 9, pp. 814-823, 2010.
54. M. Karimi and M. Nasiri-Kenari, "Outage analysis of relay-assisted free-space optical communications," *Communications, IET*, vol. 4, pp. 1423-1432, 2010.
55. S. Golrezaei-Khuzani and M. Nasiri-Kenari, "Orthogonal frequency division multiple access-based cognitive radio networks with relaying capability," *Communications, IET*, vol. 4, pp. 395-409, 2010.
56. H. Charmchi and M. Nasiri-Kenari, "Achievable rates with quantised channel state information in a multiple-access channel with one cognitive transmitter," *Communications, IET*, vol. 4, pp. 1373-1380, 2010.
57. Z. Zeinalpour-Yazdi, M. Nasiri-Kenari, B. Aazhang, J. Wehinger, and C. F. Mecklenbrauker, "Bounds on the delay-constrained capacity of UWB communication with a relay node," *Wireless Communications, IEEE Transactions on*, vol. 8, pp. 2265-2273, 2009.
58. A. Taherpour, S. Gazor, and M. Nasiri-Kenari, "Invariant wideband spectrum sensing under unknown variances," *Wireless Communications, IEEE Transactions on*, vol. 8, pp. 2182-2186, 2009.
59. F. S. Tabataba and M. Nasiri-Kenari, "Internally coded time-hopping coherent ultra-short light pulse code division multiple access scheme with optical amplifier and its performance analysis using additive noise model," *Communications, IET*, vol. 3, pp. 75-82, 2009.
60. M. G. Shayesteh and M. Nasiri-Kenari, "Multiple-Access Performance Analysis of Combined Time-Hopping and Spread-Time CDMA System in the Presence of Narrowband Interference," *Vehicular Technology, IEEE Transactions on*, vol. 58, pp. 1315-1328, 2009.
61. M. Karimi, M. Nasiri-Kenari, F. S. Tabataba, and S. M. Aghajanzadeh, "Multistage decoding for an internally coded fibre-optic time-hopping/optical code division multiple access communication system," *Communications, IET*, vol. 3, pp. 655-665, 2009.
62. M. Karimi and M. Nasiri-Kenari, "An internally coded TH/OCDMA scheme for fiber optic communication systems and its performance analysis-part II: using frame time hopping code," *Communications, IEEE Transactions on*, vol. 57, pp. 50-55, 2009.
63. M. Karimi and M. Nasiri-Kenari, "BER Analysis of Cooperative Systems in Free-Space Optical Networks," *Lightwave Technology, Journal of*, vol. 27, pp. 5639-5647, 2009.
64. A. Taherpour, S. Gazor, and M. Nasiri-Kenari, "Wideband spectrum sensing in unknown white Gaussian noise," *Communications, IET*, vol. 2, pp. 763-771, 2008.

65. M. G. Shayesteh and M. Nasiri-Kenari, "Internally coded multicarrier frequency-hopping CDMA communication system and its performance analysis," *Communications, IET*, vol. 2, pp. 255-265, 2008.
66. A. Jamshidi and M. Nasiri-Kenari, "Performance Analysis of Transmitter-Side Cooperation&#x2013;Receiver-Side-Relaying Schemes for Heterogeneous Sensor Networks," *Vehicular Technology, IEEE Transactions on*, vol. 57, pp. 1548-1563, 2008.
67. A. Taherpour, Y. Norouzi, M. Nasiri-Kenari, A. Jamshidi, and Z. Zeinalpour-Yazdi, "Asymptotically optimum detection of primary user in cognitive radio networks," *Communications, IET*, vol. 1, pp. 1138-1145, 2007.
68. F. S. Tabataba, S. M. Aghajanzadeh, M. Nasiri-Kenari, and M. Karimi, "Performance Analysis of Internally Coded Time-Hopping Coherent Ultrashort Light Pulse CDMA Scheme in Fiber-Optic Communication Systems," *IEEE Lightwave Technology, Journal of*, vol. 25, pp. 1095-1106, 2007.
69. A. Nezampour, M. Nasiri-Kenari, and M. G. Shayesteh, "Internally coded TH--UWB--CDMA system and its performance evaluation," *Communications, IET*, vol. 1, pp. 225-232, 2007.
70. M. Karimi and M. Nasiri-Kenari, "An Internally Coded TH/OCDMA Scheme for Fiber Optic Communication Systems and Its Performance Analysis&mdash;Part I: Using Optical Orthogonal Code," *Communications, IEEE Transactions on*, vol. 55, pp. 333-344, 2007.
71. A. Jamshidi, M. Nasiri-Kenari, Z. Zeinalpour, and A. Taherpour, "Space-frequency coded cooperation in OFDM multiple-access wireless networks," *Communications, IET*, vol. 1, pp. 1152-1160, 2007.
72. Z. Zeinalpour-Yazdi and M. Nasiri-Kenari, "Performance analysis and comparisons of different ultra-wideband multiple access modulation schemes," *Communications, IEE Proceedings-*, vol. 153, pp. 705-718, 2006.
73. M. Nasiri-Kenari and M. G. Shayesteh, "Performance analysis and comparison of different multirate TH-UWB systems: uncoded and coded schemes," *Communications, IEE Proceedings-*, vol. 152, pp. 833-844, 2005.
74. A. R. Forouzan, M. Nasiri-Kenari, and N. Rezaee, "Frame time-hopping patterns in multirate optical CDMA networks using conventional and multicode schemes," *Communications, IEEE Transactions on*, vol. 53, pp. 863-875, 2005.
75. P. Azmi, M. Nasiri-Kenari, and J. A. Salehi, "Internally channel-coded framed time-hopping fiber-optic CDMA communications," *Lightwave Technology, IEEE Journal of*, vol. 23, pp. 3702-3707, 2005.
76. K. R. Rad and M. Nasiri-Kenari, "Iterative detection for V-BLAST MIMO communication systems based on expectation maximisation algorithm," *IEE Electronics Letters*, vol. 40, pp. 684-685, 2004.
77. A. S. Motahari and M. Nasiri-Kenari, "Multiuser detections for optical CDMA networks based on expectation-maximization algorithm," *Communications, IEEE Transactions on*, vol. 52, pp. 652-660, 2004.

78. M. Ebrahimi and M. Nasiri-Kenari, "Performance analysis of multicarrier frequency-hopping (MC-FH) code-division multiple-access systems: uncoded and coded schemes," *Vehicular Technology, IEEE Transactions on*, vol. 53, pp. 968-981, 2004.
79. P. Azmi, M. Nasiri-Kenari, and J.A. Salehi, "Soft-Input Decoder for Decoding of Poisson-Noise Internally Channel Coded Fiber-Optic CDMA Communication Systems," *Communications, IEEE Trans. on*, Vol. 50, pp. 1994-2002, Dec. 2002.
80. P. Azmi, M. Nasiri-Kenari, and J.A. Salehi, "Multistage Decoding for Internally Bandwidth Efficient Coded Fiber-Optic CDMA Communication Systems," *Light wave Technology, IEEE Journal of*, Aug. 2002, pp. 1342- 1350.
81. A. R Forouzan, J.A. Salehi and M. Nasiri-Kenari, "Frame Time-Hopping Fiber-Optic Code Division Multiple-Access Using Generalized Optical Orthogonal Codes," *Communications, IEEE Trans. on*, Vol. 50, pp. 1971-1983, Dec. 2002.
82. H. Farmanbar and M. Nasiri-Kenari, "Iterative Multiuser Detection and Decoding for Coded CDMA Systems in Frequency-Selective Fading Channels," *Communications, IEICE Trans. on*, Vol. 85., 2002
83. M. G. Shayesteh, J.A. Salehi, and M. Nasiri-Kenari, "Spread-Time CDMA Resistance in Fading Channels," *Wireless Communications, IEEE Trans. on*, Vol. 2, pp. 446-458, May. 2003.
84. Amir R. Forouzan, M. Nasiri-Kenari, and J.A. Salehi, "Performance Analysis of Time Hopping Spread-Spectrum Multiple Access Systems: Uncoded and Coded Schemes," *Wireless Communications, IEEE Trans. on*, pp. 671-682, Oct. 2002.
85. P. Azmi, M. Nasiri-Kenari, "Narrow-Band Interference Suppression in CDMA Spread-Spectrum Communication Systems Based on Sub-Optimum Unitary Transforms," *Communications, IEICE Trans. on*, Vol. 85-B, pp. 239-247, Jan. 2002.
86. P. Azmi, M. Nasiri-Kenari, "A Generalized Fourier Transform-Domain Technique for Narrow- Band Interference Suppression in CDMA Communication Systems," *IEE ELECTRONICS LETTERS*, May. 2001.
87. M. Ebrahimi and M. Nasiri-Kenari, "Iterative Interference Cancellation for a Coded Multicarrier FH-CDMA Systems," appeared in *Scientia* 2004.
88. R. Nikjah and M. Nasiri-Kenari, "Unified Multiple-Access Performance Analysis of Several Multi-rate Multicarrier," appeared in *Scientia* 2004.
89. H. R. Ahmadi, M. Nasiri-Kenari, and M. G. Shayesteh, "Performance Analysis of Time Hopping Ultra-Wideband Systems," appeared in *Scientia*. 2004.
90. P. Azmi, M. Nasiri-Kenari, and J.A. Salehi, "Low-rate Super Orthogonal Channel Coding for Fiber-Optic CDMA Communication Systems," *Light wave Technology, IEEE Journal of*, June. 2001.
91. M. J. Borran and M. Nasiri-Kenari, "An Efficient Detection Technique for Synchronous CDMA Communication Systems based on Expectation Maximization Algorithm," *Vehicular Tech, IEEE Trans. on*, Vol. 49, Sept. 2000.

92. M. Nasiri-Kenari, R.R. Sylvester, and C.K. Rushforth, "An Efficient Soft-In-Soft-Out Multi User Detector for Synchronous CDMA with Error Correcting Codes," *Vehicular Tech, IEEE Trans. on*, Vol. 47, Aug. 1998.
93. M. Nasiri-Kenari et al., "A Reduced Complexity Sequence Detector with Soft Outputs for Partial-Response Channels," *Communications, IEEE Trans. on*, Vol. 44, Dec. 1996.
94. M. Nasiri-Kenari, et al., "A Class of DC-Free Subcodes of Convolutional Codes," *Communications, IEEE Trans. on*, Vol. 44, Nov. 1996.
95. M. Nasiri-Kenari, et. al., "Matched Spectral-Null Codes with Soft-Decision Outputs," *Communications, IEEE Trans. on*, Vol. 43, Feb. 1995.
96. M. Nasiri-Kenari, et al., "Some Construction Methods for Error-Correcting (d,k) Codes," *Communications, IEEE Trans. on*, Vol. 42, Feb. 1994.

### **Refereed Conferences (last 10 years)**

1. H. Abin, A. Gohari, and M. Nasiri-Kenari, "Molecular communication over a non-linear reaction-diffusion medium: A tractable model," 2020 IEEE Global Communications Conference (GLOBECOM 2020), 2020.
2. L. Khaloopour, M. Mirmohseni, and M. Nasiri-Kenari, "Cooperative abnormality detection in fluidic medium molecular communication," in *2020 Iran Workshop on Communication and Information Theory (IWCIT)*, pp. 1–6, IEEE, 2020.
3. F. Mokhtari, M. Mirmohseni, F. Ashtiani, and M. Nasiri-Kenari, "Resource allocation in cognitive radio inspired non-orthogonal multiple access," in *2019 Iran Workshop on Communication and Information Theory (IWCIT)*, pp. 1–6, IEEE, 2019.
4. R. Mosayebi, W. Wicke, V. Jamali, A. Ahmadzadeh, R. Schober, and M. Nasiri-Kenari, "Advanced target detection via molecular communication," in *2018 IEEE Global Communications Conference (GLOBECOM)*, pp. 1–7, IEEE, 2018.
5. L. Khaloopour, M. Mirmohseni, M. Nasiri-Kenari, "An adaptive pulse-width modulation for limited molecule production and storage," *Iran Workshop on Communication and Information Theory (IWCIT)*, 2018
6. N. Abadi, A. A. Gohari, M. Mirmohseni, M. Nasiri-Kenari, "Zero-error codes for multi-type molecular communication in random delay channel," *Iran Workshop on Communication and Information Theory (IWCIT)*, 2018
7. S. M. Azimi-Abarghouyi, B. Makki, M. Haenggi, M. Nasiri-Kenari, T. Svensson, "Coverage analysis of finite cellular networks: A stochastic geometry approach," *Iran Workshop on Communication and Information Theory (IWCIT)*, 2018
8. G. Aminian, H. Ghourchian, A. Gohari, M. Mirmohseni, and M. Nasiri-Kenari, "on the capacity of signal dependent noise channels," *Iran Workshop on Communication and Information Theory (IWCIT)*, 2017
9. R. Mosayebi, A. Gohari, M. Mirmohseni and M. N. Kenari, "Type based sign modulation for molecular communication," *2016 Iran Workshop on Communication and Information Theory (IWCIT)*, Tehran, 2016, pp. 1-6.
10. H. Arjmandi, V. Jamali, A. Ahmadzadeh, A. Burkovski, R. Schober and M. N. Kenari, "Ion pump based bio-synthetic modulator model for diffusive molecular

- communications," *2016 IEEE 17th International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, Edinburgh, 2016, pp. 1-6.
11. M. F. Ghazani, G. Aminian, M. Mirmohseni, A. Gohari and M. N. Kenari, "Physical layer network coding in molecular two-way relay networks," *2016 Iran Workshop on Communication and Information Theory (IWCIT)*, Tehran, Iran, 2016, pp. 1-6.
  12. B. Makki, C. Fang, T. Svensson and M. Nasiri-Kenari, "On the performance of amplifier-aware dense networks: Finite block-length analysis," *2016 International Conference on Computing, Networking and Communications (ICNC)*, Kauai, HI, 2016, pp. 1-5.
  13. G. Aminian, M. Mirmohseni, M. Nasiri Kenari and F. Fekri, "On the capacity of level and type modulations in Molecular communication with ligand receptors," *2015 IEEE International Symposium on Information Theory (ISIT)*, Hong Kong, 2015, pp. 1951-1955.
  14. G. Aminian, H. Arjmandi, A. Gohari, M. N. Kenari and U. Mitra, "Capacity of LTI-Poisson channel for diffusion based molecular communication," *2015 IEEE International Conference on Communications (ICC)*, London, 2015, pp. 1060-1065.
  15. M. Movahednasab, M. Soleimanifar, A. Gohari, M. N. Kenari and U. Mitra, "Adaptive molecule transmission rate for diffusion based molecular communication," *2015 IEEE International Conference on Communications (ICC)*, London, 2015, pp. 1066-1071.
  16. R. Mosayebi, H. Arjmandi, A. Gohari, M. N. Kenari and U. Mitra, "Diffusion based molecular communication: A simple near optimal receiver," *Communication and Information Theory (IWCIT)*, *2014 Iran Workshop on*, Tehran, 2014, pp. 1-4.
  17. H. Omidvar, F. Ashtiani, T. Javidi, M. Nasiri-Kenari and B. V. Vahdat, "An energy-efficient multi-sensor scheduling mechanism with QoS support for WBANs," *2014 IEEE Wireless Communications and Networking Conference (WCNC)*, Istanbul, 2014, pp. 1703-1708.
  18. H. Shokri-Ghadikolaei and M. Nasiri-Kenari, "Optimal and suboptimal sensing sequences in multiuser cognitive radio networks," in *Telecommunications (IST)*, *2012 Sixth International Symposium on*, 2012, pp. 243-248.
  19. H. Shokri-Ghadikolaei, Y. Abdi, and M. Nasiri-Kenari, "Learning-based spectrum sensing time optimization in cognitive radio systems," in *Telecommunications (IST)*, *2012 Sixth International Symposium on*, 2012, pp. 249-254.
  20. A. H. Salati, M. Nasiri-Kenari, and P. Sadeghi, "Distributed subband, rate and power allocation in OFDMA based two-tier femtocell networks using Fractional Frequency Reuse," in *Wireless Communications and Networking Conference (WCNC)*, *2012 IEEE*, 2012, pp. 2626-2630.
  21. Z. Zeinalpour-Yazdi, M. Nasiri-Kenari, and B. Aazhang, "Performance evaluation of a relay network with UWB links exploiting time-reversal technique," in *Ultra Modern Telecommunications and Control Systems and Workshops (ICUMT)*, *2011 3rd International Congress on*, 2011, pp. 1-8.
  22. N. Golrezaei, P. Mansourifard, and M. Nasiri-Kenari, "Multi-Carrier Based Cooperative Cognitive Network," in *Vehicular Technology Conference (VTC Spring)*, *2011 IEEE 73rd*, 2011, pp. 1-5.
  23. P. Mansourifard and M. Nasiri-Kenari, "Throughput analysis of multiple-access-relay channel based on rateless coding," in *Telecommunications (IST)*, *2010 5th International Symposium on*, 2010, pp. 292-296.

24. M. Derakhshani, M. Nasiri-Kenari, and T. Le-Ngoc, "Cooperative Cyclostationary Spectrum Sensing in Cognitive Radios at Low SNR Regimes," in *Communications (ICC), 2010 IEEE International Conference on*, 2010, pp. 1-5.
25. Z. Zeinalpour-Yazdi, M. Nasiri-Kenari, and B. Aazhang, "BER derivation for UWB communication with a relay node in the presence of inter-channel interference," in *Advanced Networks and Telecommunication Systems (ANTS), 2009 IEEE 3rd International Symposium on*, 2009, pp. 1-3.
26. M. G. Shayesteh and M. Nasiri-Kenari, "Performance Analysis of an Internally Coded Time-Hopping Spread-Time CDMA System in the Presence of Interference," in *Consumer Communications and Networking Conference, 2008. CCNC 2008. 5th IEEE*, 2008, pp. 430-434.
27. S. Manaffam and M. Nasiri-Kenari, "M-ary Frequency Shifted Reference for Ultra-wideband communication systems," in *Telecommunications, 2008. IST 2008. International Symposium on*, 2008, pp. 251-256.
28. H. Charmchi and M. Nasiri-Kenari, "Achievable rates for two interfering broadcast channels with a cognitive transmitter," in *Information Theory, 2008. ISIT 2008. IEEE International Symposium on*, 2008, pp. 1358-1362.
29. M. A. Sedaghat, M. N. Kenari, "Code-shifted reference for internally coded time hopping UWB communication system," *Telecommunications, 2008. IST 2008. International Symposium on*, vol., no., pp.214,218, 27-28 Aug. 2008.
30. A. Taherpour, M. Nasiri-Kenari, and A. Jamshidi, "Efficient Cooperative Spectrum Sensing in Cognitive Radio Networks," in *Personal, Indoor and Mobile Radio Communications, 2007. PIMRC 2007. IEEE 18th International Symposium on*, 2007, pp. 1-6.
31. M. G. Shayesteh and M. Nasiri-Kenari, "An Internally Coded Time-Hopping Spread-Time CDMA Scheme for UWB Systems and its Performance Analysis," in *Radio and Wireless Symposium, 2007 IEEE*, 2007, pp. 511-514.
32. M. G. Shayesteh and M. Nasiri-Kenari, "Performance analysis of an internally coded MC-FH-CDMA system," in *Telecommunications and Malaysia International Conference on Communications, 2007. ICT-MICC 2007. IEEE International Conference on*, 2007, pp. 23-28.
33. M. Mirmohseni, M. Nasiri-Kenari, and M. G. Shayesteh, "Performance analysis of internally coded partial-band DS-SS-CDMA system in multipath Rayleigh fading channel," in *Telecommunications and Malaysia International Conference on Communications, 2007. ICT-MICC 2007. IEEE International Conference on*, 2007, pp. 29-34.
34. A. Jamshidi, M. Nasiri-Kenari, and A. Taherpour, "Outage Probability Analysis of a Coded Cooperative OFDM System in Multipath Rayleigh Fading Channels," in *Personal, Indoor and Mobile Radio Communications, 2007. PIMRC 2007. IEEE 18th International Symposium on*, 2007, pp. 1-6.
35. S. Barghi and M. Nasiri-Kenari, "Performance Analysis and Comparison of Coded FH/MC-CDMA and MC-CDMA Communication System," in *Personal, Indoor and Mobile Radio Communications, 2007. PIMRC 2007. IEEE 18th International Symposium on*, 2007, pp. 1-5.
36. Z. Zeinalpour-Yazdi, M. Nasiri-Kenari, J. Wehinger, and C. F. Mecklenbrauker, "Upper Bounds on the Ergodic and Outage Capacities of Relay Networks Using UWB Links," in

- Signals, Systems and Computers, 2006. ACSSC '06. Fortieth Asilomar Conference on, 2006*, pp. 646-650.
37. M. G. Shayesteh and M. Nasiri-Kenari, "A new TH/DS-CDMA scheme for UWB communication systems and its performance analysis," in *Radio and Wireless Symposium, 2006 IEEE, 2006*, pp. 147-150.
  38. M. Mirmohseni, M. Nasiri-Kenari, and M. G. Shayesteh, "An internally coded partial-band DS-CDMA system and its performance analysis," in *Ultra-Wideband, 2005. ICU 2005. 2005 IEEE International Conference on, 2005*, pp. 38-42.
  39. Z. Z. Yazdi and M. Nasiri-Kenari, "Performance comparison of coherent and non-coherent multicarrier frequency-hopping code division multiple-access systems," in *Personal, Indoor and Mobile Radio Communications, 2004. PIMRC 2004. 15th IEEE International Symposium on, 2004*, pp. 165-169 Vol.1.
  40. Z. Z. Yazdi and M. Nasiri-Kenari, "Multiuser performance comparisons of fast frequency hopping and multicarrier slow frequency hopping systems: uncoded and coded schemes," in *Vehicular Technology Conference, 2004. VTC2004-Fall. 2004 IEEE 60th, 2004*, pp. 1894-1898 Vol. 3.
  41. Z. Z. Yazdi and M. Nasiri-Kenari, "Performance analysis of non-coherent multicarrier frequency-hopping code division multiple-access systems: uncoded and coded schemes," in *Spread Spectrum Techniques and Applications, 2004 IEEE Eighth International Symposium on, 2004*, pp. 305-309.
  42. Z. Taghavi and M. Nasiri-Kenari, "Iterative multiuser receiver for coded MC-FH multiple access systems in the presence of partial-band interference," in *Vehicular Technology Conference, 2004. VTC2004-Fall. 2004 IEEE 60th, 2004*, pp. 1899-1903 Vol. 3.
  43. K. R. Rad and M. Nasiri-Kenari, "Expectation maximization based detection for V-BLAST MIMO communication systems and performance evaluation," in *Spread Spectrum Techniques and Applications, 2004 IEEE Eighth International Symposium on, 2004*, pp. 255-259.
  40. Shayesteh, M.G.; Nasiri Kenari, M., "Various multirate time-hopping UWB systems and performance evaluation," *Spread Spectrum Techniques and Applications, 2004 IEEE Eighth International Symposium on*, vol., no., pp.120,124, 30 Aug.-2 Sept. 2004.