

Yazan H. Al-Badarneh

Electrical Engineering Department
The University of Jordan
Jordan Amman, 11942
Tel: +962-797088036

E-mail:yalbadarneh@ju.edu.jo
ORCID iD: <https://orcid.org/0000-0002-2399-1703>

Revised: Oct 21, 2023

Personal Data

- Jordanian
- Married, Two Children
- Languages: Arabic, English

General Research Interests

Statistical communication theory; information theory; multi-input, multi-output (MIMO) wireless systems; physical layer security; green communications; cognitive radio; optical-wireless communications.

Education

Ph.D. in Electrical Engineering

Texas A&M University, College Station, Tx, USA

August 2018

Advisor: Prof. Costas N. Georghiades

Dissertation Title: *On the Application of Extreme Value Theory to the Performance of k -th Best Link Selection in Wireless Communication Systems*

GPA: 3.83/4.00

M.Sc. in Electrical Engineering

Jordan University of Science and Technology (JUST), Jordan

June 2011

Advisor: Prof. Mohammad Banat

Thesis Title: *Statistical Adaptive Modulation for Multicarrier Wireless Communication System*

GPA: 87/100.

B.Sc. in Electrical & Computer Engineering

Hashemite University, Jordan

January 2009

GPA: 3.7/4.00 (Honor: top of Electrical & Computer Engineering class 2009)

Professional Employment

- December 2020 - Present: **Deputy Dean for Quality Affairs, Accreditation and Ranking**, School of Engineering, The University of Jordan, Amman, Jordan
- September 2023 - Present: **Associate Professor**, Electrical Engineering Department, The University of Jordan, Amman, Jordan
- December 2020 - September 2022: **Assistant Dean for Ditsnace Learning**, School of Engineering, The University of Jordan, Amman, Jordan
- September 2018 - August 2023: **Assistant Professor**, Electrical Engineering Department, The University of Jordan, Amman, Jordan
- September 2013 - August 2018: **Graduate Research Assistant**, Electrical Engineering Department, Texas A& M University, Texas, USA
- September 2011 - June 2013: **Full-Time Lecturer**, Electrical Engineering Department, King Abdulaziz University, Jeddah, Saudi Arabia
- February 2009 - June 2011: **Graduate Research Assistant**, Electrical Engineering Department, Jordan University of Science and Technology (JUST), Irbid, Jordan

Affiliations

- Member of the Institute of Electrical and Electronic Engineers (IEEE)
- Member, IEEE Communications Society

Honors and Awards

- Graduate Research Assistantship Award, Electrical Engineering Department, Texas A&M University, 2013-2018.
- Graduate Teaching Assistantship Award, Electrical Engineering Department, JUST, 2009-2011
- Hashemite University Award for Scientific Excellence, top of Electrical & Computer Engineering class 2009
- Ministry of Education Scholarship (Jordan) for pursuing B.Sc. in Electrical & Computer Engineering at Hashemite University, 2006-2009

Professional Service

- Technical Program Chair, Recent Results Track, IEEE Vehicular Technology Conference, Chicago, USA, August 27–30, 2018
- Session Chair, Full-Duplex and Interference Mitigation, IEEE Vehicular Technology Conference, Chicago, USA, August 27–30, 2018

- Technical Reviewer for IEEE Transactions on Wireless Communications, IEEE Transactions on Vehicular Technology, IEEE Transactions on Communications, IEEE Wireless Communications Letters, IEEE Wireless Communications Letters, IEEE Transactions on Cognitive Communications and Networking, and IEEE Access.
- Technical Reviewer for several prestigious IEEE conferences (IEEE VTC, IEEE ICC, IEEE GLOBECOM)
- Counselor of the IEEE Communications Society Student Chapter, The University of Jordan

Conference Organization

- Co-organizer (Technical Committee Member), 2020 IEEE Innovation and Entrepreneurship Conference (IEC). Organized in Amman, Jordan, December 1-3, 2021
- Co-organizer (Technical Committee Member), 2020 The IEEE 32nd International Conference on Microelectronics (ICM). Organized in Amman, Jordan, December 14-17, 2020

Journal Publications

- **Yazan H. Al-Badarneh**, Mustafa K. Alshawaqfeh and Osamah S. Badarneh, *Selection Combining Over Log-Logistic Fading Channels With Applications to Underwater Optical Wireless Communications*, **IEEE Wireless Communication Letters**, pp. **1568 - 1572**, Vol. **12**, No. **9**, September **2023**
- Athira Subhash, Abba Kammoun, Ahmed Elzanaty, Sheetal Kalyani, **Yazan H. Al-Badarneh** and Mohamed-Slim Alouini, *Optimal Phase Shift Design for Fair Allocation in RIS-Aided Uplink Network Using Statistical CSI*, **IEEE Journal on Selected Areas in Communications**, pp. **2461 - 2475**, Vol. **41**, No. **8**, August **2023**
- Athira Subhash, Abba Kammoun, Ahmed Elzanaty, Sheetal Kalyani, **Yazan H. Al-Badarneh** and Mohamed-Slim Alouini, *Max-Min SINR Optimization for RIS-Aided Uplink Communications With Green Constraints*, **IEEE Wireless Communication Letters**, pp. **942 - 946**, Vol. **12**, No. **9**, June **2023**
- Athira Subhash, Sheetal Kalyani, **Yazan H. Al-Badarneh** and Mohamed-Slim Alouini, *On the Asymptotic Performance Analysis of the k -th Best Link Selection over Non-identical Non-central Chi-square Fading Channels*, **IEEE Transactions on Communications**, pp. **7191-7206**, Vol. **70**, No. **11**, November **2022**
- **Yazan H. Al-Badarneh**, Ahmed Elzanaty and Mohamed-Slim Alouini, *On the Performance of Spectrum Sharing Backscatter Communication Systems*, **IEEE Internet of Things Journal**, pp. **1951-1961**, Vol. **9**, No. **3**, February **2022**
- Hussam Ibraiwish, Ahmed Elzanaty, **Yazan H. Al-Badarneh** and Mohamed-Slim Alouini, *EMF-Aware Cellular Networks in RIS-Assisted Environments*, **IEEE Communications Letters**, pp. **123-127**, Vol. **26**, No. **1**, January **2022**

- **Yazan H. Al-Badarneh**, Mohamed-Slim Alouini and Costas N. Georghiades, *Performance Analysis of Monostatic Multi-Tag Backscatter Systems with General Order Tag Selection*, **IEEE Wireless Communication Letters**, pp. 1201 - 1205, Vol. 9, No. 8, August 2020.
- **Yazan H. Al-Badarneh**, Costas N. Georghiades and Mohamed-Slim Alouini, *On the Throughput of Interference-Based Wireless Powered Communications with Receive Antenna Selection*, **IEEE Transactions on Vehicular Technology**, pp. 3048 - 3056, Vol. 69, No. 3, March 2020.
- **Yazan H. Al-Badarneh**, Costas N. Georghiades and Mohamed-Slim Alouini, *Asymptotic Performance Analysis of Generalized User Selection for Interference-Limited Multiuser Secondary Networks*, **IEEE Transactions on Cognitive Communications and Networking**, pp. 82-92, Vol. 5, No. 1, March 2019.
- **Yazan H. Al-Badarneh**, Costas N. Georghiades, Redha M. Radaydeh and Mohamed-Slim Alouini, *On the Secrecy Performance of Generalized User Selection for Interference-Limited Multiuser Wireless Networks*, **IEEE Transactions on Vehicular Technology**, pp. 12442 - 12446, Vol. 67, No. 12, Dec. 2018.
- **Yazan H. Al-Badarneh**, Costas N. Georghiades and Mohamed-Slim Alouini, *Asymptotic Performance Analysis of the Best Link Selection Over Wireless Fading Channels: An Extreme Value Theory Approach*, **IEEE Transactions on Vehicular Technology**, pp. 6652-6657, Vol. 67, No. 7, July 2018.
- Carlos E. Mejia, Costas N. Georghiades, Mohamed M. Abdallah and **Yazan H. Al-Badarneh**, *Code Design for Flicker Mitigation in Visible Light Communications Using Finite State Machines*, **IEEE Transactions on Communications**, pp. 6652-6657, Vol. 67, No. 5, May 2017.

Journal Submissions

- Srinivas Sagar, Athira Subhash, Ahmed Elzanaty, **Yazan H. Al-Badarneh**, Sheetal Kalyani, Mohamed-Slim Alouini and Lajos Hanzo, *The Rendezvous Between Extreme Value Theory and Future 6G Networks*, **To be submitted in IEEE Communications Surveys & Tutorials**
- Yazid M Khattabi, **Yazan H. Al-Badarneh** and Mohamed-Slim Alouini, *On the Performance of Interference-Based Energy-Harvesting-Enabled Wireless AF Relaying Communication Systems*, **To be submitted in IEEE Access**
- **Yazan H. Al-Badarneh**, Mustafa Alshawaqfeh, Osamah S. Badarneh and Yazid M Khattabi, *Performance Analysis of RIS-Assisted Spectrum Sharing Systems over Rician Fading Channels*, **Under Review in IEEE Transactions on Cognitive Communications and Networking**

Refereed Conference Publications

- **Yazan H. Al-Badarneh**, Costas N. Georghiadis and Mohamed-Slim Alouini, *On the Asymptotic Throughput of the k -th Best Secondary User Selection in Cognitive Radio Systems*, Proceedings of the IEEE Vehicular Technology Conference (VTC) 2018, Chicago, IL, August 27–30, 2018
- **Yazan H. Al-Badarneh**, Costas N. Georghiadis and Carlos E. Mejia, *On the Effective Rate of MISO/TAS Systems in Rayleigh Fading*, Proceedings of the International Symposium on Information Theory (ISIT) 2017, Aachen, Germany, June 25-30, 2017
- **Yazan H. Al-Badarneh**, Costas N. Georghiadis and Carlos E. Mejia, *Asymptotic Performance Analysis of Multiuser Diversity in Free Space Optical Communication Systems*, Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC) 2017, San Francisco, California, March 19-22, 2017
- Carlos E. Mejia, Costas N. Georghiadis and **Yazan H. Al-Badarneh**, *Code Design in Visible Light Communications Using Color-Shift-Keying Constellations*, Proceedings of the IEEE Global Communications Conference (GLOBECOM) 2016, Washington, DC, Dec. 4-8, 2016
- Mahmoud A. Smadi, **Yazan H. Al-Badarneh**, *An Enhanced Combining Technique of Homodyne ASK Optical System with Laser Phase Noise*, Proceedings of the IEEE Canadian Conference on Electrical and Computer Engineering (CCECE) 2015, Halifax, NS, May 3-6, 2015

References

- Prof. Costas N. Georghiadis, Texas A&M University, College Station, Texas, USA (e-mail: georghiadis@tamu.edu)
- Prof. Mohamed-Slim Alouini, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia (e-mail: slim.alouini@kaust.edu.sa)