FADI R. NESSIR ZGHOUL

Electrical Engineeering Department
Jordan University of Science and Technology
P.O.Box 3030
Irbid 22110
Jordan
(962)79-9428915
Email: FRNessirZghoul@just.edu.jo

EDUCATION

University of Idaho, Idaho, USA.
Doctor of Philosophy, Electrical Engineering, Dec 2006.
Dissertation Title: "Analyzing Single and Multi-tone Nonlinear Circuits Using a Modified Harmonic Balance Method"

University of Idaho, Idaho, USA.
Master of Science, Electrical Engineering, Dec 2003.
Thesis Title: "An Integrated Pulse Charging Circuit for Lithium Micro-scale Batteries"
Research sponsored by JPL NASA 2001-2003.

Mutah University, Karak, JO.
Bachelor of Science, Electrical Engineering, Aug 1999.

PROFESSIONAL EXPERIENCE

Assistant Dean — Faculty of Engineering, Jordan University of Science and Technology, Irbid, Jo — Fall 2014-2016

- Preparing the annual report for the college of engineering.
- Preparing Academic and administrative formations for the college of Engineering.
- Preparing the annual budget for the college of Engineering.
- Review and approve supplies requested by the college of engineering departments.
- Responsible for transfer student course equivalencies.
- Responsible for students classes registration services.

Assistant Professor	Electrical Engineering Department, Jordan University of Science and Technology, Irbid, Jo	Fall 2010-Present
Assistant Dean	Hijjawi Faculty for Engineering Technology, Yarmouk University, Irbid, Jo	Fall 2009-2010
Assistant Professor	Department of Electronics Engineering, Yarmouk University, Irbid, Jo	Fall 2008-2009
Assistant Professor	Department of Electrical Engineering, Al-Hashimite University, Alzarqa, Jo	Fall 2007-2008
Teaching Assistant	Department of Electrical and Computer Engineering, University of Idaho, ID, USA	Jan 2003 May 2006
Research Assistant	Microelectronic Research and Communication Institute (MRCI), University of Idaho, ID, USA	Oct 2001 - Dec 2002 and summer 2003

RESEARCH AND TEACHING INTEREST

Electronics, integrated circuit design, analog and digital circuits, simulation techniques for nonlinear circuits and power management systems.

PUBLICATIONS

1. **Fadi Nessir Zghoul**, Suat U.Ay and O.S.Saadeh "Protraction of Bartlett Bisection Theorem to Cross Coupled Circuits" *3rd International Conference on Computing, Engineering and Emerging Technologies (ICCEET2017)* Accepted.
2. Ahmad Ababneh, **Fadi R. Zghoul**, "A Distributed Sensor Relocation Algorithm for Target Localization Problems", *Ad Hoc & Sensor Wireless Networks*, 35 (2017).
3. Ahmad Ababneh, Lutfa Akter and **Fadi R. Zghoul**, "Quantizer Design for RSSI-based Target Localization in Sensor Networks", *Ad Hoc & Sensor Wireless Networks*, 35 (2017).
4. **Fadi Nessir Zghoul**, Suat U.Ay, Ismail Cevik, Ahmad A.Ababnah, Saher A Albatran and Abdallah Y Almaaitah. "A Novel Stochastic ADC Topology with Wide Input Range." *Indian Journal of Science and Technology.* 9, no. S1 (2016).
5. **Fadi Nessir Zghoul**, Suat U. Ay, and Ahmad Ababneh. "Gain and offset analysis of comparator using the bisection theorem and a balanced method." *International Journal of Electronics* 103, no. 12 (2016): 1965-1983.
6. Abougindia, Islam T., Ismail Cevik, **Fadi N. Zghoul**, and Suat U. Ay. "A precision comparator design with a new foreground offset calibration technique." *Analog Integrated Circuits and Signal Processing* 83, no. 2 (2015): 243-255.
7. Abougindia, Islam T., Ismail Cevik, Suat U. Ay, and **Fadi Nessir Zghoul**. "A fast two-step coarse-fine calibration (CFC) technique for precision comparator design." *In Electronics, Circuits, and Systems (ICECS)*, 2013 IEEE 20th International Conference on, pp. 153-156. IEEE, 2013.
8. **Fadi Nessir Zghoul**, and David Egolf. "Analyzing nonlinear circuits using a modified harmonic balance method." *In Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD)*, 2012 International Conference on, pp. 213-216. IEEE, 2012.
9. Sukumar, Vinesh, **Fadi Nessir Zghoul**, Mahmoud Alahmad, Herbert Hess, Kevin Buck, Harry Li, Dave Cox et al. "MOSFET charger controller circuit for on chip power cells in aeronautical applications." *In 2009 IEEE International Symposium on Industrial Electronics.* 2009.
10. Sukumar, Vinesh, Mahmoud Alahmad, Kevin Buck, Mathew Braley, Jasper Nance, **Fadi Nessir Zghoul**, Herbert Hess et al. "High impedance nano charger for on-chip 50nAH rated microbatteries." *In Industrial Electronics, 2006 IEEE International Symposium on*, vol. 4, pp. 2719-2723. IEEE, 2006.
11. Sukumar, Vinesh, Mahmoud Alahmad, Kevin Buck, Herbert Hess, Harry Li, Dave Cox, **Fadi Nessir Zghoul** et al. "High Voltage MOSFET Gate/Bulk Driver Controller for a Microbattery Switch Matrix in a 0.35 m Microwave SOI Technology." *Analog Integrated Circuits and Signal Processing* 44, no. 3 (2005): 203-211.
12. Sukumar, Vinesh, Mahmoud Alahmad, Kevin Buck, Herbert Hess, Harry Li, Dave Cox, **Fadi Nessir Zghoul** et al. "Switch array system for thin film lithium microbatteries." *Journal of power sources* 136, no. 2 (2004): 401-407.
13. Sukumar, Vinesh, Mahmoud Alahmad, Kevin Buck, Herbert Hess, Harry Li, Dave Cox, **Fadi Nessir Zghoul**, M. Mojaradi, W. C. West, and J. F. Whitacre. "Nano current charging algorithms for thin film lithium microbatteries." *In Proc. 11th NASA Symposium on VLSI Design*, Coeur d Alene. 2003.

COURSES TAUGHT

- CMOS Circuit Design
- Electrical Circuits 1
- Electronics 1
- Electronic Circuits LAB
- Introduction to Electronics Microcontrollers LAB
- Digital Logic
- Digital Electronic Circuits LAB.
- Electrical Circuits 2
- Electronics 2
- Electrical Circuits LAB
- Numerical methods for Engineers
- Signals and Systems

∗ **A typical load is 12 hours/week of teaching at JUST and 8 office hours.**

THESES DEFENCE COMMITTEE MEMBER

1. Atheer Al-Shaggah, "New Approach for Carbon Nano Tube Field Effect Transistor Modelling" *Jordan University of Science AND Technology, Irbid, Jordan 2015.*
2. Hussen thyabat "Short range error corrected free space optical interconnects" *Jordan University of Science AND Technology, Irbid, Jordan 2011.*

∗ **The post graduate program in the electrical engineering department at JUST only offers a master degree in two areas; power systems and wireless communication**

GRADUATION PROJECTS SUPERVISED

1. Laith Mohammad Obeidat, Oraib Saleh Al-rousan, Ghaith Mohammad Obeidat, "Wireless weather station powered by solar cell ," *Jordan University of Science and Technology, JUST, Irbid, Jordan.*
2. Hussein Barakat, Azzam Ababneh, "Sun tracking system," *Jordan University of Science and Technology, JUST, Irbid, Jordan.*
3. Tareq Omar Qaddoura, Majd Bassam Shannis, "Wind mobile phone chargers," *Jordan University of Science and Technology, JUST, Irbid, Jordan.*
4. Amal I. Jaradat, Salma M. Amayri, "line follower Robot," *Jordan University of Science and Technology, JUST, Irbid, Jordan.*
5. Obadah Nawafleh, Morad Al-faqeeh,Ahmed Shhab, Hana Al-howari, "Multi-functional robot," *Jordan University of Science and Technology, JUST, Irbid, Jordan.*
6. Dalia Dalgamouni, "On chip high speed comparator," *Jordan University of Science and Technology, JUST, Irbid, Jordan.*
7. Mohammaed Hamdi Al-Hiyari,"Smart green house," *Jordan University of Science and Technology, JUST, Irbid, Jordan.*

PROFESSIONAL AND PERSONAL SKILLS

In-depth knowledge in IC design, mixed signals, DAC's, ADC's and Proficient in computer aided design applications. Excellent analytical, problem solving and troubleshooting skills. Ability to work on multiple projects simultaneously. Passionate to deliver my best for every project. Working under deadlines. Cooperating with a work team.

GRANTS AND AWARDS

- Award: In Recognition for 2004 Outstanding Teaching Assistant.
  Department of Electrical and Computer Engineering,
  University of Idaho, Idaho, USA. May 2004.

- Award: Certificate of Recognition for the Development of a Technical Innovation which has been approved for Publication as a NASA Tech Brief Entitled Switch Array and Power Management for Battery and other Energy Storage Elements.
  National Aeronautics and Space Administration (NASA), Aug 2006.

- Grant: Wide input range stochastic analog to digital converter.
  Jordan University of Science and Technology Research. Grant No: 20160158

MEMBERSHIP OF COMMITTEES AND BOARDS

External reviewer for the B.S. program in engineering technology at Community College of Qatar, Qatar.

Jordan University Science and Technology

- Member: Steering Committee for the Alumni Office Affairs at Jordan University Science and Technology
  12^{th} Nov 2015 - 13^{th} Sep 2016

- Member: Technological Incubator at the Center of Excellence for Innovative Projects Committee at Jordan University Science and Technology.
  1^{st} June 2016 - 13^{th} Sep 2016

Faculty of Engineering at Jordan University of Science and Technology

- Member: Student Discipline Committee at the Faculty of Engineering
  Jordan University of Science and Technology
  2014 - 13^{th} Sep 2016

Electrical Engineering Department at Jordan University Science and Technology

- Committee Chair: Social Affairs at the Electrical Engineering Department
  Jordan University of Science and Technology
  2011-Now

- Head of the election committee for student congress elections at the Electrical Engineering Department
  Jordan University of Science and Technology
  2011

- Member: Information and Website Committee at the Faculty of Engineering
  Jordan University of Science and Technology
  2010-2012

PROFESSIONAL MEMBERSHIP

- Member, Institute of Electrical and Electronics Engineers (IEEE)
  Member Number: 90601665
  Region: R8 -Europe, MEast, Africa
  Section: Jordan Section

- Member, IEEE Solid-State Circuits Society.

- Member, IEEE Circuits and Systems Society.

- Administrative body member, Jordan University of Science and Technology Faculty Members Association
  year: 2014-Now

- Member, Jordan Engineers Association.
  Division: Electrical Eng.
  Reg.no:10876\4
  Reg.Date:11-29-1999