Mahmoud Mohamed Attia Elmesalawy

Associate Professor

Electronics and Communications Engineering Department
Faculty of Engineering at Helwan, Helwan University, Cairo, Egypt
1, Sherief Street, Helwan, Cairo, Egypt
Phone: +201021153226 & +201221726171(WhatsApp)
Email: melmesalawy@h-eng.helwan.edu.eg

EDUCATION

Jun. 2012 **Master of Educational Planning and Management.**
Minor in Strategic Planning Models for Higher Education Sector.
International Institute for Educational Planning (IIEP), UNESCO, Paris, France.
Dissertation: An Effective Simulation Model for Higher Educational Planning in Egypt.

Oct. 2010 **Ph.D. in Communications Engineering.**
Minor in Wireless Communication Networks.
Faculty of Engineering, Helwan University, Cairo, Egypt.
Dissertation: Performance Evaluation of OFDMA-Based Mobile Systems.

Aug. 2005 **M.Sc. in Communications Engineering.**
Minor in Computer Networks.
Faculty of Engineering, Helwan University, Cairo, Egypt.
Dissertation: Interworking Internet Protocol with Multiprotocol Label Switching.

Jun. 2002 **B.Sc. in Electronics, Communications, and Computers Engineering.**
Minor in Communications Engineering.
Graduated with Distinction Degree (Ranked First in Class).
Faculty of Engineering, Helwan University, Cairo, Egypt.
Graduation Project Dissertation: Database Firewall Protector and Implementation of Data Encryption & Authentication Algorithms for Network Security.

WORK EXPERIENCE

Current

Nov. 2016 – Present	Head of Strategic Planning Unit (SPU) of Helwan University.
Apr. 2016 – Present	Associate Professor**,** Department of Electronics and Communications Engineering, Faculty of Engineering, Helwan University, Egypt.
Sep. 2020 – Present	Coordinator of M.Sc Program in Electrical Smart Grid Engineering at Faculty of Engineering, Helwan University.

Jun. 2017 – Present	Director of Wireless Research Laboratory (WRL) at Faculty of Engineering, Helwan University (https://wrl.helwan.edu.eg).
Oct. 2016 – Present	Director of Innovation and Product Development Support Center (IPDSC) at Faculty of Engineering, Helwan University.
Nov. 2013 – Present	Cisco Academy Manager at Helwan University.

History

Feb. 2011 – Apr. 2016	Assistant Professor**,** Department of Electronics, Communications, and Computers Engineering, Faculty of Engineering, Helwan University, Egypt.
Feb. 2011 – Nov. 2012	Educational Planning Expert, Strategic Planning Unit (SPU), Ministry of Higher Education (MOHE), Egypt.
Jan. 2006 – Feb. 2011	Teaching Assistant**,** Department of Electronics, Communications, and Computers Engineering, Faculty of Engineering, Helwan University, Egypt.
Nov. 2002 – Jan. 2006	Demonstrator, Department of Electronics, Communications, and Computers Engineering, Faculty of Engineering, Helwan University, Egypt.

FUNDED PROJECTS

1- **Project Coordinator (PC) at Helwan University for Erasmus+ project funded by the European Commission (EC).**
   - **Project Title:** Smart Grid Technology - A Master Programme / SGT-MAP.
   - **Academic Partners:** University of Strathclyde - UOS (UK), University of Aberdeen - UNIABDN (UK), Alpen-Adria Universität Klagenfurt - UNI-KLU (Austria), Universidad de Sevilla - US (Spain), Helwan University - HU (Egypt), Arab Academy for Science, Technology, and Maritime Transport - AASTMT (Egypt), Alexandria University - AU (Egypt), ASWAN University - ASWU (Egypt).
   - **Associated Partners:** Egyptian Ministry of Electricity and Renewable Energy, Misr El khier organization in Egypt.
   - **Project Duration:** Three years project (Start date: 15/10/2016, End date: 14/10/2019 – Extended to 14/04/2020).

2- **Co-PI for applied research project funded by the National Telecommunication Regulatory Authority (NTRA), Ministry of Communications and Information Technology (MCIT) in Egypt.**
   - **Project Title:** Integrating 3G/4G and Wi-Fi Architectures for Diverse Offloading Capabilities.
   - **Academic Partners:** Helwan University, Faculty of Engineering, Department of Electronics, Communications and Computers Engineering.
   - **Industrial Partner:** Etisalat Misr Mobile Operator.
   - **Project Duration:** Two years project (Start date: 01/11/2017, End date: 30/10/2019).

3- **PI for applied research project funded by the National Telecommunication Regulatory Authority (NTRA), Ministry of Communications and Information Technology (MCIT) in Egypt.**
   - **Project Title:** Heterogeneous C-RAN Architecture Based on Hybrid FSO/mmW Fronthaul Transport Network for 5G Mobile Systems.
   - **Academic Partners:** Cooperated applied research project between Helwan University (Faculty of Engineering, Department of Electronics, Communications and Computers Engineering) and Cairo University (National Institute of Laser Enhanced Science "NILES").
   - **Industrial Partner:** Etisalat Misr Mobile Operator.
   - **Project Duration:** Two years project (Start date: 01/09/2016, End date: 30/08/2018).

4- **Co-PI for applied research project funded by the National Telecommunication Regulatory Authority (NTRA), Ministry of Communications and Information Technology (MCIT), Egypt.**
   - **Project Title:** Smart Grid Frequency Monitoring Network Architecture and Applications.
   - **Academic Partners:** Cooperated applied research project between Department of Electrical Power and Machines Engineering and Department of Electronics, Communications and Computers Engineering, Faculty of Engineering, Helwan University.
   - **Industrial Partner:** Egyptian Electricity Holding Company (EEHC), Egyptian Ministry of Electricity and Renewable Energy.
   - **Project Duration:** Two years project (Start time: 01/05/2012, end time: 30/04/2014).
   - **The project awarded** the ETRERA 2020 best innovative project for the category of Smart Grids on the level of European Union and Mediterranean countries, April 2014.

5- **Team Member in a development project funded by the Projects Management Unit (PMU), Ministry of Higher Education (MoHE) in Egypt.**
   - **Project Title:** Center of Excellence for Smart Educational Systems – CESES.
   - **Academic Partners:** Department of Electronics, Communications and Computers Engineering, Faculty of Engineering, Helwan University.
   - **Project Duration:** Two years project (Start date: 01/06/2014, End date: 31/05/2016).

6- **PI for applied project funded by Helwan University, Egypt.**
   - **Project Title:** Establishment of Innovation and Product Development Support Center (IPDSC) at Faculty of Engineering, Helwan University.
   - **Academic Partners:** Faculty of Engineering, Helwan University.
   - **Project Duration:** Two years project (Start date: 1/11/2016, End date: 30/10/2018).

7- **Leading the monitoring and evaluation process of more than 60 development projects being implemented at Helwan University in the context of its strategic plan (2015-2020).**

FUNDED SUPERVISED/CO-SUPERVISED GRADUATION PROJECTS

1- **Smart Breadboard:** Graduation project funded by the National Telecommunication Regulatory Authority (NTRA) and Information Technology Industry Development Agency (ITIDA), Ministry of Communications and Information Technology (MCIT) in Egypt and sponsored by National Instruments (NI).

2- **Secure+ "Portable SSL Engine":** Graduation project funded by the Information Technology Industry Development Agency (ITIDA), Ministry of Communications and Information Technology (MCIT) in Egypt and sponsored by System Engineering for Egypt (SEE).

3- **Wi-Fi over White Spaces (White-Fi) using Software Defined Radio (SDR):** Graduation project funded by National Telecommunication Regulatory Authority (NTRA), Ministry of Communications and Information Technology (MCIT) in Egypt and sponsored by Intel.

4- **Smart Waste Collection and Monitoring System:** Graduation project funded by the Information Technology Industry Development Agency (ITIDA), Ministry of Communications and Information Technology (MCIT) in Egypt.

5- **Smart Interactive Learning System (SILS):** Graduation project funded by National Telecommunication Regulatory Authority (NTRA), Ministry of Communications and Information Technology (MCIT) in Egypt.

6- **Wi-Fi Offloading for Cellular Mobile Networks:** Graduation project funded by the Information Technology Industry Development Agency (ITIDA), Ministry of Communications and Information Technology (MCIT) in Egypt.

7- **Audio investigation using ENF:** Graduation project funded by National Telecommunication Regulatory Authority (NTRA), Ministry of Communications and Information Technology (MCIT) in Egypt.

8- **Design and Implementation of Configurable GSM-VOIP gateway:** Graduation project sponsored by Giza Systems.

9- **Design and implementation of seamless handover between Wi-Fi and UMTS:** Graduation project sponsored by Sun Microsystems.

10- **IP Multimedia Subsystem (IMS) Mobile Application:** Graduation project sponsored by Giza Systems.

PATENTS

- **US Patent:** Washington, DC: U.S. Patent and Trademark Office, "METHOD AND SYSTEM FOR USING A BREADBOARD." U.S. Patent No. 8,898,607, issued November 25, 2014.

AWARDS

- Fourth position in the international scientific publications at the level of Helwan University for the year 2018.
- Best paper award in the 2nd Europe – Middle East – North African Regional Conference of the International Telecommunications Society (ITS), February 2019.
- ETRERA 2020 best innovative project for the category of Smart Grids on the level of European Union and Mediterranean countries, April 2014.
- First position award for the supervised graduation project entitled "Smart Breadboard" in the ICT stream in the Idea to Product (I2P) Global Competition hosted in Stockholm, Sweden, Nov. 18, 2011.
- Second position award for the supervised graduation project entitled "Secure+: Portable SSL Engine" in Made in Egypt (MIE) Competition hosted in Cairo, Egypt, August 2011.
- Ericson Prize for the co-supervised graduation project entitled "Design and implementation of seamless handover between Wi-Fi and UMTS" in the Egyptian Engineering Day (EED) Competition hosted in Cairo, Egypt, July 2010.
- Ericson Prize for the co-supervised graduation project entitled "IP Multimedia Subsystem (IMS) Mobile Application" in the Egyptian Engineering Day (EED) Competition hosted in Cairo, Egypt, July 2010.
- Third position award for the co-supervised graduation project entitled "Design and Implementation of Configurable GSM-VOIP gateway" in Made in Egypt (MIE) Competition hosted in Cairo, Egypt, July 2009.

GRANTS

- Next Technology Leaders (NTL) Grant for studying Managing Technology & Innovation MicroMasters through edX learning platform from RWTH Aachen University, Germany (Nov. 2019 – Aug. 2020).
- Erasmus+ International Credit Mobility (ICM) Grant for teaching/training/combined at Cardiff Metropolitan University, UK, 2020.

PROFESSIONAL CERTIFICATIONS

- Cisco Certified Network Professional (CCNP): Cisco Implementation, Installation, and Support Track, National Telecommunication Institute (Regional Cisco Academy), Cairo, Egypt.
- Cisco Certified Network Associate (CCNA): Cisco Implementation, Installation, and Support Track, National Telecommunication Institute (Regional Cisco Academy), Cairo, Egypt.
- MTI002x: Customer-Centric Innovation, a course of study offered by RWTHx, through edX online learning initiative of RWTH Aachen University, Germany.

- MTI003x: Innovation and Creativity Management, a course of study offered by RWTHx, through edX online learning initiative of RWTH Aachen University, Germany.
- MTI004x: Thinking and Acting like an Entrepreneur, a course of study offered by RWTHx, through edX online learning initiative of RWTH Aachen University, Germany.
- MTI005x: Strategic Management: From Intuition to Insight, a course of study offered by RWTHx, through edX online learning initiative of RWTH Aachen University, Germany.
- MTI006x: Strategic Management: From Insight to Decision, a course of study offered by RWTHx, through edX online learning initiative of RWTH Aachen University, Germany.
- Basics of Professional University Teaching, Alpen-Adria University, Klagenfurt, Austria.
- Smart Transmission Systems: A Key Path for the Future Electrical Networks, University of Strathclyde, UK.
- Research Quality and Performance, Clarivate Analytics – Egyptian Knowledge Bank (EKB) – International Ranking Unit (IRU), Helwan University, Egypt.
- Research Funding and Collaboration, Clarivate Analytics – Egyptian Knowledge Bank (EKB) – International Ranking Unit (IRU), Helwan University, Egypt.
- Future of Economics of Knowledge, Faculty and leadership Development Center (FLDC), Helwan University, Egypt.
- Power Electronics for Smart Grid Technologies Topologies, Converters, Modelling, and Applications, University of Strathclyde, UK.
- Future of Smart Grid Technologies, Alpen-Adria University, Klagenfurt, Austria.
- Proposal Writing for International Funded Projects, International Relations Office (IRO), Helwan University, Egypt.
- Dissemination for the procedures of values of integrity, transparency and awareness of the dangers of corruption and ways to prevent it, The National Anti-Corruption Academy (NACA), Administrative Control Authority (ACA), Egypt.
- Ethics of Scientific Research, Faculty and leadership Development Center (FLDC), Helwan University, Egypt.
- Exams Management and Students Evaluation, Faculty and leadership Development Center (FLDC), Helwan University, Egypt.
- Strategic Planning, Faculty and leadership Development Center (FLDC), Helwan University, Egypt.
- Quality Standards in Education, Faculty and leadership Development Center (FLDC), Helwan University, Egypt.
- University Administration, Faculty and leadership Development Center (FLDC), Helwan University, Egypt.

PROFESSIONAL ACTIVITIES

- **Participated in updating the 10-years master plan (2011-2021) for Higher Education sector in Egypt, Strategic Planning Unit (SPU), Ministry of Higher Education (MoHE).**
  - Designed and developed simulation model for higher education sector planning in Egypt includes student enrolments, internal efficiency, and required human resources (teaching staff, assistant teaching staff, and administrative staff).
  - The model includes new techniques for developing the most efficient scenarios with the ability to decide the optimal metrics based on a pre-defined criterion.

- **Participated in the Strategic Plan of Higher Engineering Education Sector in Egypt, Strategic Planning Unit (SPU), Ministry of Higher Education (MoHE).**
  - Writing chapters on access and internal efficiency in the Strategic Plan for Higher Engineering Education in Egypt – Phase I: Analysis and Strategic Directions, Strategic Planning Unit, Ministry of Higher Education, Egypt.

- **Participated in the Post-Secondary vocational and technical education sector analysis with OECD, Strategic Planning Unit (SPU), Ministry of Higher Education (MoHE).**
  - Setting the terms of reference for the situational analysis.
  - Writing the access and completion chapter on the OECD study report "Post-Secondary Vocational and Technical Education in Egypt - Analysis and Strategic Directions".

- **Participated as a committee member in preparing the 5-Years strategic plan for Helwan University (2015-2020)**
  - Studying the best suitable models for evaluating the organizational performance in terms of the goals and objectives of its strategic plan.
  - Proposing and applying the Balanced Score Card (BSC) model for evaluating the performance of Helwan University according to the goals and objectives of its strategic plan.
  - Designed and developed a BSC simulation model for evaluating the performance of Helwan University in achieving the goals and objectives of the strategic plan.

- Participated in preparing the new syllabus for B.Sc, M.Sc, and Ph.D levels in the department of Electronics, Communications, and Computers Engineering at Faculty of Engineering, Helwan University.

- Participated in preparing the new research plan for the department of Electronics, Communications, and Computers Engineering at Faculty of Engineering, Helwan University.

- Participated in the organization of the international virtual conference organized by Helwan University on COVID-19: Multidisciplinary Challenges & Practices, 2020 and moderating the third session of the conference: Technology against COVID-19 pandemic.

- Member of the higher committee for managing the strategic plan of Helwan University.

- Member of the digital transformation committee of Helwan University.

- Member of the board of directors of Helwan University Hub for Creativity and Scientific Research.
- Counselor of IEEE Communications Society Student Branch Chapter at Helwan University.

TEACHING ACTIVITIES

- **Graduate Courses Taught at Faculty of Engineering, Helwan University**
  - Advanced Communication Systems (Ph.D level).
  - Preparation of Scientific Research (Ph.D level).
  - Cellular Communication Systems (M.Sc level).
  - Communication Networks Engineering (Diploma level).
- **Graduate Courses Taught at Faculty of Engineering, Misr International University (MIU)**
  - Advanced Topics in Computer Communication Networks (M.Sc level).
- **Undergraduate Courses Taught at Faculty of Engineering, Helwan University**
  - Information Networks.
  - Cellular Mobile Communications.
  - Communications Systems.
  - Digital Communications (Italian Program).
  - Telephone Systems.
  - Signal Analysis.
  - Cisco Certified Network Associate (CCNA).
  - Supervision on Graduation Projects.
- **Undergraduate Courses Taught at Faculty of Engineering, Misr International University (MIU)**
  - Computer Networks.
  - Mobile Communications.
  - Digital Communications.
  - Cisco Certified Network Associate (CCNA).
- **Undergraduate Courses Taught at Faculty of Engineering, Egyptian Russian University (ERU)**
  - Satellite Communications.
  - Optical Communications.
- **Undergraduate Courses Taught at Faculty of Engineering, Misr University for Science & Technology (MUST)**
  - Wireless Networks.
- **Undergraduate Courses Taught at Faculty of Engineering, October 6 University**
  - Signal Analysis.

GRADUATE STUDENT SUPERVISIONS

- 8 M.Sc Students at Faculty of Engineering, Helwan University, Cairo, Egypt (5 thesis are completed).
- 2 M.Sc Students at Faculty of Electronic Engineering, Menoufia University, Menouf, Egypt (The two thesis are completed).
- 2 M.Sc Students at Faculty of Engineering, Misr International University (MIU), Cairo, Egypt.
- 4 Ph.D Students at Faculty of Engineering, Helwan University, Cairo, Egypt.
- One Ph.D Student at Faculty of Education, Helwan University, Cairo, Egypt.

REVIEW ACTIVITIES

Reviewer in the following journals, letters, and research projects funding agencies

- IEEE Transactions on Vehicular Technology
- IEEE Internet of Things Journal
- IEEE Transactions on Information Forensics and Security
- IEEE Access Journal
- IEEE Communications Letters
- IEEE Signal Processing Letters
- IEEE Transactions on Smart Grid
- IET Communications Journal
- IET Signal Processing Journal
- Transactions on Emerging Telecommunications Technologies (Wiley)
- Computer Networks Journal (Elsevier)
- International Journal of Electrical Power & Energy Systems (Elsevier)
- NTRA Research Funded Projects (CFP5, CFP6, and CFP7)
- Borg Al Arab Innovation Cluster Funded Projects

PUBLICATIONS

Peer Reviewed Articles

1. M. M. Abdelhakam, M. M. Elmesalawy, M. K. Elhattab and H. H. Esmat, "Energy-efficient BBU pool virtualisation for C-RAN with quality of service guarantees," in *IET Communications*, vol. 14, no. 1, pp. 11-20, 3 1 2020. **[IF:1.664, Ranked Q3]**
2. M. Anany, M. M. Elmesalawy and A. M. Abd El-Haleem, "Matching Game-Based Cell Association in Multi-RAT HetNet Considering Device Requirements," in *IEEE Internet of Things Journal*, vol. 6, no. 6, pp. 9774-9782, Dec. 2019. **[IF:9.515, Ranked Q1]**
3. N. A. Elmosilhy, M. M. Elmesalawy and A. M. Abd Elhaleem, "User Association With Mode Selection in LWA-Based Multi-RAT HetNet," in *IEEE Access*, vol. 7, pp. 158623-158633, 2019. **[IF:4.098, Ranked Q1]**

4. M. K. Elhattab, M. M. Elmesalawy, F. M. Salem and I. I. Ibrahim, "Device-Aware Cell Association in Heterogeneous Cellular Networks: A Matching Game Approach," in *IEEE Transactions on Green Communications and Networking*, vol. 3, no. 1, pp. 57-66, March 2019.
5. H.H. Esmat, Mahmoud M. Elmesalawy, I.I. Ibrahim, "Uplink resource allocation and power control for D2D communications underlaying multi-cell mobile networks," AEU - International Journal of Electronics and Communications, Volume 93, Pages 163-171, Sep., 2018. **[IF:2.853, Ranked Q2]**
6. Esmat HH, Elmesalawy MM, Abdelhakam MM, Elhattab MK., "Joint radio resource and power allocation using Nash bargaining game for H-CRAN with nonideal fronthaul links," Transaction on Emerging Telecommunications Technologies; e3449, 2018. **[IF:1.258, Ranked Q2]**
7. M. K. Elhattab, M. M. Elmesalawy, T. Ismail, H. H. Esmat, M. M. Abdelhakam and H. Selmy, "A Matching Game for Device Association and Resource Allocation in Heterogeneous Cloud Radio Access Networks," in *IEEE Communications Letters*, vol. 22, no. 8, pp. 1664-1667, Aug. 2018. **[IF:3.457, Ranked Q1]**
8. M. M. Abdelhakam, M. M. Elmesalawy, K. R. Mahmoud and I. I. Ibrahim, "A Cooperation Strategy Based on Bargaining Game for Fair User-Centric Clustering in Cloud-RAN," in *IEEE Communications Letters*, vol. 22, no. 7, pp. 1454-1457, July 2018. **[IF:3.457, Ranked Q1]**
9. M. Abdelhakam, Mahmoud M. Elmesalawy, Korany R. Mahmoud and I. Ibrahim, "Efficient WMMSE Beamforming for 5G mmWave Cellular Networks Exploiting the Effect of Antenna Array Geometries," in *IET Communications*, vol. 12, no. 2, pp. 169-178, 2018. **[IF:1.779, Ranked Q2]**
10. M. Elhattab, M. Elmesalawy and I. Ibrahim, "Opportunistic Device Association for Heterogeneous Cellular Networks with H2H/IoT Co-existence under QoS Guarantee," in *IEEE Internet of Things Journal*, vol. 4, no. 5, pp. 1360-1369, 2017. **[IF:7.596, Ranked Q1]**
11. H. H. Esmat, M. M. Elmesalawy and I. I. Ibrahim, "Joint channel selection and optimal power allocation for multi-cell D2D communications underlaying cellular networks," in *IET Communications*, vol. 11, no. 5, pp. 746-755, 3 30 2017. **[IF:1.061, Ranked Q3]**
12. Elhattab MK, Elmesalawy MM, Ibrahim II, "Distributed device association for multiservice heterogeneous cellular networks with QoS provisioning," *Transaction on Emerging Telecommunications Technologies*; e3181, 2017. **[IF:1.535, Ranked Q2]**
13. M. K. Elhattab, M. M. Elmesalawy and I. I. Ibrahim, "A Game Theoretic Framework for Device Association in Heterogeneous Cellular Networks With H2H/IoT Co-Existence," in *IEEE Communications Letters*, vol. 21, no. 2, pp. 362-365, Feb. 2017. **[IF:1.988, Ranked Q1]**
14. Ahmed Samir, Mahmoud M. Elmesalawy, A. S. Ali, and Ihab Ali, "An Improved LTE RACH Protocol for M2M Applications," Mobile Information Systems, vol. 2016, Article ID 3758507, 11 pages, 2016. **[IF:0.872, Ranked Q3]**
15. Ahmed Samir, Mahmoud M. Elmesalawy, A. S. Ali, and Ihab Ali, "Partial Contention Free Random Access Protocol for M2M Communications in LTE Networks," Journal of Wireless Networking and Communications, 6(3), 66-72, 2016.
16. H. H. Esmat, M. M. Elmesalawy and I. I. Ibrahim, "Adaptive Resource Sharing Algorithm for Device-to-Device Communications Underlaying Cellular Networks," in *IEEE Communications Letters*, vol. 20, no. 3, pp. 530-533, March 2016. **[IF:1.291, Ranked Q2]**
17. Mahmoud M. Elmesalawy, "D2D Communications for Enabling Internet of Things Underlaying LTE Cellular Networks," Journal of Wireless Networking and Communications, Vol. 6 No. 1, pp. 1-9, 2016.

18. Mahmoud M. Elmesalawy, A. S. Ali, “A Grouped System Architecture for Smart Grids Based AMI Communications over LTE,” International Journal of Wireless and Mobile Networks, Vol. 7 No. 6, pp. 55-70, 2015.
19. M.M. Eissa, Mahmoud M. Elmesalawy, Marwa M.A. Hadhoud, “Wide Area Monitoring System based on the third generation Universal Mobile Telecommunication System (UMTS) for event identification,” International Journal of Electrical Power & Energy Systems, Volume 69, Pages 34-47, July 2015. **[IF:2.587, Ranked Q1]**
20. M. M. Elmesalawy and M. M. Eissa, "New Forensic ENF Reference Database for Media Recording Authentication Based on Harmony Search Technique Using GIS and Wide Area Frequency Measurements," in *IEEE Transactions on Information Forensics and Security*, vol. 9, no. 4, pp. 633-644, April 2014. **[IF:2.408, Ranked Q1]**
21. M. M. Eissa, W. M. Fayek, M. M. A. Hadhoud, M. M. Elmesalawy and A. A. Shetaya, "Frequency/voltage wide-area measurements over transmission control protocol/internet protocol communication network for generator trip identification concerning missed data," in *IET Generation, Transmission & Distribution*, vol. 8, no. 2, pp. 290-300, February 2014. **[IF:1.353, Ranked Q1]**
22. Ibrahim I. Ibrahim, Gamal A.F.M. Khalaf, Mahmoud M. Elmesalawy, “Joint Timing, Frequency Offset Estimation and Power Control for Uplink IFDMA System”, IJICE – International Journal of Information Science and Engineering, Special Issue on Vehicular Wireless Networks and Vehicular Intelligent Transportation Systems, vol 3, pp.732-746, jun. 2010.
23. Ibrahim I. Ibrahim, Gamal A.F.M. Khalaf, Mahmoud M. Elmesalawy, “Frequency Offset Compensation for the Uplink of an IFDMA Multiple Access Systems”, International Journal of Information and Communication Engineering, World Academy of Science, Engineering and Technology, vol 4, pp.511-524, Feb. 2010.
24. Mahmoud M. Elmesalawy, et al, “Performance analysis for QoS provisioning in MPLS/DiffServ-based IP networks with non-preemptive priority queuing system”, Journal of Engineering Sciences (JES), Assuit University, Vol. 34, No. 3, PP.823-841, May 2006.
25. Mahmoud M. Elmesalawy, et al, “Performance analysis for quality of service provisining in MPLS/DiffServ-based IP networks”, Journal of Engineering Sciences (JES), Assuit University, Vol. 33, No. 3, PP.911-928, May 2005.
26. Mahmoud M. Elmesalawy, et al, “QoS Enhancement in MPLS-Based IP Networks”, Journal of Engineering Sciences (JES), Assuit University, Vol. 33, No. 2, pp.553-581, March 2005.

Conference Papers

1. M. M. Elmesalawy, A. I. Salama and M. G. Anany, "Tracy: Smartphone-based Contact Tracing Solution that Supports Self-investigation to Limit the Spread of COVID-19," Accepted for publication in Novel Intelligent and Leading Emerging Sciences Conference (NILES), Giza, Egypt, 2020.
2. Amr K. Mohammed, Helmy M. El Zoghby and M. M. Elmesalawy, " Remote Controlled Laboratory Experiments for Engineering Education in the Post-COVID-19 Era: Concept and Example," Accepted for publication in Novel Intelligent and Leading Emerging Sciences Conference (NILES), Giza, Egypt, 2020.

3. A. M. Alagrami, Mahmoud M. Elmesalawy and Ahmed M. Abd El-Haleem, "Enhanced ANDSF WiFi Discovery Mechanism Using Machine Learning for Mobile Data Offloading," 2019 15th International Computer Engineering Conference (ICENCO), Cairo, Egypt, 2019.
4. Gamal A. Khalaf, Mahmoud M. Elmesalawy and Eman Serag El Din, "Backhaul-Aware Scheduling for LWA with Energy-Throughput Tradeoff for an In-Order Packet Arrivals," 2019 International Symposium on Advanced Electrical and Communication Technologies (ISAECT), Rome, Italy, 2019.
5. A. I. Salama and M. M. Elmesalawy, "Flexible and Adaptive Testbed for 5G Experimentations," *2019 Novel Intelligent and Leading Emerging Sciences Conference (NILES)*, Giza, Egypt, 2019, pp. 166-169.
6. A. I. Salama and M. M. Elmesalawy, "Experimental OAI-based Testbed for Evaluating the Impact of Different Functional Splits on C-RAN Performance," *2019 Novel Intelligent and Leading Emerging Sciences Conference (NILES)*, Giza, Egypt, 2019, pp. 170-173.
7. M. G. Anany, Mahmoud M. Elmesalawy and Eman Serag El Din, "A Matching Game Solution for Optimal RAT Selection in 5G Multi-RAT HetNets," 2019 10th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON), New York City, NY, USA, 2019.
8. N. A. Elmosilhy, Mahmoud M. Elmesalawy and A. M. A. El Haleem, "Optimal Deployment of Heterogeneous Wireless Nodes in Integrated LTE/Wi-Fi Networks," 2019 10th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON), New York City, NY, USA, 2019.
9. A. I. Abdulshakoor, M. M. Elmesalawy, N. A. Elmosilhy and A. M. A. El-Haleem, "Joint Network and Mode Selection in 5G Multi RAT Heterogeneous Networks," *2019 42nd International Conference on Telecommunications and Signal Processing (TSP)*, Budapest, Hungary, pp. 307-312, 2019.
10. A. I. Abdulshakoor, M. M. Elmesalawy, G. A. Khalaf and M. I. Dessouky, "Backhaul-aware Scheduling Technique for LTE-WLAN Aggregation," *2019 IEEE Wireless Communications and Networking Conference (WCNC)*, Marrakesh, Morocco, pp. 1-6, 2019.
11. A. I. Abdulshakoor, M. M. Elmesalawy and G. A. Khalaf, "Proportional Traffic Splitting for Efficient LTE-WLAN Aggregation in Multi-RAT Heterogeneous Networks," *2019 36th National Radio Science Conference (NRSC)*, Port Said, Egypt, pp. 242-248, 2019.
12. M. G. Anany, Eman Serag El Din, and Mahmoud M. Elmesalawy "Optimal Radio Access Network Selection in Multi-RAT HetNets Using Matching Game Approach," 2019 2nd Europe – Middle East – North African Regional Conference of the International Telecommunications Society (ITS), Aswan, Egypt, February 18-21, 2019.
13. Ahmed I. Abdulshakoor, Mahmoud M. Elmesalawy, and Gamal A. Khalaf "Backhaul Effect on User Association in cellular and WiFi Networks," 2019 2nd Europe – Middle East – North African Regional Conference of the International Telecommunications Society (ITS), Aswan, Egypt, February 18-21, 2019.
14. Noha A. Elmosilhy, Ahmed M. Abd El-Haleem, and Mahmoud M. Elmesalawy, "Optimal Placement of Heterogeneous Wireless Nodes in LTE/WiFi Integrated Networks," 2019 2nd Europe – Middle East – North African Regional Conference of the International Telecommunications Society (ITS), Aswan, Egypt, February 18-21, 2019.

15. Mostafa M. Abdelhakam and Mahmoud M. Elmesalawy, “Energy-Efficient Approach for Beamforming Design and BBUs Aggregation in Heterogeneous C-RAN,” 2019 2nd Europe – Middle East – North African Regional Conference of the International Telecommunications Society (ITS), Aswan, Egypt, February 18-21, 2019.
16. M. Elhattab, Mahmoud M. Elmesalawy, T. Ismail," A Matching Game-Based Fronthaul-aware User Association in 5G Heterogeneous Cloud Radio Access Networks," 2018 International Symposium on Networks, Computers and Communications (ISNCC), Rome, Italy, June 2018.
17. M. Abdelhakam and M. Elmesalawy, "Joint Beamforming Design and BBU Computational Resources Allocation in Heterogeneous C-RAN with QoS Guarantee,” 2018 International Symposium on Networks, Computers and Communications (ISNCC), Rome, Italy, June 2018.
18. M. Al-Nahhal, T. Ismail, H. Selmy and M. M. Elmesalawy, "BPSK based SIM-FSO communication system with SIMO over log-normal atmospheric turbulence with pointing errors," *2017 19th International Conference on Transparent Optical Networks (ICTON)*, Girona, Spain, 2017, pp. 1-4.
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RESEARCH PROFILE

- **Research Interests:** 5G Communications, Heterogeneous Networks (HetNets), Multi-RATs Wireless Networks, Internet of Things Communications, Mobile Data Offloading, UAVs Communications, and Smart Grid Communications Technologies.
- **Google Scholar H-index:** 9 (Jul. 2020)
- **Google Scholar Citations:** 215 (Jul. 2020)
- **ORCID ID:** https://orcid.org/0000-0002-6299-3963
- **Web of Science Researcher ID:** X-2840-2019
- **Scopus Author ID:** 56015564300
- **IEEE Membership:** 92928925

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