Faculty C.V.

1. **Name and date of birth:**

   Mounib Khanafer, January 24, 1979

2. **Academic Rank:**

   Full-Time Associate Professor

3. **Degrees**

   - *Ph.D. in Electrical and Computer Engineering, University of Ottawa, 2012*

   - *M.A.Sc., in Electrical Engineering, University of Ottawa, 2007*

   - *B.Sc., in Electrical Engineering, Kuwait University, 2002*

4. **Service at this Institution**

   10 years and 8 months

   2013 – 2019 Assistant Professor of Electrical and Computer Engineering

   2019 – Present Associate Professor of Electrical and Computer Engineering

5. **Professional Experience**

   - *2019 – Present, Associate Professor in Elect. & Comp. Eng., American U. of Kuwait, Kuwait*

   - *Summer 2022, Visiting Professor, Dartmouth College, NH, USA*

   - *2013 – 2019, Assistant Professor in Elect. & Comp. Eng., American U. of Kuwait, Kuwait*

   - *Summer 2014, Visiting Professor, University of Ottawa, Ottawa, Canada*

   - *2012 – 2013, Postdoctoral Fellow, University of Ottawa, Ottawa, Canada*

   - *2008 – 2012, Teaching & Research Assistant, University of Ottawa, Ottawa, Canada*

   - *2005 – 2008, Software Designer, Nortel Networks, Ottawa, Canada*

   - *2004 – 2006, Intern, Communications Research Centre, Ottawa, Canada*

   - *2003 – 2005, Teaching & Research Assistant, University of Ottawa, Ottawa, Canada*

   - *Summer 2001, Visiting Scholar, Interuniversity Microelectronics Centre, Leuven, Belgium*

6. **Publications**

   a) Refereed Journals:

      1. Hamid Hajaje, **Mounib Khanafer**, Zine El Abidine Guennoun, Junaid Israr, and Mouhcine Guennoun, "A Collision-aware MAC Protocol for Efficient Performance in Wireless Sensor Networks," International Journal of Advanced Computer Science and Applications (IJACSA), vol. 12, no. 3, March 2021.

2. **Mounib Khanafer** and Shervin Shirmohammadi, "Applied AI in instrumentation and measurement: The deep learning revolution," <u>IEEE Instrumentation and Measurement Magazine</u>, vol. 23, no. 6, pp. 10 – 17, September 2020.

3. Palwasha W. Shaikh, Mohammed El-Abd, **Mounib Khanafer**, and Kaizhou Gao, "A Review on Swarm Intelligence and Evolutionary Algorithms for Solving the Traffic Signal Control Problem," <u>IEEE Transactions on Intelligent Transportation Systems</u>, pp. 1 – 16, August 2020.

b) Conferences

1. **Mounib Khanafer**, Logan Kostick, Chixiang Wang, Wondimu Zegeye, Weijia He, Berkay Kaplan, Nurzaman Ahmed, Kevin Kornegay, David Kotz, and Timothy J. Pierson, "Device Discovery in the Smart Home Environment," in the proceedings of IEEE/ACM Workshop on the Internet of Safe Things (SafeThings 2024), San Francisco, CA, USA, May 2024.

2. Ravindra Mangar, Jingyu Qian, Wondimu Zegeye, **Mounib Khanafer**, Abdulrahman AlRabah, Ben Civjan, Shalni Sundram, Sam Yuan, Carl Gunter, Kevin Kornegay, Timothy J. Pierson, and David Kotz, "Designing and Evaluating a Testbed for the Matter Protocol: Insights into User Experience," in the proceedings of the NDSS Workshop on Security and Privacy in Standardized IoT (SDIoTSec '24), San Diego, California, USA, February 26 – March 1, 2024. (*Distinguished Paper Award*)

3. Denise Anthony, Carl A. Gunter, Weijia He, **Mounib Khanafer**, Susan Landau, Ravindra Mangar, and Nathan Reitinger, "The HandyTech's Coming Between 1 and 4: Privacy Opportunities and Challenges for the IoT Handyperson," in the Proceedings of the 2023 Workshop on Privacy in the Electronic Society (WPES 2023), Copenhagen, Denmark, November 2023.

4. Ayman Kandil, Ali Darwiche, Reem Qasem, Fatima Matook, Ahmad Younis, Habib Badran, Maryam Bin-Jassem, Ossama Ahmed, Ali Behiry, Mohammed El Abd, and **Mounib Khanafer**, "Pipeline Leak Identification Emergency Robot Swarm (PLIERS)," in the Proceedings of 2023 20th Annual IEEE International Conference on Sensing, Communication, and Networking (SECON), Madrid, Spain, September 2023.

5. **Mounib Khanafer** and Tushar Jois, "Towards Application-Driven IoT Education," to appear in the Proceedings of the IEEE Global Engineering Education Conference (EDUCON 2023), Salmaiya, Kuwait, May 2023.

6. **Mounib Khanafer** and Mohammed El Abd, "Stimulating Research Projects Through Teaching a Course on the Internet of Things," Proceedings of the IEEE Global Engineering Education Conference (EDUCON 2020), Porto, Portugal, April 2020.

7. **Mounib Khanafer**, Marwa Kandil, Reem Al-Baghdadi, Amani Al-Ajmi, and Hussein T. Mouftah, "Enhancements to IEEE 802.15.4 MAC Protocol to Support Vehicle-to-Roadside Communications in VANETs," Proceedings of the IEEE International Conference on Communications (ICC 2019), Shanghai, China, May 2019.

8. **Mounib Khanafer** and Mohammed El Abd, "Guideline for Teaching an Introductory Course on the Internet of Things," Proceedings of the IEEE Global Engineering Education Conference (EDUCON 2019), Dubai, UAE, April 2019.

9. <u>Membership in Professional Societies</u>

1. Senior IEEE member. (Jun. 2016 – Present)
2. IEEE Communications Society (ComSoc) member. (Feb. 2018 – Present)

10. <u>Patents, Honors and Awards</u>

1. Joint recipient of the Distinguished Paper Award at the NDSS Workshop on Security and Privacy in Standardized IoT (SDIoTSec '24), San Diego, California, USA, February 26 – March 1, 2024.

2. Recipient of Dartmouth-AUK Fellowship, June – August 2022.

3. Joint recipient of the "Second Best Poster Award", presented at the 4th Annual WiSense Workshop, University of Ottawa, Canada, September 2012.

3. Recipient of the University of Ottawa Dean's Scholarship for completing the Ph.D. program in a timely fashion, July 2012.

4. Recipient of the "First Best Poster Award", presented at the 3rd Annual WiSense Workshop, University of Ottawa, Canada, September 2011.

5. Recipient of the University of Ottawa Admission Scholarship for the Ph.D. program, January 2008.

9. Recipient of the University of Ottawa Admission Scholarship for the Master's program, January 2003.

10. Ranked 2nd in 1997 Electrical Engineering Class at Kuwait University

11. Dean's Honour List, Kuwait University (1997-2002)

12. Distinction's List, Kuwait University (1997-2002)

11.   Courses Taught

a) Academic Courses (Undergraduate)

#	Course Name	Credits	Level
1	Wireless Networks and Mobile Systems	3	4th Year
2	Computer Networks	3	4th Year
3	Introduction to the Internet of Things	3	3rd Year
4	Data and Computer Communications	3	3rd Year
5	Microprocessors and Interfacing	3	3rd Year
6	Signals and Systems	3	3rd Year
7	Electronics	3	2nd Year
8	Computer Organization and Architecture	3	2nd Year
9	Electric Circuits	3	2nd Year
10	Electric Circuits Laboratory	1	2nd Year
11	Digital Logic Design	3	2nd Year
12	Digital Logic Design Laboratory	1	2nd Year
13	MATLAB Programming Laboratory	1	2nd Year
14	Computer Programming I	4	1st Year

12.   Other Duties

Committee	Level	Semesters/Years of Service	Role
Dean's Council	College	Fall 2020 – Present	Member
Curriculum and Assessment Committee	College	Spring 2024	Chair
Industrial Advisory Board	College	Spring 2023 – Present	Member
Accreditation Committee	College	Fall 2020 – Spring 2022	Chair

Academic Policies and Procedures Committee	University	Fall 2020 – Spring 2022	Member
Curriculum and Assessment Committee	Departmental	Fall 2019 – Fall 2020	Member
ABET Accreditation Steering Committee	College	Spring 2021 – Fall 2021	Chair
Academic Policies and Procedures Committee	College	Fall 2019 – Spring 2020	Chair
Academic Policies and Procedures Committee	College	Fall 2018 – Spring 2019	Member
ECE Student Liaison Committee	Departmental	Fall 2013 – Fall 2019	Chair
Student Advisory Board (SAB)	Departmental	Fall 2013 – Fall 2019	Chair
Course Assessment Committee	Departmental	Fall 2013 – Spring 2020	Member
ECE Exhibition Organizing Committee	Departmental	Fall 2016/Fall 2017	Chair
Professional Development Committee	University Standing	Fall 2014 – Fall 2016	Chair
Academic Computing and Technology Committee	University Standing	Fall 2016 – Spring 2017	Member
Ad Hoc Committee to design an "Engineering Ethics" course	Departmental	Fall 2015 – Fall 2016	Chair

13. Research Grants

Grant	Funding Agency	Project Title	Amount (KWD)	Year(s)
PD Award	AUK	HandyTech	**740**	2023
PD Award	AUK	SPLICE	**900**	2023
PD Award	AUK	PLIERS	**1000**	2023
AUK-Dartmouth Fellowship	AUK	Security and Privacy in IoT-based Smart Homes	**2250**	2022

AUK Research Grant	AUK	PLIERS: IoT-based Inspection System for Pipes	**1406**	2022
AUK Research Grant	AUK	Medium Access Control (MAC) Protocols for Wireless Body Area Networks (WBANs)	**1000**	2019
PD Award	AUK	Enhancements to IEEE 802.15.4 MAC Protocol to Support Vehicle-to-Roadside Communications in VANETs	**909**	2019
IoT Lab Equipment	AUK	IoT Technologies	**1705**	2018
PD Award	AUK	A framework for the design of cost-effective wireless body area networks with efficient data collection	**454**	2018
PD Award	AUK	An Optimized Cluster-Based WSN Design for Latency-Critical Applications	**800**	2017
Research Initiation Grant	AUK	Investigating the Performance of Wireless Sensor Networks in the Context of the Smart Grid	**500**	2016
PD Award	AUK	A Review of Intrusion Detection in 802.15.4-based Wireless Sensor Networks	**291**	2016
Total			**11955**	

13. **Participation in Specific Programs**

Workshop Title	Date	Organizing Agency and Location
Post Graduate Program in Artificial Intelligence and Machine Learning: Business Applications	Sept. 2021 – May 2022	University of Texas at Austin (Online)
Self-Study Report Development Workshop	Spring 2021	ABET (Online)

ABET IDEAL Workshop	Summer 2019	ABET (ABET Headquarters, Baltimore, MD, USA)
Internet of Things (IoT) and Machine-to-Machine (M2M)	February 2018	IEEE Communications Society (Online)