

Isma Farah Siddiqui (HEC Approved PhD Supervisor)

Name	Isma Farah Siddiqui	Designation	Associate Professor
PEC Registration	COMP/3750	Regular Appointment Date	28 January 2008
Current Designation Appointment Date	11 July 2019	Qualification	Ph.D. (Hanyang University, South Korea)
Field of Interest	Data Engineering, Software Engineering, Semantic Web Data Analytics, IoT, Blockchain Technology	Mobile Number	03332724313
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MUET Responsibilities

- Member on Students' Advisory Committee, Mehran UET, Pakistan.
- Member of the Board of Studies for Dept of SWE of Mehran UET, Pakistan.

Professional Activities

- Guest Speaker – “Female Career and Importance and ways for Higher Education in COMPUTER SCIENCE” (at Jinnah University for Women, Karachi, on 28th January 2020)
- Guest Speaker – “ICT Trends in Modern Medical Sciences” (In 16th Annual Medical Symposium at Muhammad Medical College on 08th September 2018)
- Conduct of Technical Tutorial - '[Semantic Web and Linked Data Meet Web of Things](#)' (In 5th International Multi-Topic ICT Conference 2018 (IMTIC'18) on 25th April 2018)

Research Projects:

National:

1. HEC Project No. 2196, “Smart Grid Testbed Software in Green-Cloud Environment”, 2018-2019, **Principle Investigator**.
2. HEC Project No. 2358 “User Privacy Protection for location-based services over road network using Fog computing”, 2018-2019, **Co-Principle Investigator**.

International

1. UC#7 /28 Feb 2018/10.2-44e: Robust security infrastructure against IoT device-based DDoS attack in cloud environments, Saudi Arabia, 2018-2019 (Researcher) [On-going]

Travel Grants:

International

1. HEC Travel Grant for “A knowledge-based path optimization technique for cognitive nodes in smart grid” at 2018th IEEE Global Communications Conference”, 9-13th December 2018, Abu Dhabi, UAE.

Publications:

International Journal Articles

1. Isma Farah Siddiqui, Scott Uk-Jin Lee, Asad Abbas, “A Novel Knowledge-Based Battery Drain Reducer for Smart Meters”, *Intelligent Automation and Soft Computing*, DOI: 10.31209/2019.100000132 (SCIE- IF:0.652)
2. Sana Naz, **Isma Farah Siddiqui**, Qasim Ali “Analyzing Students’ Academic Performance Through Educational Data Mining”, 3C Tecnología. Glosas de innovación aplicadas a la pyme. Special Issue, pp. 402–421, May 2019. (SCOPUS)
3. **Isma Farah Siddiqui**, Nawab Muhammad Faseeh Qureshi, Bhawani Shankar Chowdhry, Muhammad Aslam Uqaili “Edge-Node-Aware Adaptive Data Processing Framework for Smart Grid”, *Wireless Personal Communications*, vol. 106, no. 1, pp. 179-189, March 2019. (SCIE-IF:0.929)
4. Nawab Muhammad Faseeh Qureshi, **Isma Farah Siddiqui**, Mukhtiar Ali Unar, Muhammad Aslam Uqaili, Choon Sung Nam, Dong Ryeol Shin, Jaehyoun Kim, Kashif Bashir, Asad Abbas “An Aggregate MapReduce Data Block Placement Strategy for Wireless IoT Edge Nodes in Smart Grid”, *Wireless Personal Communications*, vol. 106, no. 4, pp. 2225-2236, September 2018. (SCIE-IF: 0.929)
5. **Isma Farah Siddiqui**, Nawab Muhammad Faseeh Qureshi, Muhammad Akram Shaikh, Bhawani Shankar Chowdhry, Asad Abbas, Ali Kashif Bashir and Scott Uk-Jin Lee, “Stuck-at Fault Analytics of IoT Devices Using Knowledge-based Data Processing Strategy in Smart Grid”, *Wireless Personal Communications*, vol. 106, no. 4, pp. 1969-1983, April 2018. (SCIE- IF: 0.929)
6. **Isma Farah Siddiqui**, Scott Uk-Jin Lee, Asad Abbas and Ali Kashif Bashir, “Optimizing Lifespan and Energy Consumption by Smart Meters in Green-Cloud-Based Smart Grids”, *IEEE Access*, vol. 5, pp. 20934-20945, September 2017. (SCIE- IF: 4.098)
7. **Isma Farah Siddiqui**, Asad Abbas and Scott Uk-Jin Lee, “A hidden markov model to predict hot socket issue in smart grid,” *Journal of Theoretical and Applied Information Technology*, vol. 94, no. 2, pp. 408-415, Dec. 2016. (SCOPUS)
8. Nawab Muhammad Faseeh Qureshi, Dong Ryeol Shin, **Isma Farah Siddiqui**, Bhawani Shankar Chowdhry, Storage-Tag-Aware Scheduler for Hadoop Cluster, *IEEE Access*, vol. 5, pp. 13742 – 13755, 2017 (SCIE- IF: 4.098)

9. Asad Abbas, **Isma Farah Siddiqui**, Scott Uk-Jin Lee, and Ali Kashif Bashir, 2017, Binary Pattern for Nested Cardinality Constraints for Software Product Line of IoT-based Feature Models, *IEEE Access*, vol. 5, pp. 3971-3980. (SCIE- IF: 4.098)
10. Asad Abbas, Isma Farah Siddiqui, Scott Uk–Jin Lee, Ali Kashif Bashir, Waleed Ejaz, and Nawab Muhammad Faseeh Qureshi. "Multi-Objective Optimum Solutions for IoT-Based Feature Models of Software Product Line." *IEEE Access*, vol. 6, pp. 12228-12239, 2018 (SCIE-IF: 4.098)
11. Nawab Muhammad Faseeh Qureshi, Dong Ryeol Shin, **Isma Farah Siddiqui**, Asad Abbas, 2017, HSLA: Heterogeneous storage-tier log analyzer over Hadoop, *Journal of Theoretical and Applied Information Technology*, vol. 95, no. 10, pp. 2290-2296. (SCOPUS)
12. Nawab Muhammad Faseeh Qureshi, Dong Ryeol Shin, **Isma Farah Siddiqui**, Asad Abbas, 2017, Predictive Analysis of Locality-aware storage-tier data blocks over Hadoop, *Journal of Theoretical and Applied Information Technology*, vol. 95, no. 12, pp. 2658-2665. (SCOPUS)
13. Asad Abbas, **Isma Farah Siddiqui** And Scott Uk-Jin Lee. "Contextual variability management of IoT application with xml-based feature modelling," *Journal of Theoretical and Applied Information Technology*, vol. 95, no. 6, pp. 1300-1308, Mar. 2017. (SCOPUS)
14. **Isma Farah Siddiqui**, Asad Abbas, Abdul Rahim Mohamed Ariffin and Scott Uk-Jin Lee, "A Comparative Study of Multithreading APIs for Software of ICT Equipment," *Indian Journal of Science and Technology*, vol. 9, no. 48, pp. 1-5, Dec. 2016. (SCOPUS)
15. Asad Abbas, **Isma Farah Siddiqui** and Scott Uk-Jin Lee, "Goal-based modeling for requirement traceability of software product line," *Journal of Theoretical and Applied Information Technology*, vol. 94, no. 2, pp. 327-334, Dec. 2016. (SCOPUS)
16. Asad Abbas, **Isma Farah Siddiqui** and Scott Uk-Jin Lee, "Multi-Objective Optimization of Feature Model in Software Product Line: Perspectives and Challenges," *Indian Journal of Science and Technology*, vol. 9, no. 45, pp. 1-7, Dec. 2016. (SCOPUS)
17. Abdul Rahim Mohamed Ariffin, **Isma Farah Siddiqui** and Scott Uk-Jin Lee, "An Empirical Study over Correctness Properties for Multithreaded Programs," *Indian Journal of Science and Technology*, vol. 9, no. 17, pp. 1-8, May 2016. (SCOPUS)
18. Asad Abbas, Zhiqiang Wu, **Isma Farah Siddiqui** and Scott Uk-Jin Lee, "An Approach for Optimized Feature Selection in Software Product Lines using Union-Find and Genetic Algorithms," *Indian Journal of Science and Technology*, vol. 9, no. 17, pp. 1-9, May 2016. (SCOPUS)
19. **Isma Farah Siddiqui** and Scott Uk-Jin Lee, "Access Control as a Service for Information Protection in Semantic Web based Smart Environment," *KSII-Journal of Internet Computing and Services(JICS)*, vol. 17, no. 5, pp. 9-16, Oct. 2016.

International Book Chapter

1. **Isma Farah Siddiqui**, Nawab Muhammad Faseeh Qureshi, Scott Uk-Jin Lee, Mukhtiar Ali Unar. "An advanced hyper-efficient design to detect random peer-to-peer botnets." *Communications in Computer and Information Science*, Vol 414, pp. 251-258, 2014. (**Springer CCIS Series-Book Chapter- SCOPUS Indexed**)

International Conferences/Workshop Proceedings

1. Sana Fatima, **Isma Farah Siddiqui**, Qasim Ali, "Predicting Students' Academic Performance Through Supervised Machine Learning" in The 2nd International Conference on Information Science and Communication Technology ICISCT20, Karachi Pakistan, February 2020.
2. Bhagia Sheri, Pooja Kumari, **Isma Farah Siddiqui**, Hira Noman, "Artificial Intelligence Based Memory Stash Alzheimer's Aid" in The 2nd International Conference on Information Science and Communication Technology ICISCT20, Karachi Pakistan, February 2020.
3. MAha Agro, Fiza Azam, **Isma Farah Siddiqui**, "Identifying Polarity of Twitter Sentiments using traditional Knowledge Engineering Algorithms" in The 11th International Conference on Internet, Hanoi, Vietnam, December 2019.
4. Uroosa Sheikh, **Isma Farah Siddiqui**, Qasim Ali, Sorath Buriro, Nasreen Babar, "NLP BASED SERVICE RECOMMENDATION SYSTEM" in The 11th International Conference on Internet, Hanoi, Vietnam, December 2019.
5. Pir Hamid Ali Qureshi, **Isma Farah Siddiqui**, "A Knowledge Engineering Approach for Gaming Big Data Analytics using Orient Database Framework" in The 11th International Conference on Internet, Hanoi, Vietnam, December 2019.
6. Gul Bano ; Qasim Ali ; Sunbul Sajid Khuwaja ; **Isma Farah Siddiqui**, Paras Lal ; Imran Memon ; Asma Zubedi., "Comparative analysis of Mobile Application Testing and Crowd Source Software Testing," 2019 8th International Conference on Information and Communication Technologies (ICICT), Karachi, Pakistan, 2019, pp. 129-134.
7. Komal Naz, **Isma Farah Siddiqui**, Qasim Ali, Saqib Ali, "A Comprehensive Ontology for Human Resource Management in the Context of Software Industry.", In the 14th Asia Pacific International Conference on Information Science & Technology (APIC-IST 2019), Beijing, China, June 2019.
8. Nawab Muhammad Faseeh Qureshi, **Isma Farah Siddiqui**, Asad Abbas, Ali Kashif Bashir, "Pseudo Diversion onto Persistent IoT-botnet Connectivity through Data Analytics.", In the 14th Asia Pacific International Conference on Information Science & Technology (APIC-IST 2019), Beijing, China, June 2019.
9. Memoona Sami, Junaid Baloch, Mariam Jawaid, Rabeea Jaffari, **Isma Farah Siddiqui**, "LERNEN, Connecting Professionals and Students.", In the 14th Asia Pacific International Conference on Information Science & Technology (APIC-IST 2019), Beijing, China, June 2019.
10. Sorath Buriro, **Isma Farah Siddiqui**, Qasim Ali, Uroosa Shaikh, Nasreen Babar, "Semantic Web-based Healthcare Data Management.", In the 14th Asia Pacific International Conference on Information Science & Technology (APIC-IST 2019), Beijing, China, June 2019.

11. Muhammad Talha, Danish Kumar, Kanwal Aftab, **Isma Farah Siddiqui**, “Data Analytics On Big Health Care Data Using HADOOP & HIVE.”, In the 14th Asia Pacific International Conference on Information Science & Technology (APIC-IST 2019), Beijing, China, June 2019.
12. Eman Shahid, Sandia Kumari, **Isma Farah Siddiqui**, Qasim Ali, “Images Based Indoor Positioning Using AI and Crowdsourcing.”, In the 8th International Conference on Educational and Information Technology (ICEIT 2019), Oxford, United Kingdom, May 2019.
13. Sana Bhutto, **Isma Farah Siddiqui**, Qasim Ali Arain, “Analyzing Students' Academic Performance through Educational Data Mining.”, In International Multi-Topic Conference on Engineering and Science, Mauritius, May 2019.
14. Komal Naz, **Isma Farah Siddiqui**, Rabeea Jaffari, “Predictive analytics for employee churn in the software industry using exploratory data analysis”, In 1st International Conference on Computational Sciences and Technologies, Pakistan, April 2019.
15. Soonh Taj, **Isma Farah Siddiqui**, Naeem Ahmed Mahoto, “Product Usability Evaluation: A Machine Learning Approach”, In 1st International Conference on Computational Sciences and Technologies, Pakistan, April 2019.
16. Nawab Muhammad Faseeh Qureshi, **Isma Farah Siddiqui**, Asad Abbas, Ali Kashif Bashir, Keehyun Choi, Jaehyoun Kim and Dong Ryeol Shin, “Dynamic Container-based Resource Management Framework of Spark Ecosystem”, In 21st IEEE International Conference on Advanced Communications Technology, PyeongChang, Korea, February 2019.
17. Nawab Muhammad Faseeh Qureshi, Ali Kashif Bashir, **Isma Farah Siddiqui**, Asad Abbas, Keehyun Choi and Dong Ryeol Shin “A knowledge-based path optimization technique for cognitive nodes in smart grid,” In Proc. 37th Global Communications Conference, Abu Dhabi, December 2018.
18. **Isma Farah Siddiqui**, Nawab Muhammad Faseeh Qureshi, Asad Abbas “Data-driven false negation analytics of IoT devices in Smart grid”, In Proc. 10th International Conference on Internet (ICONI 2018), Phnom Penh, Cambodia, December 2018.
19. Faiza Muhammad Waseem, **Isma Farah Siddiqui** “A Comprehensive Study of Educational Data Mining”, In Proc. 10th International Conference on Internet (ICONI 2018), Phnom Penh, Cambodia, December 2018.
20. Nawab Muhammad Faseeh Qureshi, Dong Ryeol Shin, Choon Sung Nam, **Isma Farah Siddiqui**, Asad Abbas, Scott Uk-Jin Lee, Muhammad Aslam Uqaili, Ali Kashif Bashir and Qasim Ali Arain “Stream-based authentication mechanism for multi-homing big data networks in the wireless environment,” In Proc. 3rd Global Conference on Wireless and optical Communications, Malaga, Spain, October 2018.
21. Mohsin Javaid Siddiqui, **Isma Farah Siddiqui**, Asad Abbas and Scott Uk-Jin Lee, “Comparative Analysis of GUI Development for Android application by utilizing MDA Approach,” In Proc. International Workshop on Convergence Information Technology, Busan, South Korea, December 2017.
22. Nawab Muhammad Faseeh Qureshi, **Isma Farah Siddiqui**, Mukhtiar Ali Unar, Muhammad Aslam Uqaili, Choon Sung Nam, Dong Ryeol Shin, Jaehyoun Kim, Kashif Bashir, Asad Abbas “An Aggregate MapReduce processing using Hadoop for wireless IoT edge nodes in smart grid,” In Proc. 2nd Global Conference on Wireless and optical Communications, Malaga, Spain, September 2017.

23. **Isma Farah Siddiqui**, Nawab Muhammad Faseeh Qureshi, Muhammad Akram Shaikh, Bhawani Shankar Chowdhry, Asad Abbas and Scott Uk-Jin Lee, “Knowledge-based stuck-at fault analysis for wireless IoT smart meters in smart grid,” In Proc. 2nd Global Conference on Wireless and optical Communications, Malaga, Spain, September 2017.
24. Asad Abbas, Zhiqiang Wu, Mohsin Javid Siddiqui, **Isma Farah Siddiqui** and Scott Uk-Jin Lee, “Contextual Variability Management of Multi-Software Product Line,” In Proc. International Conference on Computing Convergence and Applications, Saipan, USA, August 2017.
25. Asad Abbas, Hyung-Lak Kim, **Isma Farah Siddiqui**, Ali Kashif Bashir and Scott Uk-Jin Lee, “Contextual Variability Management of IoT Applications Using Agent-Base Modeling with Software Product Line,” In Proc. International Conference on Computing Convergence and Applications, Saipan, USA, August 2017.
26. Asad Abbas, **Isma Farah Siddiqui** and Scott Uk-Jin Lee, “XML-based Feature Modeling of IoT Applications,” In Proc. International Conference on Computing Convergence and Applications (ICCCA), Busan, South Korea, December 2016.
27. **Isma Farah Siddiqui**, Asad Abbas and Scott Uk-Jin Lee, “HBAC: An access control over Semantics-enabled Smart Grids to enable energy-efficiency and lifetime optimization,” In Proc. 2nd International Conference on Information and Convergence Technology for Smart Society, Ho Chi Minh, Vietnam, January 2016.
28. Asad Abbas, Zhiqiang Wu, **Isma Farah Siddiqui** and Scott Uk-Jin Lee, “Optimized feature selection with crosscutting concerns in software product line feature model,” In Proc. 2nd International Conference on Information and Convergence Technology for Smart Society, Ho Chi Minh, Vietnam, January 2016.
29. **Isma Farah Siddiqui** and Scott Uk-Jin Lee, “Privacy-Aware Smart Learning: Providing XACML as a Service in Semantic Web based Smart Environment,” In Proc. 7th International Conference on Internet Symp., Kuala Lumpur, Malaysia, December 2015.
30. Abdul Rahim Mohamed Ariffin, **Isma Farah Siddiqui**, Gayeon Kim and Scott Uk-Jin Lee, “A Survey on Correctness Properties for Multithreaded Applications,” In Proc. 2nd International Conference on Information and Convergence Technology for Smart Society, Kuala Lumpur, Malaysia, July 2015.
31. **Isma Farah Siddiqui** and Scott Uk-Jin Lee, “A Novel Approach for Integrating Semantic Web Techniques into Smart Education Environment,” In Proc. 1st International Conference on Information and Convergence Technology for Smart Society, Bangkok, Thailand, January 2015. *[Best Paper Award]*
32. **Isma Farah Siddiqui**, Nawab Muhammad Faseeh, Scott Uk-Jin Lee and Mukhtiar Ali Unar, “An Advanced Hyper-Efficient Design to Detect Random Peer-to-Peer Botnets,” In Proc. 3rd International Multi-Topic Conference, Hyderabad, Pakistan, December 2013.
33. **Isma Farah Siddiqui**, Asad Abbas and Scott Uk-Jin Lee, “Comparative Analysis of Centralized Vs. Distributed Locality-based Repository over IoT-Enabled Big Data in Smart Grid Environment,” In Proc. 한국컴퓨터정보학회 동계학술대회, Jeonju, January 2017. *[Best Paper Award]*

34. Asad Abbas, **Isma Farah Siddiqui** and Scott Uk-Jin Lee, “Feature Modeling with Multi-Software Product Line of IoT Protocols,” In Proc. 한국컴퓨터정보학회 동계학술대회, Jeonju, January 2017. [*Best Paper Award*]
35. Asad Abbas, **Isma Farah Siddiqui**, Gayeon Kim and Scott Uk-Jin Lee, “Aspect-Oriented Programing based Process Synchronization in Concurrent Systems,” In Proc. 18th Korea Computer Congress, Phoenix Park, December 2015.
36. Asad Abbas, **Isma Farah Siddiqui** and Scott Uk-Jin Lee, “XML-based Feature Modeling for Variability Management in Complex Software Product Line,” In Proc. 17th Korea Computer Congress, Jeju, June 2015.
37. **Isma Farah Siddiqui** and Scott Uk-Jin Lee, “A Framework for Verifying Consistency of SQL-DB Ontology using Alloy,” In Proc. 16th Korea Computer Congress, Busan, August 2014.