Mounib Khanafer, PhD

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Mounib Khanafer's Publications

Refereed Journal Papers:

- 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.

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

- 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," IEEE Transactions on Intelligent Transportation Systems, pp. 1 – 16, August 2020.

- **Mounib Khanafer**, Irfan Al-Anbagi, and Hussein T. Mouftah, "An Optimized WSN Design for Latency-Critical Smart Grid Applications," Journal of Sensors, vol. 2017, vol. 2017, Article ID 5274715, July 2017.

- Mouhcine Guennoun, **Mounib Khanafer**, and Hussein T. Mouftah, "Modeling of Variable Clear Channel Assessment MAC protocol for Wireless Sensor Networks," Computer Communications, vol. 59, pp. 67-83, March 2015.

- **Mounib Khanafer**, Mouhcine Guennoun, Hussein T. Mouftah, "A Survey of Beacon-Enabled IEEE 802.15.4 MAC Protocols in Wireless Sensor Networks," IEEE Communications Surveys and Tutorials, vol. 16, no 2, pp. 856-876, May 2014.

- **Mounib Khanafer**, Mouhcine Guennoun, Hussein T. Mouftah, "Priority-Based CCA Periods for Efficient and Reliable Communications in Wireless Sensor Networks," Wireless Sensor Network, vol. 4, no. 2, pp. 45-51, February 2012.

Refereed Conference Papers

- **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," to appear in the proceedings of IEEE/ACM Workshop on the Internet of Safe Things (SafeThings 2024), San Francisco, CA, USA, May 2024.

- 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," to appear 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)**

- 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.

- 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.

- **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.

- **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.

- **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.

- **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.

- Mahmoud Al-Bitar, Fatemah Abdal, Kofran Al-Jazzaf, Abdulrahman Al-Saqran, and **Mounib Khanafer**, "The Use of Unreal Engine to Create Virtual Realty Fitness and Gaming Application," Proceedings of the 10th IEEE-GCC Conference and Exhibition, Kuwait, April 2019

- Ali Kelkawi and **Mounib Khanafer**, "A framework for the design of cost-effective wireless body area networks with efficient data collection," Proceedings of the 6th International Conference on Digital Information, Networking, and Wireless Communications (DINWC), Beirut, Lebanon, April 2018.

- Ali Kelkawi, Hadi Najafpour, Ahmad Khalifa, and **Mounib Khanafer**, "Mobicare: E-Health and Emergency Wireless Monitoring System," Proceedings of the 2nd International Conference on Computing Sciences and Engineering (ICCSE), Kuwait, March 2018.

- **Mounib Khanafer**, Irfan Al-Anbagi, and Hussein T. Mouftah, "An Optimized Cluster-Based WSN Design for Latency-Critical Applications," Proceedings of the 13th International Wireless Communications and Mobile Computing Conference (IWCMC 2017), pp. 969 – 973, Valencia, Spain, June 2017.

- Mahmoud Imdoukh, Yasser Khalil, Ali Rady, and **Mounib Khanafer** "Zealth: ZigBee-Based WBAN System for e-Health Monitoring," Proceedings of the 9th IEEE-GCC Conference and Exhibition, Manama, Bahrain, May 2017.

- **Mounib Khanafer**, Youssef Gahi, Mouhcine Guennoun, Hussein T. Mouftah, "A Review of Intrusion Detection in 802.15.4-based Wireless Sensor Networks," Proceedings of the 3rd IEEE International Conference on Cyber Security and Cloud Computing (CSCloud 2016), Beijing, China, June 2016.

- Ali Rady, Yasser Khalil, Mahmoud Imdoukh, and **Mounib Khanafer**, "Z-Health: A ZigBee-based WBAN for E-Health Monitoring of Children," Proceedings of the 1st International Conference on Computing Sciences and Engineering (ICCSE), Kuwait, March 2015.

- Irfan Al-Anbagi, **Mounib Khanafer**, Hussein T. Mouftah, "MAC Finite Buffer Impact on the Performance of Cluster-Tree based WSNs," Proceedings of the International Conference on Communications (ICC'13), Budapest, Hungary, June 2013.

- Irfan Al-Anbagi, **Mounib Khanafer**, Hussein T. Mouftah, "A Realistic and Stable Markov-based Model for WSNs," Proceedings of the 4th International Conference on Computing, Networking and Communications (ICNC'13), San Diego, California, USA, January 2013.

- **Mounib Khanafer**, Mouhcine Guennoun, Hussein T. Mouftah, "An Efficient Adaptive Backoff Algorithm for Wireless Sensor Networks," Proceedings of IEEE Global Communications Conference (GLOBECOM '11), Houston, Texas, USA, December 2011.

- **Mounib Khanafer**, Mouhcine Guennoun, Hussein T. Mouftah, "Intrusion detection in WSN-based intelligent transportation systems," Proceedings of the 1st ACM International Symposium on Design and Analysis of Intelligent Vehicular Networks and Applications, Miami, Florida, USA, October – November 2011.

- **Mounib Khanafer**, Mouhcine Guennoun, Hussein T. Mouftah, "Adaptive Sleeping Periods in Slotted IEEE 802.15.4 for Efficient Energy Savings: Markov-Based Theoretical Analysis," Proceedings of IEEE International Conference on Communications (ICC '11), Kyoto, Japan, June 2011.

- **Mounib Khanafer**, Mouhcine Guennoun, Hussein T. Mouftah, "Extending Beacon-Enabled IEEE 802.15.4 to achieve Efficient Energy Savings: Simulation-Based Performance Analysis," Proceedings of the 4th IFIP International Conference on New Technologies, Mobility and Security Program (NTMS '11), Paris, France, February 2011.

- **Mounib Khanafer**, Mouhcine Guennoun, Hussein T. Mouftah, "Intrusion Detection System for WSN-based Intelligent Transportation Systems," Proceedings of IEEE Global Communications Conference (GLOBECOM '10), Miami, Florida, USA, December 2010.

- **Mounib Khanafer**, Mouhcine Guennoun, Hussein T. Mouftah, "WSN Architectures for Intelligent Transportation Systems," Proceedings of the 3rd IFIP International Conference on New Technologies, Mobility, and Security (NTMS '09), Cairo, Egypt, December 2009.

Posters:

- Sarah Alenezi, Noura Al-Sultan, Bodour Al-Reshidi, Hanan Al-Shemmari, and **Mounib Khanafer**, "Road Accident Investigation Dispatch System," a poster presented at the 15th

Annual Undergraduate Research Conference on Applied Computing (URC), Zayed University, Dubai, UAE, April 2024.

- Ghalia Almutairi, Abrar Alherz, Asaiel Al-Rashidi, Nour Nooraldeen, and **Mounib Khanafer**, "Automated Medication Dispenser System (AMD)," a poster presented at the 15th Annual Undergraduate Research Conference on Applied Computing (URC), Zayed University, Dubai, UAE, April 2024.

- Assayel Al-Mutawa, Jumana Al-Jaber, Shatha Al-Mutawa and **Mounib Khanafer**, "Vehicle Collision Detection System," a poster presented at the 7th Annual Undergraduate Research Conference on Applied Computing (URC), Zayed University, Dubai, UAE, April 2015.

- Yamen Nasrallah, **Mounib Khanafer**, Mouhcine Guennoun and Hussein T. Mouftah, "Priority-Based CCA Periods for Efficient and Reliable Communications in Wireless Sensor Networks," a poster presented at 2012 WiSense Workshop, University of Ottawa, Ottawa, Sept. 2012 **(Second Best Poster Award)**.

- **Mounib Khanafer**, Mouhcine Guennoun and Hussein T. Mouftah, "An Efficient Adaptive Backoff Algorithm for Wireless Sensor Networks," a poster presented at 2011 WiSense Workshop, University of Ottawa, Ottawa, Sept. 2011 **(First Best Poster Award)**.

- **Mounib Khanafer**, Mouhcine Guennoun and Hussein T. Mouftah, "Intrusion Detection in WSN-based Intelligent Transportation Systems," Proceedings 2011 NSERC-DIVA Workshop, University of Ottawa, Ottawa, Sept. 2011, pp. 65-70, (and pp. 98).

- **Mounib Khanafer** and Hussein T. Mouftah, "WSN Architectures for Intelligent Transportation Systems," a poster presented at 2009 WiSense Workshop, University of Ottawa, Ottawa, Jul. 2009.

American University of Kuwait Technical Reports:

- **Author** of the Accreditation Board for Engineering and Technology (ABET) Self Study Report submitted for accrediting the Computer Engineering Program at AUK (2021)

- **Author** of the ABET Self Study Report submitted for accrediting the Electrical Engineering Program at AUK (2021)

- **Co-author** of "Criterion 5"; a chapter of the ABET Self-Study Report submitted for the Electrical Engineering program (2017)

- **Co-author** of "Criterion 5"; a chapter of the ABET Self-Study Report submitted for the Computer Engineering program (2015). (The self-study was selected for display as one of the

well-prepared Self-Study Reports at the 2016 ABET Symposium held in Hollywood, Florida) (2016)

- **Co-author** of the "Alumni Survey;" a survey that must be submitted by the alumni of both the Electrical and Computer Engineering programs (2014)