

Curriculum Vitae

Dr. Mohamed Abdurazak Elalem

د. محمد عبد الرزاق العالم
(Associate Professor)

Elmergib University
Faculty of Engineering
Electrical and Computer Department
Alkhoms, Libya
Email: maelalem@elmergib.edu.ly

Personal

- Born on November 1967, *Mesallata*, Libya.
- Citizenship: Libyan. item : Tajoura, Tripoli

Education

- Ph.D. in Electrical and Computer Engineering, Ryerson University, Toronto, Canada, May, 2013.
- M.Sc. in Electrical and Electronic Engineering, Telecommunication, Tripoli University, Libya, Oct., 2006.
- Course training in communication switches and solutions at **Mitel company, UK, Canada**, 2005.
- BSc., Electrical and Electronic Engineering, Tripoli University, Libya, Mar. 1990.

Employment

- 1- Elmergib University, Libya (Full-time **Associate Prof** in the department of Electrical and Computer Engineering) Jun. 2020 - Present.
- 2- Elmergib University, Libya (Full-time **Assistant Prof** in the department of Electrical and Computer Engineering) May 2016 - May 2020.
- 3- Elmergib University, Libya (Full-time **Lecturer** in the department of Electrical and Computer Engineering) Jul 2013 - May 2016.
- 4- Head of Quality and Performance Evaluation Section in the Faculty of Engineering, Elmergib University, Oct 2013 - Mar. 2016.

- 5- Elmergib University, Libya (Full-time **Research Assistant** in the department of Electrical and Computer Engineering) Mar 2006 - Aug 2008.
- 6- Railway Project, Libya (Part-time **Design Telecommunication Engineer** in Signalling and Telecommunication Management) Dec. 1996 - Mar. 2006.
- 7- Elmergib University, Libya (Part-time **Teacher Assistant** in the Department of Electrical and Computer Engineering) Dec 1996 - Dec. 2002.
- 8- Elmergib University, Libya (Full-time **Teacher Assistant** in the Department of Electrical and Computer Engineering) Jan. 1993 - Dec 1996.
- 9- Ministry of Transportation, Libya **Training Engineer** Jan. 1991 - Dec. 1992.
- 10- Part time teaching for undergraduate courses in many national universities as University of Tripoli (UoT) and Libyan University.

Teaching (Undergraduate Level)

- Communication Engineering and Systems.
- Signals and Systems.
- Digital Communications.
- Electromagnetic Engineering.
- Cellular Mobile Communications.
- Electrical Circuits.
- Calculus (Basic Math and Algebra).
- Differential Equations.
- Numerical Analysis for Engineering
- Computer Programming (Basic + Fortran 90, Visual basic, and MatLab).
- Probabilities and Random Signal Processes.
- **Supervising many undergraduate projects.**

Teaching (Graduate Level)

- Advanced Digital Communications.
- Advanced Wireless Communications.
- Information Theory and Coding.
- Advanced Mathematics.
- **Supervising five Master thesis's. Several projects in the field of wireless communications are in progress.**

Skills

Programming Languages: PHP, Java Script, , V-Basic, and FoxPro.

Operating Systems: Windows & Mac.

Applications: Mathematica, MatLab, MapleSoft, \LaTeX , MS Office and Adobe products.

Miscellaneous: CCNA Cisco certificate, software configuration management, design and evaluation mobile networks, design and sizing photovoltaic systems, good teams skills.

Membership: Member of *IEEE* since 2008, and of European Alliance for Innovation *EAI*.

Journal Papers

- J1- Sana S. AL-Gamati, **Mohamed A. Elalem**, “Dynamic Pricing to Maximize Mobile Network Revenue (Almadar Aljadeed: Case Study)”, *Elmergib Journal of Electrical & Electronic Engineering EJEEE*, Vol.1, Issue 1, Dec. 2022.
- J2- Nouri Ahwaas, **Mohamed A. Elalem**, “BER Performance of SISO-OFDM Scheme based on FFT over an AWGN Channel”, *International Journal of Advances in Computer and Electronics Engineering (IJACEE)*, ISSN: 2456 - 3935 Vol. 6, No. 9, pp. 1-8, Sep. 2021
- J3- Suad O. Merad, Asma M. Eshahiry and **Mohamed A. Elalem** “Average Delay with Different Priorities for Secondary User in Cognitive Radio Networks”, *International Journal of Latest Engineering Research and Applications (IJLERA)* ISSN: 2455-7137, Vol. 06, Issue 11, pp 17-28, Nov. 2021.
- J4- Abobaker Shahran and **Mohamed Elalem** “Open Transport Network OTN””, *International Journal of Latest Engineering Research and Applications (IJLERA)* ISSN: 2455-7137, Vol 04, Issue 08, pp 28-35, Aug. 2019.
- J5- Rima Almosbahi and **Mohamed Elalem** “Optimization Of Coverage And Handover for Heterogeneous Networks”, *International Journal of Advanced Research and Publications (IJARP)* ISSN: 2456-9992, Vol. 3 Issue 3, pp 213-219, Mar. 2019.
- J6- **M. Elalem** “Wirelessly Monitoring Patients Based on E-Health Sensors”, *Taqnyia: Periodical Scientific and Engineering Journal*, issued by Higher Institution of Sciences and Technology (HIST), Messallata, Libya, Vol. 14, No. 1/2, pp 01-16, 2018.
- J7- **M. Elalem** “Pilot Aided Transmissions Technique to Achieve Optimal Effective Capacity Over Imperfect Channel Estimation in Cognitive Radio Networks”, *Journal of Information Sciences and Computing Technologies (JISCT)*, Vol. 6, issue 2, pp 625-637, Nov. 2017.
- J8- **M. Elalem** “Effective Capacity Analysis For Cognitive Networks Under QoS Satisfaction”, *Journal of Information Sciences and Computing Technologies (JISCT)*, Vol. 5, issue 3, pp 498-518, Feb. 2016.
- J9- **M. Elalem** and L. Zhao, “Effective capacity and interference analysis in multiband dynamic spectrum sensing”, *Journal of Communication and Network(CN)*, Vol.5, No.2, May 2013.

- J10- **M. Elalem** and L. Zhao, "Throughput maximization based on optimal access probabilities in cognitive radio system", *Journal of Communication and Network(CN)*, Vol.5, No.3, Aug. 2013.
- J11- **M. Elalem** and L. Zhao, "Channel Estimation and Effective Capacity over Imperfect Rayleigh Channel environment in Cognitive Radio", *Journal of Communication and Computer(JCC)*, Jun. 2013.

Conference Papers

a - International Conferences

- IC1- **M. Elalem** and Tahani Jabir, "Malware Analysis in Cyber Security based on Deep Learning; Recognition and Classification," 2023 IEEE 3rd International Maghreb Meeting of the Conference on Sciences and Techniques of Automatic control and Computer Engineering, (MI-STA 2023) May 2023 Benghazi, Libya.
- IC2- **M. Elalem**, "Capacity maximization in dynamic spectrum sharing based on optimal access probabilities" 4th International Conference on Wireless Mobile Communication and Healthcare (Mobihealth), EAI, Athens, Greece, Nov. 2014.
- IC3- **M. Elalem** "Effective capacity with interference constraints in multichannel spectrum sharing system", International Conference on Research and Innovation in Information Systems (ICRIIS), Kuala Lumpur, Malaysia, Nov. 2013.
- IC4- **M. Elalem** and L. Zhao, "Optimal access strategy for capacity optimization in cognitive radio system," In Proc. *IEEE Wireless Comm. and Networking Conf.(WCNC)*, Shanghai, China, Apr. 2013.
- IC5- **M. Elalem** and L. Zhao, "Effective capacity and interference constraints in multi-channel cognitive radio network," In Proc. *IEEE Wireless Comm. and Networking Conf.(WCNC)*, Shanghai, China, Apr. 2013.
- IC6- **M. Elalem** and L. Zhao, "Effective capacity optimization based on overlay cognitive radio network in gamma fading environment," In Proc. *IEEE Wireless Comm. and Networking Conf.(WCNC)*, Shanghai, China, Apr. 2013.
- IC7- **M. Elalem** and L. Zhao, "Effective capacity optimization for cognitive radio network based on underlay scheme in gamma fading channels," In Proc. *IEEE Int. Conf. on Computing, Networking and Communications (ICNC)*, San Diego, USA, Jan. 2013.
- IC8- **M. Elalem** "Novel power control algorithm by decomposed geometric programming method for CDMA cognitive radio networks," In Proc. *IEEE Int. Conf. Comm. (ICC)*, Ottawa, Canada, Jun. 2012.
- IC9- **M. Elalem** and L. Zhao, "Optimal access probabilities to maximize capacity in cognitive radio system," In Proc. 11th International Conference for Upcoming Engineers (ICUE), Toronto, Canada, Aug. 2012.
- IC10- **M. Elalem** and L. Zhao, "Traditional distributed power control algorithms for cognitive radio network," In Proc. *IEEE 6th International ICST Conference on Communications and Networking (ChinaComm)*, Harbin, China, Aug. 2011.
- IC11- **M. Elalem**, L. Zhao, and Z. liao, "Interference mitigation using power control in cognitive radio networks", In Proc. *IEEE Vehicular Tech. Conf. (VTC)*, Taipei, Taiwan, May 2010.

- IC12- **M. Elalem**, L. Zhao, “Realistic User Distribution and Its Impact on Capacity and Coverage For a WCDMA Mobile Network” *IEEE* Sarnoff, NJ, USA, May 2009.
- IC13- **M. Elalem**, A. Akki, “Uplink Capacity Coverage Product in CDMA Mobile Networks”, WOC (Wireless and Optical Communications), Quebec City, Canada, May 2008.

b - National Conferences

- NC1- Magda Abunab and **Mohamed Elalem**, “Decision-Making Rules in Cooperative Cognitive Radio Networks: Evaluation and Comparison,” The Third Conference for Engineering Sciences and Technology CEST 2020, Alkhums, Libya, Dec. 2020.
- NC2- **Mohamed Elalem**, “Underlay Scheme Performance in General Fading Channels Based on Dynamic Spectrum Access”, Researches of the 6th Scientific Conference, Higher Institute of Scientific and Technology, Al-Khums, Libya, Dec. 2017.
- NC3- **Mohamed Elalem** “Effect of Imperfect Channel Estimation on Power Control and Achievable Rate in Cognitive Radio Networks” The International Conference on Electrical and Computer Engineering (ICECE), Benghazi, Libya, Mar. 2013.
- NC4 **Mohamed Elalem** “Effective Capacity for Multichannel Dynamic Spectrum Access systems with Interference Constraints”, The International Conference on Electrical and Computer Engineering (ICECE), Benghazi, Libya, Mar. 2013.
- NC5- **Mohamed Elalem** “Optimal Access Probabilities to Maximize Capacity in Cognitive Radio system”, The International Conference on Electrical and Computer Engineering (ICECE), Benghazi, Libya, Mar. 2013.
- NC6- **Mohamed Elalem**, “An Enhanced Transmission Algorithm for Cognitive Radio Network Based on Constrained Distributed Power Control”, Fifth Libyan Arab International Conference on Electrical and Electronic Engineering, Tripoli, Libya, Mar. 2010.
- NC7- **Mohamed Elalem**, Dr.A.S.Akki, Dr. L. Zhao, “Impact of Introducing a Hot Spot Microcell On Capacity-Coverage Stability in a WCDMA Mobile Network”, Fifth Libyan Arab International Conference on Electrical and Electronic Engineering, Tripoli, Libya, Mar. 2010.
- NC8- **Mohamed Elalem**, A.S. Akki ”Effect of Non-uniform user Distribution on Capacity and Coverage for a CDMA Mobile Network” The National Conference for Information Technology and Communication Tripoli, Libya, May 2010.
- NC9- **Mohamed Elalem**, A.S. Akki “Capacity Coverage Product in CDMA Mobile Networks for Planning and Evaluations”, The National Conference for Information Technology and Communication Tripoli, Libya, May 2008.

Languages

- Arabic - Native Language.
- English - Speak/Read/Write.

Awards

- Graduate Research Excellence Awards (GREAs), Ryerson University, Toronto, Canada, 2012.

Last updated: May 21, 2023