




Department of Computer Science and Information Technology  
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## DR. KHALEEL AHMAD | SENIOR ASSISTANT PROFESSOR

**CURRENT DESIGNATION/ INVOLVEMENT** Currently working as a Senior Assistant Professor at the Department of Computer Science and Information Technology, School of Technology, Maulana Azad National Urdu University (Central University), Hyderabad, Telangana, India.

**AREA OF SPECIALIZATION** Blockchain Technology, Cyber Security, Cryptography, Opportunistic Network

**ONGOING ACADEMIC RESEARCH/PROJECTS** Awarded SERB International Research Experience (SIRE) fellowship for the year 2022-2023 funded by Science and Engineering Research Board, Govt. of India for the duration of six months.  
Currently, I am working on a Blockchain Technology project with Prof. Laura Emilia Maria Ricci at the Department of Computer Science, University of Pisa, Italy.

**VISITING FACULTY** Visiting Faculty (Research), National Defence University of Malaysia (UPNM), Malaysia  
26 December 2018 to 6 January 2019

- ACADEMIC AND ADMINISTRATIVE EXPERIENCE**
- Worked as an Assistant CPIO
  - Convener, NAAC Criteria 3
  - Academic Coordinator
  - Member, Board of Studies, Dept. of CS & IT, MANUU
  - Member, School Board, School of Technology

**EDUCATIONAL QUALIFICATION** M.Tech, Ph.D.

**TEACHING PROFICIENCY** Blockchain Technology, Cryptography, Data Structure, Algorithms, Network Security, Computer Network

- RESEARCH PUBLICATION DETAILS**
- Patents:**
- A Method For Establishing a Secure Communication Over a Network  
Khairol Amali Bin Ahmad, Khaleel Ahmad, Ahamed Shareef  
Filed 2019-08-23, Filed Country: Malaysia
  - Smart Vehicle Monitoring System  
Khairol Amali Bin Ahmad, Khaleel Ahmad, Manju Khari, Archit Garg  
Filed 2020-12-18, Filed Country: Malaysia

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## Edited Books:

- Ahmad, K. A. B., Ahmad, K., & Dulhare, U. N. (Eds.). (2021). *Functional Encryption*. Cham: Springer.
- Dulhare, U. N., Ahmad, K., & Ahmad, K. A. B. (Eds.). (2020). *Machine Learning and Big Data: Concepts, Algorithms, Tools and Applications*. John Wiley & sons.
- Ahmad, K., Doja, M. N., Udzir, N. I., & Singh, M. P. (Eds.). (2019). *Emerging security algorithms and techniques*. CRC Press.
- Ahmad, K., Udzir, N. I., & Deka, G. C. (Eds.). (2018). *Opportunistic Networks: Mobility Models, Protocols, Security, and Privacy*. CRC Press.

## Journals:

- Khujamatov, H., Ahmad, K., Usmanova, N., Khoshimov, J., Alduailij, M., & Alduailij, M. (2022). Fog Computing Capabilities for Big Data Provisioning: Visualization Scenario. *Sustainability*, MDPI, 14(13), 8070. **[Indexing: SCIE, Scopus] [IF: 3.88]**
- Hassan, S. U., Ahamed, J., & Ahmad, K. (2022). Analytics of machine learning-based algorithms for text classification. *Sustainable Operations and Computers*, Elsevier, 3, 238-248.
- Khan, T., Singh, K., Hasan, M. H., Ahmad, K., Reddy, G. T., Mohan, S., & Ahmadian, A. (2021). ETTERS: A comprehensive energy aware trust-based efficient routing scheme for adversarial WSNs. *Future Generation Computer Systems*, Elsevier 125, 921-943. **[Indexing: SCIE, Scopus] [IF: 7.30]**
- Saračević, M., Sharma, S. K., & Ahmad, K. (2021). A novel block encryption method based on Catalan random walks. *Multimedia Tools and Applications*, Springer, 1-18. **[Indexing: SCIE, Scopus] [IF: 2.57]**
- Abouarork, M., & Ahmad, K. (2021). Authentication in opportunistic networks: State and art. *Journal of Discrete Mathematical Sciences and Cryptography*, Taylor & Francis, 24(6), 1689-170. **[Indexing: ESCI, Scopus]**
- Pavlović, N., Šarac, M., Adamović, S., Saračević, M., Ahmad, K., Maček, N., & Sharma, D. K. (2021). An approach to adding simple interface as security gateway architecture for IoT device. *Multimedia Tools and Applications*, Springer, 1-16. **[Indexing: SCIE, Scopus] [IF: 2.57]**
- Ahmad, K., Kamal, A., Ahmad, K. A. B., Khari, M., & Crespo, R. G. (2021). Fast hybrid-MixNet for security and privacy using NTRU algorithm. *Journal of Information Security and Applications*, Elsevier 60, 102872. **[Indexing: SCIE, Scopus] [IF: 4.96]**
- Abouaroek, M., & Ahmad, K. (2021). Performance analysis of NTRU algorithm with non-post-quantum algorithms. *Journal of Discrete Mathematical Sciences and Cryptography*, Taylor & Francis, 24(5), 1349-1363. **[Indexing: ESCI, Scopus]**
- Talukdar, M. I., Hassan, R., Hossen, M. S., Ahmad, K., Qamar, F., & Ahmed, A. S. (2021). Performance improvements of AODV by black hole attack detection using IDS and digital signature. *Wireless Communications and Mobile Computing*, Hindawi, 2021. **[Indexing: SCIE, Scopus] [IF: 2.14]**
- Ahamed, J., Koli, A. M., Ahmad, K., Jamal, M., & Gupta, B. B. (2022). CDPS-IoT: Cardiovascular Disease Prediction System Based on IoT Using Machine Learning. *International Journal of Interactive Multimedia & Artificial Intelligence*, 7(4). **[Indexing: SCIE, Scopus] [IF: 4.93]**
- Hossen, M. S., Ahmad, K., & Ahmad, K. A. B. (2021). Impact of contacts for message copies, mobile nodes and buffer size in delay-tolerant networks. *International Journal of Innovative Computing and Applications*, InderScience, 12(2-3), 90-97. **[Indexing: Scopus]**

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- Ahmad, K., & Kamal, A. (2020). Mix networks: existing scenarios and future directions on security and privacy. *Recent Patents on Engineering*, Bentham Science, 14(3), 310-323. **[Indexing: ESCI, Scopus]**
  - bin Ahmad, K. A., Hasan, M. N., Hossen, M. S., & Ahmad, K. (2021). Performance Analysis of DEBT Routing Protocols for Pocket Switch Networks. *CMC-COMPUTERS MATERIALS & CONTINUA*, 66(3), 3075-3087. **[Indexing: SCIE, Scopus] [IF: 3.86]**
  - Hassan, R., Pepic, S., Saracevic, M., Ahmad, K., & Tasic, M. (2020). A Novel Approach to Data Encryption Based on Matrix Computations. *Comput. Mater. Contin*, 66, 1139-1153. **[Indexing: SCIE, Scopus] [IF: 3.86]**
  - Ahmad, K., Sahu, M., Shrivastava, M., Rizvi, M. A., & Jain, V. (2020). An efficient image retrieval tool: query based image management system. *International Journal of Information Technology*, Springer, 12(1), 103-111. **[Indexing: Scopus]**
  - Khujamatov, K., Ahmad, K., Reypnazarov, E., & Khasanov, D. (2020). Markov chain based modeling bandwidth states of the wireless sensor networks of monitoring system. *International Journal of Advanced Science and Technology*, 29(4), 4889-4903. **[Indexing: Scopus]**
  - Ahamed, J., Zahid, M., Omar, M., & Ahmad, K. (2019). AES and MQTT based security system in the internet of things. *Journal of Discrete Mathematical Sciences and Cryptography*, Taylor & Francis, 22(8), 1589-1598. **[Indexing: ESCI, Scopus]**
  - Sati, S., & Ahmad, K. (2020). Efficient evict policy for PROPHET. *International Journal of Information Technology*, Springer, 12(1), 251-260. **[Indexing: Scopus]**
  - Husain, D., Omar, M., Ahmad, K., Jain, V., & Wason, R. (2019). Load status evaluation for Load Balancing in Distributed Database Servers. *3c Tecnología: glosas de innovación aplicadas a la pyme*, 8(1), 422-447. **[Indexing: ESCI]**
  - Abouaroek, M., & Ahmad, K. (2019). Node authentication using NTRU algorithm in opportunistic network. *Scalable Computing: Practice and Experience*, 20(1), 83-92. **[Indexing: ESCI, Scopus]**
  - Ahmad, K., Alam, M. S., & Udzir, N. I. (2019). Security of NoSQL database against intruders. *Recent Patents on Engineering*, Bentham Science, 13(1), 5-12. **[Indexing: ESCI, Scopus]**
  - Khan, I. I., Ahmad, K., Rizvi, M. A., & Ahmad, K. A. B. (2019). Increased PSNR with improved DWT digital watermarking technique. *International Journal of Innovative Computing and Applications*, InderScience, 10(3-4), 185-193. **[Indexing: Scopus]**
  - Shrivastava, M., Rizvi, M. A., Sahu, M., & Ahmad, K. (2018). IAODV: AN IMPROVED AODV ROUTING PROTOCOL FOR MANET. *International Journal of Advanced Research in Computer Science*, 9(2).
  - Ahmad, K., Fathima, M., Jain, V., & Fathima, A. (2017). FUZZY-PROPHET: a novel routing protocol for opportunistic network. *International Journal of Information Technology*, Springer, 9(2), 121-127. **[Indexing: Scopus]**
  - Fathima, M., Ahmad, K., & Fathima, A. (2017). Mobility Models and Routing Protocols in Opportunistic Networks: A Survey. *International Journal of Advanced Research in Computer Science*, 8(5).
  - Ahmad, K., Alam, M. S., & Rizvi, M. A. (2016). Secure Mobile Commerce in Ad hoc Network Using CAEC2M. *International Journal of Future Generation Communication and Networking*, 9(12), 197-204.
  - Ahmad, K., & Alam, M. S. (2016). E-commerce security through elliptic curve cryptography. *Procedia Computer Science*, Elsevier, 78, 867-873. **[Indexing: Scopus]**
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## Conference Papers:

- Khujamatov, H., Akhmedov, N., Amir, L., & Ahmad, K. (2022). Blockchain Adaptation in Healthcare: SWOT Analysis. In *International Conference on Network Security and Blockchain Technology* (pp. 346-355). Springer, Singapore.
- Arsheen, S., & Ahmad, K. (2021, November). SLR: A Systematic Literature Review on Blockchain Applications in Healthcare. In *2021 International Conference on Information Science and Communications Technologies (ICISCT)* (pp. 1-6). IEEE.
- Abbas, S., & Ahmad, K. (2021, March). Opportunistic Routing Protocols Based on Fuzzy Logic: Present and Future Directions. In *2021 International Conference on Artificial Intelligence and Smart Systems (ICAIS)* (pp. 1055-1060). IEEE.
- Arsheen, S., Wahid, A., Ahmad, K., & Khalim, K. (2020, October). Flying ad hoc network expedited by DTN scenario: Reliable and cost-effective MAC protocols perspective. In *2020 IEEE 14th International Conference on Application of Information and Communication Technologies (AICT)* (pp. 1-6). IEEE.
- Sati, S., Sohoub, A., Eltahir, A., Ahmad, K. A. B., Ahmad, K., & Bakeer, A. (2018, November). Degree contact DC-epidemic routing protocol for opportunistic networks. In *2018 Advances in Wireless and Optical Communications (RTUWO)* (pp. 198-203). IEEE.
- Ahmad, K., Wahid, A., Quadri, M. P., & Fathima, A. (2015, April). Parallel virtualization in IaaS in community cloud. In *2015 Fifth International Conference on Communication Systems and Network Technologies* (pp. 1071-1075). IEEE.
- Wahid, A., Ahmad, K., Tyagi, G., & Rizvi, M. A. (2014, November). Anti-theft cloud apps for android operating system. In *2014 International Conference on Computational Intelligence and Communication Networks* (pp. 765-769). IEEE.
- Chaudhary, A., Ahmad, K., & Rizvi, M. A. (2014, April). E-commerce security through asymmetric key algorithm. In *2014 Fourth International Conference on Communication Systems and Network Technologies* (pp. 776-781). IEEE.
- Kumar, G., Ahmad, K., Saurabh, A. K., & Doja, M. N. (2014, March). Data prevention from unauthorized access by Unclassified Attack in Data Warehouse. In *2014 International Conference on Computing for Sustainable Global Development (INDIACom)* (pp. 734-738). IEEE.
- Tyagi, G., Ahmad, K., & Doja, M. N. (2014, February). A novel framework for password securing system from key-logger spyware. In *2014 International Conference on Issues and Challenges in Intelligent Computing Techniques (ICICT)* (pp. 70-74). IEEE.

## Chapters:

- Kamal, A., Ahmad, K., Hassan, R., & Khalim, K. (2021). NTRU Algorithm: N<sup>th</sup> Degree Truncated Polynomial Ring Units. In *Functional Encryption* (pp. 103-115). Springer, Cham.
- Dulhare, U. N., Mubeen, A., & Ahmad, K. (2020). Hands-on H2O machine learning tool. *Machine Learning and Big Data: Concepts, Algorithms, Tools and Applications*, 423-453.
- Ahmad, K., Kamal, A., & Ahmad, K. A. B. (2019). Discrete logarithm problem. In *Emerging Security Algorithms and Techniques* (pp. 47-57). Chapman and Hall/CRC.
- Ahmad, K., Kamal, A., & Ahmad, K. A. B. (2019). Prime Number. In *Emerging Security Algorithms and Techniques* (pp. 27-45). Chapman and Hall/CRC.

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- Dulhare, U. N., & Ahmad, K. (2019). Hands-On “SageMath”. In *Emerging Security Algorithms and Techniques* (pp. 293-308). Chapman and Hall/CRC.
  - Ranjan, R., Mukherjee, A., Rai, P., & Ahmad, K. (2019). Asymmetric Cryptography. In *Emerging Security Algorithms and Techniques* (pp. 119-137). Chapman and Hall/CRC.
  - Abouaroek, M., & Ahmad, K. (2018). Foundations of opportunistic networks. In *Opportunistic Networks* (pp. 1-10). Chapman and Hall/CRC.
  - Ahmad, K., Fathima, M., & bin Ahmad, K. A. (2018). Taxonomy of Routing Protocols for Opportunistic Networks. In *Opportunistic Networks* (pp. 85-116). Chapman and Hall/CRC.
  - Dubey, S., Verma, K., Rizvi, M. A., & Ahmad, K. (2018). SWOT analysis of cloud computing environment. In *Big Data Analytics* (pp. 727-737). Springer, Singapore.
  - Ahmad, K., & Shareef, A. (2018). Hands-On Kernel-Based Virtual Machine (KVM). In *Design and Use of Virtualization Technology in Cloud Computing* (pp. 182-193). IGI Global.
  - Ahmad, K., Ansari, M., & Kamal, A. (2018). Hands-On Xen: Installation Guide for Xen Server. In *Design and Use of Virtualization Technology in Cloud Computing* (pp. 221-232). IGI Global.
  - Ahmad, K., & Ansari, M. (2018). Hands-On Vagrant. In *Design and Use of Virtualization Technology in Cloud Computing* (pp. 208-220). IGI Global.
  - Ahmad, K., & Kamal, A. (2017). Hands-On Aerospike. In *NoSQL: Database for Storage and Retrieval of Data in Cloud* (pp. 311-322). Chapman and Hall/CRC.
  - Ansari, M., & Ahmad, K. (2017). Hands-On Cloudant. In *NoSQL: Database for Storage and Retrieval of Data in Cloud* (pp. 333-340). Chapman and Hall/CRC.
  - Ahmad, K., & Javed, M. (2017). Hands-On Redis. In *NoSQL: Database for Storage and Retrieval of Data in Cloud* (pp. 355-364). Chapman and Hall/CRC.
  - Hussain, D., & Ahmad, K. (2017). Hands-On RethinkDB. In *NoSQL: Database for Storage and Retrieval of Data in Cloud* (pp. 365-376). Chapman and Hall/CRC.
  - Ahmad, K., & Haseeb, A. (2017). Hands-On Cassandra for Windows. In *NoSQL: Database for Storage and Retrieval of Data in Cloud* (pp. 323-332). Chapman and Hall/CRC.
  - Ahmad, K., & Ansari, M. (2017). Hands-on InfluxDB. In *NoSQL: Database for Storage and Retrieval of Data in Cloud* (pp. 341-354). Chapman and Hall/CRC.
  - Ahmad, K., Kumar, G., Wahid, A., & Kirmani, M. M. (2016). Software Performance Estimate using Fuzzy Based Backpropagation Learning. In *Emerging Research Surrounding Power Consumption and Performance Issues in Utility Computing* (pp. 320-344). IGI Global.
  - Fathima, A., Ahmad, K., & Wahid, A. (2015). Intrusion Detection, Prevention, and Privacy of Big Data for Cyber-Physical Systems. In *Cyber-Physical Systems* (pp. 434-461). Chapman and Hall/CRC.
  - Wahid, A., Quadri, M. P., Siddiqui, A. T., Kirmani, M. M., & Ahmad, K. (2015). Verifiable Response in Heterogeneous Cloud Storage: An Efficient KDC Scheme. In *Handbook of Research on Securing Cloud-Based Databases with Biometric Applications* (pp. 91-108). IGI Global.

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DETAILS OF  
CONFERENCE/SEMINAR  
/WORKSHOP/ FDP  
(ATTENDED/PRESENTED)

Workshop/FDP Attended: 15  
Paper Presented: 05

- Delivered the **Invited Lecture on “Hands-on Blockchain Based Cyber Security”** in ATAL FDP on Cyber Security, 6-10 December 2021 Organized by Jawahar Lal Nehru University (A Central University), Delhi, India.
- Delivered the **Invited Talk on “Role of Blockchain Technology in Digital Era”** in IEEE International Conference on Information Science and Communications Technologies (ICISCT 2021), 3<sup>th</sup>, 4<sup>th</sup> and 5<sup>th</sup> of November 2021 organized by Tashkent Uzbekistan Tashkent University of Information Technologies, Tashkent, Uzbekistan.
- Delivered the **Invited Talk on “Blockchain Technology”**, 30 October 2021 Organized by BIT Sindri, Dhanbad, India.
- Delivered the **Invited Talk on “eContent Development”** in the Workshop on eContent Development and Online Pedagogy from 25 Oct to 30 October 2021 Organized by UGC-HRDC, Maulana Azad National Urdu University, Hyderabad, India.
- Delivered the **Invited Talk on “Role of Blockchain Technology in Digital Era”** in FDP on Cyber Security in Digital Era, 23-27 August 2021 Organized by Department of Computer Sciences, Baba Ghulam Shah Badshah University, J&K, India.
- Delivered the **Invited Lecture on “e-Voting System Using Blockchain”** at Department of Computer Science and Engineering, GIET University, Odisha, India on 22 August 2021.
- **Chaired the Session** in National Conference on Computational Methods, Data Science and Applications (CMDSA-2021), 24-25 May 2021 Organized by Department of Computer Science and Information Technology, Maulana Azad National Urdu University (A Central University), India.
- Delivered the **Invited Lecture on “Tools for Literature Review”** in a Five-Day Online Workshop on Research Methodology and ICT Tools for Research, 11-19 April 2021 Organized by Maulana Azad National Urdu University (A Central University) in collaboration with Telangana State Urdu Academy, Hyderabad, India.
- Delivered the **Invited Talk on “Impact of Blockchain Technology on IR 4.0”** in 3<sup>rd</sup> International Conference on Communication and Computing system (ICCCS-2021), 5-7 February 2021 Organized by Jawahar Lal Nehru University (A Central University), Delhi, India.
- **Chaired the Session** in 3<sup>rd</sup> International Conference on Communication and Computing system (ICCCS-2021), 5-7 February 2021 Organized by Jawahar Lal Nehru University (A Central University), Delhi, India.
- Delivered the **Expert Lecture on “Blockchain Technology”** at Department of Computer Science and Engineering, Sangam University, Rajasthan, India on 28<sup>th</sup> December 2020.
- Delivered the **Invited Talk on “Delving IR 4.0 Applications using Blockchain”** in 5<sup>th</sup> International Conference on Defence & Security Technology (DSTC 2020), 3<sup>th</sup> and 4<sup>th</sup> of December 2020 Organized Faculty of Engineering, National Defence University of Malaysia, Malaysia.
- Delivered the **Invited Talk on “Delving IR 4.0 Applications using Blockchain”** in IEEE International Conference on Information Science and Communications Technologies (ICISCT 2020), 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> of November 2020 organized by Tashkent Uzbekistan Tashkent University of Information Technologies, Tashkent, Uzbekistan.
- **Chaired the Session** in the 1<sup>st</sup> International Conference on Networks and Cryptology organized by School of Computer and System Sciences, Jawaharlal Nehru University (A Central University), New Delhi, India held on 14-16 June 2019.
- Delivered the **Invited Lecture on “Cloud Computing Tools”** at UGC-Human Resource Development Centre, Jawaharlal Nehru Technological University, Hyderabad, India on 21<sup>st</sup> February 2019.

- **Chaired the Session** in the 2<sup>nd</sup> International Conference on Computer Science and Electronics, Jan 02-03, 2017, Kuala Lumpur, Malaysia.
- **Chaired the Session** in the 1st International Conference on Computer and Electronics Engineering, Jan 9-10, 2016, Hyderabad, India.
- Delivered the **Guest Lecture on “Network security”** at the Department of Computer Science, Telangana University, Telangana, India on 1<sup>st</sup> April 2015.
- Delivered the **Guest Lecture on “Information Security”** at the Department of Computer Science, Central University of Haryana (A Central University), India on 27<sup>th</sup> Nov 2013.

#### ACHIVEMENTS

- Presented paper on **“Performance Analysis of NTRU Algorithm With Non Post-Quantum Cryptography Algorithms”** in 2<sup>nd</sup> International Conference on Networks and Cryptology organized by School of Computer and System Sciences, Jawaharlal Nehru University, New Delhi, India held on 4-6 December 2020. **(Best Paper Award)**
- Presented paper on **“Secure Mobile Commerce in Ad hoc Network Using CAEC<sup>2</sup>M”** in 2<sup>nd</sup> International Conference on Recent Trends in Computer Science and Electronics (RTCSE-2017) at Kuala Lumpur, Malaysia, **02-03 January 2017. (Award of Research Excellence)**

#### DETAILS OF SUPERVISION (M.PHIL/M.TECH/PH.D.)

Ph.D.: 01 Awarded  
02 Ongoing  
M.Tech: 05 Awarded

#### PROFESSIONAL MEMBERSHIPS

- Life Membership of the Indian Science Congress Association (ISCA).
  - Life Membership No: L27764
- Life Membership of Indian Society for Technical Education (ISTE), India.
  - Membership No: LM 71999
- Life Membership of Cryptography Research Society of India (CRSI), India.
  - Membership No: L/388
- Life Membership of International Association Engineers (IAENG, Hong Kong).
  - Membership No: 107176
- Life Membership of International Association of Computer Science and Information Technology (IACSIT), Singapore.
  - Membership No: 80339566

#### PERSONAL DETAILS

**Father’s Name** : Mr. Abdul Hamid Khan  
**Date of Birth** : 01/07/1983  
**Gender** : Male  
**Marital Status** : Married  
**Nationality** : Indian  
**Language Known** : English, Urdu, Hindi

Date: 15/07/2022

Place: Hyderabad

(Dr. Khaleel Ahmad)

[Last update on: 15<sup>th</sup> July 2022]