

Dr.Sarra Alqahtani
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Education

B.S. in Computer Science, June 2006: King Saud University.

M.S. in Information Systems, June 2009: King Saud University.

Ph.D. in Computer Science, December 2015: The University of Tulsa, Tandy School of Computer Science.

Appointments

- 1) Assistant Professor, Wake Forest University (2019-Present)
- 2) Postdoctoral Research Associate, University of Tulsa (2017-2019)
- 3) Adjunct Professor, University of Tulsa (August 2018- December 2018)
- 4) Research Assistant, University of Tulsa (May- August 2013)
- 5) Lecturer, Shaqra University, Al Qwaieah, Saudi Arabia (2009-2010, 2016-2017)
- 6) Teaching Assistant, King Saud University, Al Qwaieah, Saudi Arabia (2008-2009)

Grants & Awards

- 1) Co-Investigator, \$748,224, *Rapid Change from Alluvial Mining and Development in Madre de Dios, Peru: A Multi-Sensor Fusion Approach to Quantify Terrestrial and Aquatic Impacts and Test Policy Effectiveness*, NASA, January 2021, 3 years.
- 2) Winner team, \$118,000, *Early alert system for tropical forest mining*, the artisanal mining grand challenge, Conservation X Labs, October 2020.

Publications

1. Ashley Peake, Joe McCalmon, Yixin Zhang, Danny Myers, Pau'l Pauca, and **Sarra Alqahtani**, "Deep Reinforcement Learning for Adaptive Exploration of Unknown Environments," The 20th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2021), under review.
2. Xiaotian Liu, Pengyi Shi, **Sarra Alqahtani**, Victor Paúl Pauca, and Miles Silman, "Robustness-Driven Exploration with Probabilistic Metric Temporal Logic", the 13th International Conference on Agents and Artificial Intelligence (ICAART 2021), under review.
3. Ashley Peake, Joe McCalmon, Yixin Zhang, Benjamin Raiford, and **Sarra Alqahtani**, "Wilderness Search and Rescue Missions using Deep Reinforcement Learning," IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR), Accepted, 2020.
4. Ashley Peake, Joe McCalmon, Benjamin Raiford, Tongtong Liu, and **Sarra Alqahtani**, "Multi-Agent Reinforcement Learning for Cooperative Adaptive Cruise Control," International Conference on Tools with Artificial Intelligence (32nd ICTAI), Accepted, November, 2020.
5. **Sarra Alqahtani**, Xinchu He, Rose Gamble, and Papa Mauricio,"Formal Verification of Functional Requirements for Smart Contract Compositions in Supply Chain Management Systems", Proceedings of the 53rd Hawaii International Conference on System Sciences, 2020.
6. Xinchu He, **Sarra Alqahtani**, Rose Gamble, and Mauricio Papa, "Securing Over-The-Air IoT Firmware Updates using Blockchain", Proceedings of the International Conference on Omni-Layer Intelligent Systems, 2019.
7. Xinchu He, **Sarra Alqahtani**, and Rose Gamble, "Toward Privacy-Assured Health Insurance Claims", IEEE International Conference on Blockchain 2018, Halifax, Canada.
8. **Sarra Alqahtani**, Ian Riley, Samuel Taylor, Rose Gamble, and Roger Mailler, "Task allocation in Uncertain Environments using a QuadTree and Flow network" , International Conference on

- Unmanned Aircraft Systems (ICUAS), Dallas, TX, USA, 2018, pp. 74-83.
9. **Sarra Alqahtani**, Samuel Taylor, Ian Riley, Rose Gamble, and Roger Mailler, "Predictive Path Planning Algorithm Using Kalman Filters and MTL Robustness", IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR), Philadelphia, PA, USA, 2018, pp. 1-7.
 10. **Sarra Alqahtani**, Ian Riley, Samuel Taylor, Rose Gamble, and Roger Mailler, "MTL Robustness for Path Planning with A*", In Proceedings of the 17th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS '18).
 11. Sharmin Jahan, Charlie Walter, **Sarra Alqahtani**, Rose Gamble, "Self-Adaptive Coordination to Complete Mission Goals," Proceedings of Workshop on Self-Improving System Integration (SISSY 2018).
 12. **Sarra Alqahtani**, Xinchu He, Rose Gamble "Adapting Compliance of Security Requirements in Multi-Tenant Applications", IEEE 2nd International Workshops on Foundations and Applications of Self* Systems (FAS* W), 2017, pp.122-129.
 13. **Sarra Alqahtani** and Rose Gamble "Verifying the Detection Results of Impersonation Attacks in Service Clouds", Advances in Science, Technology and Engineering Systems Journal 2, 2017, pp. 449-459.
 14. **Sarra Alqahtani** and Rose Gamble "Mitigating service impersonation attacks in clouds", Future Technologies Conference (FTC), San Francisco, 2015, pp.998-1007.
 15. Allen Marshall, **Sarra Alqahtani**, Anton Ridgway, Charles Walter, Rose Gamble, and Roger Mailler. "Combining coordination with usage policies to improve mission scheduling resilience." In Resilience Week (RWS 2015), pp. 1-6. IEEE, 2015.
 16. **Sarra Alqahtani** and Rose Gamble "DDoS Attacks in Service Clouds", 48th Hawaii International Conference on System Sciences, Jan 2015, Kauai, Hawaii, USA. (
 17. **Sarra Alqahtani** and Rose Gamble "Enforcing the Chinese Wall Model for Tenant Conflict of Interest in the Service Cloud", Int. J. of Business Process Integration and Management, 2014 Vol.7, No.2, pp.166 - 177.
 18. **Sarra Alqahtani** and Rose Gamble "Embedding a Distributed Auditing Mechanism in the Service Cloud", CSA Workshop, June 2014, Anchorage, Alaska, USA.
 19. **Sarra Alqahtani**, Rose Gamble, and Indrakshi Ray, "Auditing Requirements for Implementing the Chinese Wall Model", in the Service Cloud in *IEEE Cloud Security Auditing Workshop at the 9th World Congress on Services*, 2013.
 20. Mourad Ykhlef and **Sarra Alqahtani**, 2010, "A new Graphical Query Language for Retrieving Telecommunication Data", Riyadh: STS International Conference on Communication Technologies (ICTT 2010).
 21. Mourad Ykhlef and **Sarra Alqahtani**. "Querying and Restructuring XML Data by Graphical Query Language", International Journal of Web Information Systems, Emerald Group Publishing, Bingley, UK., Volume 6, No. 2, 2010 pp 230-247.
 22. Mourad Ykhlef and **Sarra Alqahtani**, "A Survey of graphical query languages for XML Data", Journal of King Saud University, Computer and Information Sciences, Volume 23, Issue 2, ISSN 1319-1578, Elsevier, July 2011, pp 59-70.
 23. Mourad Ykhlef and **Sarra Alqahtani**, 2009, "QLX: A new Graphical Query Language for XML Data", Malaysia: The 11th International conference on Information Integration and web-based Applications and Services (IIWAS 2009).

Synergistic Activities

- 1) Served as a program committee member:
 - 1st IEEE International Conference on Autonomic Computing and Self-Organizing Systems - ACSOS 2020
 - The 9th International Conference on Intelligent Systems and Applications- INTELLI 2020

- 2) Served as a reviewer:
 - Applied Sciences,
 - Advances in Science, Technology and Engineering Systems Journal
- 3) Served in 3 doctoral dissertation committees in University of Tulsa.