

# MAZEN O. HASNA, PH.D.

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## SYNOPSIS

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Dr. Mazen Hasna has about twelve years of academic experience, and has a distinguished record in research, teaching, and education leadership.

In particular, Dr. Hasna has an outstanding research profile resulted in being on the 2015 highly cited list of Thomson Reuters. He has an H-index of 18 with a record of more than 120 indexed publications. His pioneering work on cooperative communication and relayed transmission has around 3000 citations, with a single paper on performance analysis of dual hop systems receiving more than 1000 citations. On top of that, Dr. Hasna has received research grants in the last 10 years worth of more than \$5M. He contributed to many IEEE conferences and journals, and he is the general chair of WCNC 2016 that will be held in Doha in April, 2016. On the service side, Dr. Hasna has led a project to build a low cost wireless network in the Comoros Islands to help connecting the three islands and to enable internet connectivity to distance and low gifted areas. In addition, Dr. Hasna is the co-founder of Qatar Mobility Innovation Center, an applied research center promoting the innovations in the wireless and mobile communications area which resides in Qatar Science and Technology Park. The center was recently valued to worth more than \$40M.

## EDUCATION

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**9/1999-8/2003**

**UNIVERSITY OF MINNESOTA (UMN), MN, USA**

*PH.D. IN ELECTRICAL ENGINEERING (DIGITAL WIRELESS COMMUNICATIONS)*

- Thesis "Selected Topics in the Performance Analysis of Wireless Communication Systems"

**8/1996-5/1998**

**UNIVERSITY OF SOUTHERN CALIFORNIA (USC), CA, USA**

*M.SC. IN ELECTRICAL ENGINEERING*

**9/1989-6/1994**

**QATAR UNIVERSITY, QATAR**

*B.SC. IN ELECTRICAL ENGINEERING*

- Distinction with honor class; GPA=4.98/5

## EMPLOYMENT

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<b>02/2013-Now</b> <i>VICE PRESIDENT AND CHIEF ACADEMIC OFFICER</i>	<b>QATAR UNIVERSITY</b>
<b>11/2012-02/2013</b> <i>ACTING VICE PRESIDENT AND CHIEF ACADEMIC OFFICER</i>	<b>QATAR UNIVERSITY</b>
<b>7/2008-11/2012</b> <i>DEAN, COLLEGE OF ENGINEERING</i>	<b>QATAR UNIVERSITY</b>
<b>5/2007-7/2008</b> <i>ASSOCIATE DEAN FOR ACADEMIC AFFAIRS, COLLEGE OF ENGINEERING</i>	<b>QATAR UNIVERSITY</b>
<b>5/2005-5/2007</b> <i>HEAD, ELECTRICAL ENGINEERING DEPARTMENT</i>	<b>QATAR UNIVERSITY</b>
<b>9/2003-5/2005</b> <i>ASSISTANT PROFESSOR, ELECTRICAL ENGINEERING DEPARTMENT</i>	<b>QATAR UNIVERSITY</b>
<b>9/1999-8/2003</b> <i>RESEARCH/TEACHING ASSISTANT</i>	<b>UNIVERSITY OF MINNESOTA (UMN), MN, USA</b>
<b>1/1995-9/1996</b> <i>TEACHING ASSISTANT</i>	<b>QATAR UNIVERSITY</b>

## AWARDS

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- IEEE ICTC 2015 service award
- 2002 Mathew-Huber Award for excellence in transportation research and education, Center for Transportation Studies, UMN, USA.
- Ministry of Education graduate studies scholarship (1996-2003)

## TEACHING

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- Taught the following courses:
  - o Probability and Statistics for Engineers.
  - o Numerical Methods for Engineers.
  - o Signals and Systems.
  - o Communication Systems.
  - o Digital Communications.
  - o Electrical Engineering Seminar.
  - o Practical Training for Electrical Engineering.

## ACTIVITIES

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- Frequent reviewer of IEEE journals and conferences.
- Served on the steering committee for "Qatar Broadband Project" with Supreme Council for Information and Communication Technologies (ictQatar).
- TPC member for many IEEE conferences.
- Wireless Communications Track Chair for ICT2010 held in Doha April 2010, and member of the conference steering committee.
- Helped in establishing IEEE Qatar section, and served as its VP for three years.
- Founding member, society of Qatari Engineers.
- Co-supervisor of a PhD student at Concordia University, Canada with Dr. Ali Ghrayeb, and a PhD student at University of Victoria with Dr. Hong-Chuan Yang.
- General Chair of IEEE WCNC Conference to be held in Doha April 2016.

## AFFILIATIONS & MEMBERSHIPS

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- IEEE Senior Member (including Communications, Vehicular Technology and Education Societies).
- ASEE Member.
- Founding member, society of Qatari Engineers.
- Founding member, IEEE Qatar section.
- Adjunct Professor, University of Victoria, March 2010-Now.
- Board Member, Gulf University.
- Member, national committee for registering engineers and consulting offices (2010-2015).
- Member, joint management committee, Qatar Mobility Innovations Center.
- Board member, Qatar National Library.

## COMPLETED PROJECTS

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- M. Naby, N. Al-Emadi and **Hasna, M. O.**; "EMR Measurements in the State of Qatar" supported by Qatar Telecom (Qtel). (QR 680,000),
- **Hasna, M. O.**; "Collaborative research into third generation (3G) networks, technologies and services" supported by Qtel, in collaboration with TAMU and TAMUQ. (QR 280,000 for QU part)
- **Hasna, M. O.**, A. Abu Dayya; "Propagation Models for WiMax Wireless Deployments in Qatar" funded by Qatar National Research Fund (QNRF) Undergraduate Research Experience Program (UREP). (\$20,000)
- **Hasna, M. O.**, and A. Abu-Dayya, "Indoor RF Radiation Measurements, Analysis and Simulation in Qatar" Funded by QNRF-UREP (\$40k)
- T. Khattab, A. Abu-Dayya, **Hasna, M. O.**, etc, "Energy-Efficient Wireless Sensor Networks: A Cooperative Design Perspective," March 08-Feb 10, QNRF National Priorities Research Program (NPRP) (\$376k)

- M. Alouini, **Hasna, M. O.**, H. Yang, and Y. Ko " Collaborative Strategies for 60 GHz Wireless Personal Area Networks", March 08-Feb 10, QNRF-NPRP (\$410k)
- A. Ghrayeb, **Hasna, M. O.**, M. Alouni, and A. Abu Dayya, "Distributed Network-Channel Coding for Cooperative Wireless Systems", Sep'09-August'12, QNRF-NPRP (\$1040k)
- D. Trinchero, A. Abu Dayya, **Hasna, M. O.** and T. Khattab. "Wireless Sensor Networks for the Survey of Gas and Water Distribution Networks" Sep'09-August'12, QNRF-NPRP (\$1006k)
- A. Ghrayeb, **Hasna, M. O.**, and K. B. Letaief, "Opportunistic Spectrum Utilization in Cognitive Radio: Towards the Communication Utopia", January'11-January'14, QNRF-NPRP (\$1048k)
- M. Uysal, A. Ghrayeb, **Hasna, M. O.**, and T. Duman, "Enabling Cooperative Diversity Techniques for Underwater Acoustic Communications", January'11-January'14, QNRF-NPRP (\$1047k)
- **Hasna, M. O.**, and Trinchero, Daniele, "Building a Low Cost Wireless Network in The Comoros Islands", January'12-June'13, Ministry of Foreign Affairs- Arab Committee for supporting Comoros Islands (\$250k)

## CURRENT PROJECTS

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- **Hasna, M. O.**, M. Nafie, A. Eltawil, and A. Sultan, "Interference Management in Relay-Assisted Wireless Communications Networks", April'12-April'15, QNRF-NPRP (\$1049k).

## SUPERVISED/CO-SUPERVISED PHD STUDENTS

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- Xuehua Zhang, "Relaying Strategies for Cooperative Systems", Concordia University, 2014.
- Lei Zhang, "Spatial Spectral Efficiency Analysis for Wireless Communications", University of Victoria, 2014.

## PUBLICATIONS

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### ***Patents:***

- [1] D. Trinchero, R. Stefanelli, A. Kadri, T. Khattab, **Hasna, M. O.**, and A. Abu Dayya; "A system for remote leak detection and/or path tracking for underground fluid transportation pipelines"; filed to the European Patent Office, January, 2010.

### ***Edited Books:***

- [1] Abdulwahed, M; **Hasna, M. O.**; and Froyed, J, " Engineering and Engineering Education in the Middle East: Status, Challenges, Role in Fostering Human and Economic Development, and Futuristic Transformations" In process.

### ***Book Chapters:***

- [1] **Hasna, M. O.**; and Alouini, M.-S" Performance Analysis and Optimization of Multihop Communication Systems" Chapter 15 in "Wireless Communication Systems and Networks", Kluwer Academic Publishing, Springer, 2004.

### ***Journal Publications:***

- [1] Young Jin Chun, Simon L. Cotton, **Hasna, M. O.**, Ali Ghrayeb, "A Stochastic Geometry Based Approach to Modeling Interference Correlation in Cooperative Relay Networks", IEEE Transactions on Wireless Communications, Page(s): 9, 2015.
- [2] Aymen Omri, **Hasna, M. O.**, Mohammed Nafie, " Effective area spectral efficiency for wireless communication networks with interference management", EURASIP Journal on Wireless Communications and Networking, Page(s): 12, 2015.
- [3] Liang Yang; **Hasna, M.O.**; Xiqi Gao, "Performance of Mixed RF/FSO With Variable Gain over Generalized Atmospheric Turbulence Channels", IEEE Journal on Selected Areas in Communications, Volume: 33, Issue: 9, Page(s):11, 2015.
- [4] Chun, Y.; Omri, A.; **Hasna, M. O.**, "Joint Optimization of Area Spectral Efficiency and Delay Over PPP Interfered Ad-hoc Networks", IEEE Communication Letters, Volume: PP, Issue: 99, Page(s): 4, 2015.
- [5] Young Jin Chun, **Hasna, M. O.**, Ghrayeb, A.; "Modeling Heterogeneous Cellular Networks Interference Using Poisson Cluster Processes", IEEE Journal on Selected Areas in Communications, Volume: 33, Issue: 10, Page(s): 13 , 2015.
- [6] Maurice Khabbaz , Chadi Assi , **Hasna, M. O.**, Ali Ghrayeb; "Modelling, analysis and performance improvement of an SRU's access request queue in multi-channel V2I communications", Pervasive and Mobile Computing, Volume: 21, Pages 92-102, 2015.
- [7] Zhang, X., **Hasna, M. O.**; Ghrayeb, A.; "An Adaptive Transmission Scheme for Two-way Relaying with Asymmetric Data Rates", IEEE Transactions on Vehicular Technology, Volume: PP, Issue: 99 , Page(s): 1, 2015.
- [8] Omri, A.; **Hasna, M. O.**; Letaief, K.B.; "Inter-Relay Interference Management Schemes for Wireless Multi-User Decode-and-Forward Relay Networks", IEEE Transactions on Wireless Communications, Volume: 14, Page(s): 2072 – 2081, 2015.
- [9] Young Jin Chun; **Hasna, M. O.**; Ghrayeb, A. "Adaptive Network Coding for Spectrum Sharing Systems", IEEE Transactions on Wireless Communications, Volume: 14 , Page(s): 639 – 654, 2015.
- [10] Liang Yang, **Hasna, M. O.**, and Xiqi Gao; "Asymptotic BER analysis of FSO with multiple receive apertures over  $\mathcal{M}$  - distributed turbulence channels with pointing errors", Optics Express, Volume: 22, Issue: 15, page(s): 18238-18245, 2014.
- [11] Xuehua Zhang ; Jafarkhani, H. ; Ghrayeb, A. ; **Hasna, M. O.**; "Relay Assignment in Multiple Source-Destination Cooperative Networks With Limited Feedback", IEEE Transactions on Wireless Communications, Volume: 13 , Issue: 10, Page(s): 5741 – 5751, 2014.

- [12] Lei Zhang ; Hong-Chuan Yang ; **Hasna, M. O.**; “Generalized Area Spectral Efficiency: An Effective Performance Metric for Green Wireless Communications” , IEEE Transactions on Communications, Volume: 62 , Page(s): 747 – 757, 2014.
- [13] Hamdi, K. ; **Hasna, M. O.** ; Ghrayeb, A. ; Ben Letaief, K.; “Opportunistic Spectrum Sharing in Relay-Assisted Cognitive Systems With Imperfect CSI”, IEEE Transactions on Vehicular Technology, Volume: 63 , Issue: 5, Page(s): 2224 – 2235, 2014.
- [14] Gouissem, A. ; Hamila, R. ; **Hasna, M. O.** , “Outage Performance of Cooperative Systems Under IQ Imbalance”, IEEE Transactions on Communications, Volume: 62 , Issue: 5, Page(s): 1480 – 1489, 2014.
- [15] Song, S.; **Hasna, M. O.**; Letaief, K., “Prior Zero Forcing for Cognitive Relaying” IEEE Transactions on Wireless Communications, Volume: 12, Page(s): 938 – 947, 2013.
- [16] Hamdi, K.; **Hasna, M. O.**; Ghrayeb, A.; Letaief, K.; “Priority-Based Zero-Forcing in Spectrum Sharing Cognitive Systems” IEEE Communications Letters, Volume: 17, Issue: 2, Page(s): 313 – 316, 2013.
- [17] Xiang Nian Zeng ; Ghrayeb, A. ; **Hasna, M. O.**; “Joint Optimal Threshold-Based Relaying and ML Detection in Network-Coded Two-Way Relay Channels”, IEEE Transactions on Communications, Volume: 60 , Issue: 9, Page(s): 2657 – 2667, 2012.
- [18] Xuehua Zhang ; **Hasna, M. O.** ; Ghrayeb, A.; “Performance Analysis of Relay Assignment Schemes for Cooperative Networks with Multiple Source-Destination Pairs” IEEE Transactions on Wireless Communications, Volume: 11 Issue: 1, Page(s): 166 – 177, 2012.
- [19] Nguyen, S.; Ghrayeb, A.; **Hasna, M. O.**; “Iterative Compressive Estimation and Decoding for Network-Channel-Coded Two-Way Relay Sparse ISI Channels” IEEE Communications Letters, Volume: 16, Issue:12, Page(s): 1992 – 1995, 2012.
- [20] Zeng X. N., A. Ghrayeb, and **Hasna, M. O.**; “Joint Optimal Threshold-Based Relaying and ML Detection in Network-Coded Two-Way Relay Channels” IEEE Transaction on Communications, Volume: 60, Issue: 9, Page(s): 2657-2667, 2012.
- [21] Hussain, S. I.; Alouini, M-S; **Hasna, M. O.**; “A Diversity Compression and Combining Technique Based on Channel Shortening for Cooperative Networks” IEEE Transactions on Wireless Communications, Volume: 11, Issue: 2, Page(s): 659 – 667, 2012.
- [22] X. Zhang, **Hasna, M. O.**, and A. Ghrayeb; “Performance Analysis of Relay Assignment Schemes for Cooperative Networks with Multiple Source Destination Pairs” IEEE Transactions on Wireless Communications, Volume: 11, Issue: 1, Page(s): 166 – 177, 2012.
- [23] S. Nam; **Hasna, M. O.**; Alouini, M.-S. “Joint Statistics of Partial Sums of Ordered Exponential Variates and Performance of GSC Receivers over Rayleigh Fading Channel” IEEE Transaction on Communications, Volume: 59, Issue: 8, Page(s): 2241-2253, 2011.
- [24] X. Zhang, A. Ghrayeb, and **Hasna, M. O.**; “On Relay Assignment in Network-Coded Cooperative Systems” IEEE Transaction on Wireless Communications, Volume: 10, Issue: 3, Page(s): 868 – 876, 2011.
- [25] G. Alhabian, A. Ghrayeb, **Hasna, M. O.**, and A. Abu-Dayya, “Threshold-Based Relaying in Coded Cooperative Networks” IEEE Transaction on Vehicular Technology, Volume: 60, Issue: 1, Page(s): 123 -135, 2011.

- [26] Sinh Le Hong Nguyen; Ghrayeb, A.; Al-Habian, G.; **Hasna, M. O.**; "Mitigating Error Propagation in Two-Way Relay Channels with Network Coding" IEEE Transactions on Wireless Communications, Volume: 9, Issue: 11, Page(s): 3380 – 3390, 2010.
- [27] K.Tourki, Alouini, M.-S., **Hasna, M. O.**; "Wireless Transmission Using Cooperation on Demand", Physical Communication, Volume: 3, Issue: 3, Page(s): 190 – 197, 2010.
- [28] M.Abd Elnaby, M.Nofal, S.Khames, H.El-Khobi, and **Hasna, M. O.**; "Teletraffic Model of Mobile Radio Networks with Overlapping Microcells", The Mediterranean Journal of Electronics and Communications Volume: 2, Issue: 1, Page(s): 18-23, 2006.
- [29] Lin Yang; **Hasna, M. O.**; Alouini, M.-S.; "Average outage duration of multihop communication systems with regenerative relays" IEEE Transactions on Wireless Communications, Volume: 4, Issue: 4, Pages: 1366 -1371, 2005.
- [30] **Hasna, M. O.**; Alouini, M.-S.; "A Performance Study of Dual Hop Transmissions with Fixed Gain Relays" IEEE Transactions on Wireless Communications, Volume: 3, Issue: 6, Page(s): 1963 -1968, 2004.
- [31] **Hasna, M. O.**; Alouini, M.-S.; "Optimal Power Allocation for Relayed Transmissions over Rayleigh Fading Channels" IEEE Transactions on Wireless Communications, Volume: 3, Issue: 6, Page(s): 1999 - 2004, 2004.
- [32] **Hasna, M. O.**; Alouini, M.-S.; "Harmonic Mean and End-to-End Performance of Transmission Systems with Relays" IEEE Transactions on Communications, Volume: 52, Issue: 1, Pages: 130 -135, 2004.
- [33] **Hasna, M. O.**; Alouini, M.-S.; "End-to-End Outage Probability of Multihop Transmission over Lognormal Shadowing Channels" The Arabian Journal for Science and Engineering, Volume 28, Number 2C, 2003.
- [34] **Hasna, M. O.**; Alouini, M.-S.; "End-to-End Performance of Transmission Systems with Relays over Rayleigh Fading Channels" IEEE Transactions on Wireless Communications, Volume: 2, Issue: 6, Page(s): 1126 -1131, 2003.
- [35] **Hasna, M. O.**; Alouini, M.-S.; "Outage Probability of Multihop Transmission over Nakagami Fading Channels" IEEE Communications Letters, Volume: 7, Issue: 5, Page(s): 216 -218, 2003.
- [36] **Hasna, M. O.**; Alouini, M.-S.; Bastami, A.; Ebbini, E.S.; "Performance Analysis of Cellular Mobile Systems with Successive Co-Channel Interference Cancellation" IEEE Transactions on Wireless Communications, Volume: 2, Issue: 1, Pages: 29 -40, 2003.

### ***Conference Publications:***

- [1] Omri, A.; **Hasna, M. O.**, "Interference avoidance scheme for wireless multi-user multi-relay networks" 22nd International Conference on Telecommunications, April 27-29, 2015, Sydney, Australia, Pages: 225 – 230.
- [2] Omri, A., **Hasna, M. O.**, "Optimal power consumption based on new power spectral efficiency metric for wireless cellular networks", IEEE Wireless Communications and Networking Conference (WCNC), March 9-12, 2015, New Orleans, LA, USA, Pages: 1620 - 1624.
- [3] Omri, A.; **Hasna, M. O.**, "Inter-relay interference cancellation for wireless multi-user multi-decode-and-forward relay networks", 22nd International Conference on Telecommunications, Pages: 231 - 237, 2015.
- [4] Shaker, R. ; Khakzad, H. ; Taherpour, A. ; Khattab, T. ; **Hasna, M. O.**; "Hybrid underlay/overlay cognitive radio system with hierarchical modulation in the presence

- of channel estimation error", 2014 IEEE Global Communications Conference (GLOBECOM), Dec. 8-12, 2014, Austin, TX, USA, Pages: 967 – 972.
- [5] Sedighi, S.; Taherpour, A. ; Khattab, T. ; **Hasna, M. O.**; "Multiple antenna cyclostationary-based detection of primary users with multiple cyclic frequency in Cognitive Radios", 2014 IEEE Global Communications Conference (GLOBECOM), Dec. 8-12, 2014, Austin, TX, USA, Pages: 799 – 804.
  - [6] Khakzad, H. ; Shakeri, R. ; Taherpour, A. ; Khattab, T. ; **Hasna, M. O.**; "Cognitive relay-sharing by using hierarchical modulation under interference constraints", 2014 IEEE Global Communications Conference (GLOBECOM), Dec. 8-12, 2014, Austin, TX, USA, Pages: 973 – 978.
  - [7] Abdulwahed, M.; Ahmad, S.; **Hasna, M. O.**; Ghani, S. ; Benammar, M.; "Contribution of Shell Eco-Marathon engineering design experience to soft skills development: A qualitative analysis in the Asian context", 2014 International Conference on Interactive Collaborative Learning (ICL), Dec. 3-6, 2014, Dubai, UAE, Pages: 424 – 431.
  - [8] Chamkhia, H.; **Hasna, M. O.**; Bouallegue, R.; "Capacity enhancement in cognitive radio wireless network with dynamic spectrum access", 2014 International Conference on Information and Communication Technology Convergence (ICTC), Oct. 22-24, 2014, Busan, Cyprus, Pages: 99 – 104.
  - [9] Abdulwahed, M.; Benammar, M.; **Hasna, M. O.**; Ghani, S.; "Utilizing international design competitions for enhancing 21st century engineering skills: The experience of shell Eco-Marathon", 2014 IEEE Frontiers in Education Conference (FIE), Oct. 22-25, 2014, Madrid, Spain, Pages: 1 – 7.
  - [10] Young Jin Chun; **Hasna, M. O.**; "Analysis of heterogeneous cellular networks interference with biased cell association using Poisson cluster processes", 2014 International Conference on Information and Communication Technology Convergence (ICTC), Oct. 22-24, 2014, Busan, South Korea, Pages: 319 – 324.
  - [11] Gouissem, A. ; Hamila, R. ; **Hasna, M. O.**; "Outage performance of OFDM-based relaying systems under IQ imbalance", 2013 Global Information Infrastructure Symposium, Oct. 28-31, 2013, Trento, Italy, Pages: 1 – 7.
  - [12] Khair, R.; Abdulwahed, M. ; Hamouda, A. ; **Hasna, M. O.**; "From global to local: Investigation of necessary engineering skills for KBE transformation in Qatar in the context of global engineering attributes", 2013 IEEE Frontiers in Education Conference, Oct. 23-26, 2013, Oklahoma City, OK, USA, Pages: 637 – 643.
  - [13] Rodriguez de la Concepcion, A. ; **Hasna, M. O.** ; Elsayed, M. ; Stefanelli, R. ; Trincherro, D. ; Mohamed, K.A. ; Mashmoun, N.; "Enabling ICT development with low cost high capacity wireless networks in remote and underdeveloped locations an application to public finance management in Comoros Islands", 2014 IEEE Global Humanitarian Technology Conference (GHTC), Oct. 10-13, 2014, San Jose, CA, USA, Pages: 257 – 262.
  - [14] Bouallegue, S.; **Hasna, M. O.** ; Hamila, R. ; Sethom, K.; "Improved relay selection for decode-and-forward cooperative wireless networks under secrecy rate maximization", 2014 International Wireless Communications and Mobile Computing Conference (IWCMC), Aug. 4-8, 2014, Nicosia, Cyprus, Pages: 530 – 535.
  - [15] Abdulwahed, M.; Balid, W. ; **Hasna, M. O.** ; Pokharel, S.; "Skills of engineers in knowledge based economies: A comprehensive literature review, and model development", 2013 IEEE International Conference on Teaching, Assessment and Learning for Engineering (TALE), Aug. 26-29, 2013, Bali, Indonesia, Pages: 759 – 765.



- [16] Omri, A.; **Hasna, M. O.**; "Inter-relay Interference management schemes for multi-user cooperative wireless networks", 2014 International Wireless Communications and Mobile Computing Conference (IWCMC), Aug. 4-8, 2014, Nicosia, Cyprus, Pages: 163 – 168.
- [17] Abdulwahed, M.; Ghani, S.; **Hasna, M. O.** ; Hamouda, A.; "Life is engineering program: Impact of an engineering outreach project in K-12", 2013 IEEE Global Engineering Education Conference (EDUCON), March 13-15, 2013, Berlin, Germany, Pages: 827 – 833.
- [18] Omri, A.; **Hasna, M. O.**; "Interference management schemes with general order statistics and interference constraint for multi-user cooperative wireless networks", 2013 IEEE Global Communications Conference (GLOBECOM), Dec. 9-13, 2013, Atlanta, GA, USA, Pages: 1779 – 1784.
- [19] Hraiech, Z.; Omri, A. ; **Hasna, M. O.** ; Siala, M. ; Abdelkefi, F.; "Best available relay and user selection scheme for interference management in wireless cooperative communication networks", 2013 7th IEEE GCC Conference and Exhibition (GCC), Nov. 17-20, 2-13, Doha, Qatar, Pages: 334 – 338.
- [20] Abdulwahed, M. ; Pokharel, S. ; Balid, W. ; **Hasna, M. O.**; "Systemic framework of competencies of 21st century technical and engineering human resource: A development case for a knowledge based Economy in Qatar", 2013 7th IEEE GCC Conference and Exhibition (GCC), Nov. 17-20, 2013, Doha, Qatar, Pages: 413 – 418.
- [21] Omri, A.; **Hasna, M. O.**; "Cooperative communications scheme with interference management under ICI for OFDM LTE-A systems", 2013 International Conference on ICT Convergence (ICTC), Oct. 14-16, 2013, Jeju, South Korea, Pages: 540 – 545.
- [22] Chamkhia, H.; **Hasna, M. O.**; "Performance analysis of relay selection schemes in underlay cognitive networks with imperfect channel state information", 2013 International Conference on ICT Convergence (ICTC), Oct. 14-16, 2013, Jeju, South Korea, Page(s): 556 – 560.
- [23] Chun, Young Jin; **Hasna, M. O.**; Ghrayeb, Ali ; "Adaptive network coding over cognitive relay networks", 2013 IEEE 24th International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC), Sept. 8-11, 2013, London, UK, Pages: 105 – 110.
- [24] Chamkhia, Hela; **Hasna, M. O.**; "Sub-channels selection schemes with interference management for underlay cognitive networks", 2013 IEEE 24th International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC), Sept. 8-11, 2013, London, UK, Pages: 3016 - 3021.
- [25] Chamkhia, H. ; **Hasna, M. O.**; "Performance analysis of relay selection schemes in OFDM-based underlay cognitive networks", 2013 IEEE 14th Workshop on Signal Processing Advances in Wireless Communications (SPAWC), June 16-19, 2013, Darmstadt, Germany, Pages: 390 – 394.
- [26] Karakaya, B.; **Hasna, M. O.**; Duman, T.M. ; Uysal, M. ; Ghrayeb, A.; "Multi-resampling Doppler compensation in cooperative underwater OFDM systems", 2013 MTS/IEEE OCEANS – June 10-14, 2013, Bergen, Norway, Pages: 1 – 8.
- [27] Omri, A.; **Hasna, M. O.**; "Novel cooperative communication schemes with interference management for multi-user wireless networks", 2013 IEEE International Conference on Communications (ICC), June 9-13, 2013, Budapest, Hungary, Pages: 5651 – 5656.
- [28] Omri, A.; **Hasna, M. O.**; "Performance Analysis of OFDMA Based Wireless Cooperative Networks with Interference Management", 2013 IEEE 77th Vehicular

- Technology Conference (VTC Spring), June 2-5, 2013, Dresden, Germany, Pages: 1 – 6.
- [29] Lei Zhang; Hong-Chuan Yang ; **Hasna, M. O.**; “On Ergodic Capacity of Wireless Transmission Subject to Poisson Distributed Interferers over Rayleigh Fading Channels”, 2013 IEEE 77th Vehicular Technology Conference (VTC Spring), June 2-5, Dresden, Germany, Pages: 1 – 6.
  - [30] Lei Zhang ; Hong-Chuan Yang ; **Hasna, M. O.**; “Area spectral efficiency of underlay cognitive radio transmission over rayleigh fading channels”, 2013 IEEE Wireless Communications and Networking Conference (WCNC), April 7-10, 2013, Shanghai, China, Pages: 2988 – 2992.
  - [31] Lei Zhang ; Hong-Chuan Yang ; **Hasna, M. O.**; “Generalized area spectral efficiency: An effective performance metric for green wireless communications” ,2013 IEEE International Conference on Communications (ICC), June 9-13, 2013, Budapest, Hungary, Pages: 5376 – 5380.
  - [32] Lei Zhang ; Hong-Chuan Yang ; **Hasna, M. O.**; “Area spectral efficiency of cooperative network with DF and AF relaying”, 2012 Asia-Pacific Signal & Information Processing Association Annual Summit and Conference (APSIPA ASC), Dec. 3-6, 2012, Hollywood, CA, USA, Pages: 1 – 6.
  - [33] Omri, A. ; **Hasna, M. O.**; “Enhancing wireless networks performance through cooperative communications with interference management”, 2012 International Conference on ICT Convergence (ICTC), Oct. 15-17, 2012, Jeju Island, Korea, Pages: 524 – 529.
  - [34] Chamkhia, H. ; **Hasna, M. O.**; Hamila, R. ; Hussain, S.I.; “Performance analysis of relay selection schemes in underlay cognitive networks with Decode and Forward relaying”, 2012 IEEE 23rd International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC), Sept. 9-12, 2012, Sydney, NSW, Australia, Pages: 1552 – 1558.
  - [35] Gouissem, A. ; **Hasna, M. O.**; Hamila, R. ; Besbes, H. ; Abdelkefi, F.; “Outage Performance of OFDM Ad-Hoc Routing with and without Subcarrier Grouping in Multihop Network”, 2012 IEEE Vehicular Technology Conference (VTC Fall), Sept. 3-6, 2012, Quebec City, QC, Canada, Pages: 1 – 5.
  - [36] Omri, A. ; Hamila, R. ; **Hasna, M. O.** ; Bouallegue, R.; “Modified Alamouti decoding for highly selective channels for LTE systems”, 2012 11th Conference on International Information Science, Signal Processing and their Applications (ISSPA), July 2-5, 2012, Montreal, QC, Canada, Pages: 940 – 944.
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