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Ahmed Elsayed Abdelhaliem Farghal

PERSONAL INFORMATION

Marital status: Married
Citizenship: Egyptian
Place of Birth: Sohag, Egypt

WORK EXPERIENCE

May 2019 – Now, **Sohag University**, Sohag, Egypt
Assistant Professor, Full Time
Department of Electrical Engineering

Taught courses on the following subjects:

- Electronic Circuits (2)
- Electromagnetic Fields (2-A)
- Advanced Optical Communications
- Electronic Devices

November 2015 – May 2019, **Menoufia University**, Menouf, Egypt
Assistant Professor, Full Time
Department of Electronics and Electrical Communications Engineering

Taught courses on the following subjects:

- ECE 323: Microwave Engineering + Lab
- EEC 613: Optical Computer Networks
- EEC 628: Advanced Optical Communications
- EEC 713: Performance Analysis of Optical Networks
- EEC 729: Analysis and Design of Communication Circuits

November 2014 – July 2015, **Kyushu University**, Fukuoka, Japan
Special Research Student, Full Time
Graduate School of Information Science and Electrical Engineering
Research Project: SAC/Spatial OCDMA System Using Multi-Core Fiber (MCF)

September 2012 - September 2015, **Egypt-Japan University of Science and Technology (E-JUST)**, Alexandria, Egypt
PhD Student, Full Time
Department of Electronics and Communications Engineering
Research Project: Examining the Use of CDMA for Providing Multirate Multiservice Transmission in All-Optical Networks (AONs).

April 2011 – September 2012, **Menoufia University**, Menouf, Egypt
Research Associate, Assistant Lecturer, Full Time

Department of Electronics and Electrical Communications Engineering

Assisted in teaching courses on the following subjects:

- Electrical circuits
- Electronic circuits
- Microwave electronics
- Elective course

January 2007 – April 2011, **Menoufia University**, Menouf, Egypt

Research Assistant, Teaching Assistant, Full Time

Department of Electronics and Electrical Communications Engineering

Research Project: Examining the Performance of Near-Infrared Light-Emitting Devices Based on Quantum Dots (QDs).

Assisted in teaching courses on the following subjects:

- Lab. Tests
- Microwave engineering
- Mobile communication systems
- Electronic circuits
- Radar and Sonar

EDUCATION

2012 - 2015, **Egypt-Japan University of Science and Technology (E-JUST)**, Alexandria, Egypt

Ph.D. in Electronics and Communications Engineering, September 2015

Supervisors: Prof. Hossam M. H. Shalaby, Prof. Kazutoshi Kato, Prof. Ramesh Pokharel

Courses: Mobile Communications, Advanced Optical Communications Systems, Advanced Computer Networks, Quantum and Optical Electronics, Numerical Electromagnetic, Seminars on Advanced Topics in Communications.

Thesis Title: Performance Analysis of Multirate Multiservice OCDMA Networks.

2007 - 2011, **Menoufia University**, Menouf, Egypt

M.Sc. in Electronic Engineering (Communications Engineering), February 2011

Supervisors: Prof. Atef Abou El-Azm, Dr. Wageh M. H. Swelm

Courses: Communication Circuits, Information Theory, Remote Sensing, Specialized Topics, Generation and Transmission of Optical Signals, Digital Signal Processing, Radar and Sonar Systems, Specialized Mathematics, Advanced Communication Systems.

Thesis Title: Characterization of Infrared and Near-Infrared Light Emitting Devices Based on Quantum Dots.

2001 - 2006, **Menoufia University**, Menouf, Egypt

B.Sc. in Electronic Engineering, June 2006

Cumulative Grade: Distinction with Degree of Honor

Department Rank: Ranked Third over a class of 400 students

Graduation Project: Digital Automatic Private Branch Exchanges (PBXs)

Project Grade: Distinction.

TRAINING COURSES AND CERTIFICATES

- Nanotechnology Workshop at the Bibliotheca Alexandria, Egypt, 2-3 September 2007.
- Exams and Students Evaluation Systems, Faculty and Leadership Development Center (FLDC), Menoufia University, Jun. 2008.
- The Credit Hour Systems, FLDC, Menoufia University, Jul. 2008.
- Communication Skills, FLDC, Menoufia University, Jul. 2008.
- Use of Technology in Teaching, FLDC, Menoufia University, Aug. 2008.
- Research Ethics, FLDC, Menoufia University, Aug. 2008.
- University Code of Ethics, FLDC, Menoufia University, Aug. 2008.
- International Publishing of Scientific Research, FLDC, Menoufia University, Feb. 2012.
- Competing for Research Funds, FLDC, Menoufia University, Feb. 2012.
- Conference Organization, FLDC, Menoufia University, May 2012.
- Communication Skills in Different Education Styles, FLDC, Menoufia University, Jun. 2012.
- Managing Research Teams, FLDC, Menoufia University, Jul. 2012.
- Quality Standards in the Education Process, FLDC, Menoufia University, Jul. 2012.

JOURNAL PUBLICATIONS

- [J12] R. Eltaieb, **A. E. A. Farghal**, H. H. Ahmed, W. Saif, A. Ragheb, S. Alshebeili, H. M. H. Shalaby, and F. E. A. El-samie, “**Efficient classification of optical modulation formats based on singular value decomposition and Radon transformation,**” *IEEE/OSA J. Lightwave Technol.*, 2019.
- [J11] **A. E. Farghal**, “**On the performance of OCDMA/SDM PON based on FSO under atmospheric turbulence and pointing errors,**” *Optics & Laser Technol.*, vol. 114C, pp. 196-203, Jun. 2019.
- [J10] **A. E. Farghal** and H. M. H. Shalaby, “**Reducing inter-core crosstalk impact via code-interleaving and bipolar 2-PPM for core-multiplexed SAC OCDMA PON,**” *IEEE/OSA J. Opt. Commun. Netw.*, vol. 10, no. 1, Jan. 2018.
- [J9] **A. E. Farghal**, “**Performance analysis of core-multiplexed spectral amplitude coded-OCDMA PON,**” *IEEE/OSA J. Opt. Commun. Netw.*, vol. 8, no. 9, pp. 666–675, Sep. 2016.
- [J8] **A. E. Farghal**, H. M. H. Shalaby, K. Kato, and R. K. Pokharel, “**Performance analysis of multicode OCDM networks supporting elastic transmission with QoS differentiation,**” *IEEE Trans. Commun.*, vol. 64, no. 2, pp. 741–752, Feb. 2016.
- [J7] **A. E. Farghal**, H. M. H. Shalaby, K. Kato, and R. K. Pokharel, “**Optical code-division multiplexing (OCDM) networks adopting code-shift keying/overlapping PPM signaling: Proposal and performance analysis,**” *IEEE Trans. Commun.*, vol. 63, no. 10, pp. 3779–3788, Oct. 2015.

- [J6] **A. E. Farghal**, H. M. H. Shalaby, Z. Kawasaki, "**Performance analysis of multirate multiservice optical CDMA networks adopting overlapping PPM signaling**," *IEEE/OSA J. Lightw. Technol.*, vol. 32, no. 15, pp. 2649–2658, Aug. 2014.
- [J5] **A. E. Farghal**, H. M. H. Shalaby, and Z. Kawasaki, "**Multirate multiservice all-optical code switched GMPLS core network utilizing multicode variable-weight optical code-division multiplexing**," *IEEE/OSA J. Opt. Commun. Netw.*, vol. 6, no. 8, pp. 670–683, Aug. 2014.
- [J4] **A. E. Farghal**, S. Wageh, and A. Abou El-Azm, "**Electronic and excitonic processes in multilayer organic light emitting devices incorporating PbSe quantum dots**," *J. Comput. Electron.*, vol. 11, pp. 414–423, Oct. 2011.
- [J3] **A. E. Farghal**, S. Wageh, and A. Abou El-Azm, "**The effect of electrode materials on the optical characteristics of infrared quantum dot-light emitting devices**," *Progress in Electromagnetics Research C*, vol. 19, pp. 47–59, Jan. 2011.
- [J2] **A. E. Farghal**, S. Wageh, and A. Abou El-Azm, "**Anode material based on SWCNT for infrared quantum dot light-emitting devices**," *Opt. Quant. Electron.*, vol. 42, no. 4, pp. 263–276, Mar. 2010.
- [J1] **A. E. Farghal**, S. Wageh, and A. Abou El-Azm, "**Electromagnetic modeling of outcoupling efficiency and light emission in near-infrared quantum dot light emitting devices**," *Progress in Electromagnetics Research B*, Vol. 24, pp. 263–284, 2010.

HONORS AND AWARDS

- Best thesis award nomination for the Ph.D. degree, at Egypt-Japan University of Science and Technology (E-JUST), Fall 2015.
- Awarded an excellence scholarship for graduate studies at E-JUST, 2012-2015.
- Degree of Honor of Cumulative Academic Distinction, Faculty of Electronic Engineering, Menoufia University, July 2006.
- Academic Distinction Award, Faculty of Electronic Engineering, Menoufia University, 2002 - 2006.

PROFESSIONAL MEMBERSHIPS

- Member of the Egyptian Engineering Syndicate since 2006.

LANGUAGE AND COMPUTER SKILLS

Languages: Arabic (mother tongue) and English (very good) – IBT TOEFL Score: 85

Computer: Programming (MATLAB), Microsoft Office, Windows (ICDL certified), LATEX

REFERENCES

Available upon request