Abdorasoul Ghasemi

CONTACT INFORMATION	Department of Computer Engineering K.N. Toosi University of Technology Tehran, 1631714191, Iran	*Voice:* (+98) 912-647-1954 *LinkdIn:* www.linkedin.com/in/abdorasoul-ghasemi-914976139 *E-mail:* arghasemi@gmail.com *WWW:* wp.kntu.ac.ir/arghasemi

RESEARCH INTERESTS

Network science and its engineering applications

Computer and Communication Networks

Complex social and technological systems

Performance evaluation of computer systems

EDUCATION

Amirkabir University of Technology (Tehran Polytechnique), Tehran, Iran

Ph.D., Electrical Engineering, Computer and Communication Networks, Oct. 2008
Dissertation Topic: "Analysis and Development of Cross Layer Power Control and Resource Allocation Scheme for MultiHop Wireless Networks"

M.Sc., Electrical Engineering, 2003
Dissertation Topic: "Navigation of Mobile Robots Based on Stereo Images"

Isfahan University of Technology, Isfahan, Iran

B.Sc.: Electrical Engineering, Sep. 2001

ACADEMIC EXPERIENCE

K.N. Toosi University of Technology, Tehran, Iran

Associate Professor, Nov. 2016 - present
Assistant Professor, Sep. 2009 - Nov. 2016

University of California, Davis, Davis, CA, USA

Visiting Professor, April 2017- Sep. 2018

PUBLICATIONS

Books

A. Ghasemi, *Analytical Principles of Computer Networks,* (In Persian) KNTU Press, 2015.

Journal Publications

1. A. Ghasemi, M. Posfai, and R. M. D'Souza, "Control complexity: Diversities in structural controllability of complex networks with given degree sequence," arXiv preprint arXiv: 1905.06581, 2019.

2. G. García-Pérez, R. Aliakbarisani, A. Ghasemi, M. Serrano, "Predictability of missing links in complex networks," arXiv preprint arXiv:1902.00035, 2019.

3. Z. Alavikia, A. Ghasemi, "Pool Resource Management Based on Early Collision Detection in Random Access of Massive MTC over LTE " *Ad Hoc Networks*, In Press, DOI: j.adhoc.2019.101883

4. R. Aliakbari, A. Ghasemi, and S. F. Wu, "A Data-Driven Metric Learning Based Scheme for Unsupervised Network Anomaly Detection," *Computers and Electrical Engineering,* vol. 73, pp.71-83, 2019.

5. Z. Alavikia, A. Ghasemi, "Random multiple data packets transmission scheme in LTE-based machine-type communications" *Computer Communications*, Vol. 129, pp. 152-165, 2018.

6. Z. Alavikia, Ghasemi A., "Collision-Aware Resource Access Scheme for LTE-Based Machine-to-Machine Communications, *IEEE Transactions on Vehicular Technology,* vol. 67, no. 5, pp. 4683-8, 2018.

7. M. Zarrini, A. Ghasemi, "Loss and delay analysis of non-Poisson M2M traffic over LTE networks", *Transactions on Emerging Telecommunications Technologies,* 29.2 (2018): e3273.

8. F. Morvari, A. Ghasemi, "Priority-based adaptive access barring for M2M communications in LTE networks using learning automata," *International Journal of Communication Systems* 30.16 (2017): e3325.

9. Z. Alavikia, A. Ghasemi, "A Multiple Power Levels Random Access Method for M2M Communications in LTE/LTE-A Network," *Transactions on Emerging Telecommunications Technologies* 28.6 (2017): e3137. 2016.

10. M. Fahimi, A. Ghasemi, "A Distributed Learning Automata Scheme for Spectrum Management in Self-Organized Cognitive Radio Network", *IEEE Trans. Mobile Computing*, vol. 16, no. 6, pp. 1490 - 1501, 2017.

11. Z. Alavikiav, A. Ghasemi, "Overload Control in the Network Domain of LTE/LTE-A Based Machine Type Communications", *Wireless Networks*, 24.1, 1-16, 2018.

12. F. Morvari, A. Ghasemi, "Two-Stage Resource Allocation for Random Access M2M Communications in LTE Network", *IEEE Communications Letter*,VOL. 20, NO. 5, pp. 982-985, May 2016.

13. S. Haddadi, A. Ghasemi, "A Pricing Based Stackelberg Game for Spectrum Trading in Heterogeneous Networks", *IET Communications*, doi: 10.1049/iet-com.2016.0033, 2016.

14. A. Ghasemi, M. Mollaei, "A MinMax Routing Algorithm for Long Life Route Selection in MANETs" *International Journal Of Information and Communication Technology*, vol. 7, no. 4, pp.17-25, 2015.

15. M. Fahimi, A. Ghasemi, "Joint Spectrum Load Balancing and Handoff Management in Cognitive Radio Networks: A Non-Cooperative Game Approach" *Wireless Networks,*, DOI 10.1007/s11276-015-1023-z, 2016.

16. N. Razmi, M. Ahmadian Attari, E. Soleimani-Nasab, A. Ghasemi, "Single and Dual Relay Selection in Two-Way Network-coded Relay Networks," *Wireless Pers Commun,*, Volume 83, Issue 1, pp 99-115, July 2015.

17. A. Radmehr, A. Ghasemi, "Error concealment via particle filter by Gaussian mixture modeling of motion vectors for H. 264/AVC" *Signal, Image and Video Processing*, DOI 10.1007/s11760-014-0743-3, 2015.

18. S. M. Mirrezaei, K. Faez, A. Ghasemi, "Performance Analysis of Network Coding Based Two-Way Relay Wireless Networks Deploying IEEE 802.11," *Wireless Pers Commun,*, DOI 10.1007/s11277-013-1485-1 , 2013.

19. A. Ghasemi, M. Fahimi, "A Mobility Based Cooperative MAC Protocol for Wireless Networks," *International Journal Of Information and Communication Technology*, vol. 4, Issue 5, pp. 1-9, 2012.

20. H. Bizhani, A. Ghasemi, "Joint Admission Control and Channel Selection Based on Multi Response Learning Automata (MRLA) in Cognitive Radio Networks," *Wireless Pers Commun,*, DOI 10.1007/s11277-012-0834-9, 2012

21. M. F. Farahani, A. Ghasemi, S. M. Razavizadeh, "Sequential Interference-Aware Admission Control in Power Controlled Underlay Cognitive Radio Networks," *International Journal Of Information and Communication Technology*, vol. 2, Issue 4, pp. 33-40, 2010.

22. A. Ghasemi, S. M. Razavizadeh,"A Simple MAC Protocol for Cognitive Wireless Networks", IEICE Trans. Commu, Vol. E92-B, No. 12, Dec. 2009.

23. A. Ghasemi, K. Faez, "A Game Theoretic Algorithm for Power-Aware MAC in Ad Hoc Wireless Networks," *Computer Communications (Elsevier)* 33 (2010) 1440-1451, 2010.

24. A. Ghasemi, K. Faez, "Power-Aware MAC for Multihop Wireless Networks: A Cross Layer Approach," *IEEE Trans. on Wireless Commu.,* VOL. 7, NO. 10, pp. 3917-3929, Oct. 2008.

25. A. Ghasemi, K. Faez, "Jointly Rate and Power Control in Contention Based Multihop Wireless Networks," *Computer Communications (Elsevier)*, Vol. 30, Issue 9, pp. 2021-2031, 2007.

Conference Presentations

1. Z. Alavikia and A. Ghasemi, "Performance Evaluation of Preamble Detection in LTE Network for Massive MTC", *Iranian Conference on Electrical Engineering (ICEE),* 2018.

2. S. Haddadi and A. Ghasemi, "Coordinated multi-point joint transmission evaluation in heterogenous cloud radio access networks," *Iranian Conference on Electrical Engineering (ICEE),* 2017.

3. F. Morvari and Abdorasoul Ghasemi, "Learning Automaton based Adaptive Access Barring for M2M Communications in LTE Network", *24th Iranian Conference on Electrical Engineering (ICEE),* 2016.

4. B. Hassanpour and Abdorasoul Ghasemi, "Online Load Estimation for Efficient Random Access of Machine Type Communications in LTE Networks", *24th Iranian Conference on Electrical Engineering (ICEE),* 2016.

5. Mina Fahimi and Abdorasoul Ghasemi, "Analysis of the PRP M/G/1 Queuing System for Cognitive Radio Networks with Handoff Management" *22th Iranian Conference on Electrical Engineering (ICEE),* 2014.

6. Ali Radmehr, Abdorasoul Ghasemi, "A novel video error concealment technique using modified boundary matching algorithm with correlation function," *21th Iranian Conference on Electrical Engineering (ICEE),* 2013.

7. Maryam Sadat Rasouli Danesh, Abdorasoul Ghasemi, "Robust and energy efficient clock synchronization scheme for wireless sensor networks," *21th Iranian Conference on Electrical Engineering (ICEE),* 2013.

8. Hosein Aghajani, Abdorasoul Ghasemi, "A congestion-game based scheme for handoff management in cognitive radio networks," *21th Iranian Conference on Electrical Engineering (ICEE),* 2013.

9. A. Ghasemi, "Call Admission Control based on stability criterion for wireless cellular networks," *19th Iranian Conference on Electrical Engineering (ICEE),* 2011.

10. A. Ghasemi, K. Faez, "A Nash Power-Aware MAC Game for Ad Hoc Wireless Networks," In Proc. of IEEE PIMRC 2008.

11. A. Ghasemi, K. Faez, "Power-Aware MAC for Multihop Wireless Networks, A Cross Layer Approach," In Proc. Of IEEE icc07, 2007.

12. A. Ghasemi, K. Faez, "Opportunistic Power Control for Wireless Ad hoc Networks," Iranian Conference on Electrical Engineering (ICEE), Tehran, Iran, 2007.

13. A. Ghasemi, K. Faez, M. Dehghan, "A New Pricing Function for Power Control Game in Wireless Data Networks," In Proc. Of IEEE VTC Fall 2006.

14. A. Ghasemi, K. Faez, "A New Batch End to End LSP Setup in MPLS Networks," International symposium on telecommunication (IST), Shiraz, Iran, 2005.

15. A. Ghasemi, K. Faez, "Classification of Normal and PVC-Heart Beat Using DCT-Time Domain Features and SVM Classifier," Eighth International Conference on Pattern Recognition and Information Processing, May 18-20, Minsk, Belarus, 2005.

16. A. Ghasemi, A. Raie, "Extracting and Matching Line Segments in Stereo Images to Produce Ground Map For Mobile Robots," In the 12th Iranian Conference on Electrical Engineering (ICEE) Mashhad, Iran, 2004.

17. A. Raie, A. Ghasemi, "Navigation of Mobile Robots Using Stereo Images," In Proceedings of 6th Society of Manufacturing Engineering of Iran (SMEIR), Tehran, Iran, 2004.

TEACHING EXPERIENCE	Advanced Computer Networks (Graduate), K.N. Toosi university of Technology
	Performance Evaluation of Computer Systems (Graduate), K.N. Toosi university of Technology
	Computer Networks, K.N. Toosi university of Technology
	Data Communications, K.N. Toosi university of Technology
	Digital Logic, K.N. Toosi university of Technology
	Multimedia Systems, K.N. Toosi university of Technology
CURRICULAR DEVELOPMENT	Developing new graduate course, "Networks theory and engineering applications" In progress.
SERVICE EXPERIENCE	Chair of computer department, Faculty of electrical engineering, K.N. Toosi university of technology (KNTU), 2012-2015
	Editorial board of cloud computing and information technology journal (in Persian), Computer Society of Iran, 2017-present.
	Director of multimedia research laboratory, KNTU, 2011-present
	Adviser of two Ph.D. students in EE and CE departments at KNTU
	Adviser of 25 master of science dissertation in computer engineering at KNTU
	Recurring Comp. exam member of EE and CE departments at KNTU
	Scientific committee member of 25th Iranian Conference on Electrical Engineering (ICEE2017)
COMPUTER SKILLS	Languages: Python, MATLAB, and C++
	Networks Packages: igraph
HONORS AND AWARDS	Ranked 1st among M.Sc. graduate students in the Electrical Engineering department of AmirKabir university of technology, 2003.
	Ranked 1st among BS. graduate students in the Electronic group of Electrical and Computer Engineering department of Isfahan University of technology, 2001.
	Ranked 348st among 251,000 participants in the 1997 nationwide university entrance exam for undergraduate studies
REFEREE DUTIES	Referee for: IEEE JSAC, IEEE Trans. Wireless Communications, IEEE Trans. Communications, IEEE Trans. Mobile Computing, IEEE. Trans. Vehicular Technology, IEEE Communications Letters, Ad Hoc Networks, IET Networks, Computer Communications,