

## CURRICULUM VITAE

**Dr. Saru Kumari**

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### **CONTACT DETAILS**

Department of Mathematics  
Chaudhary Charan Singh University, Meerut, India  
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**QUALIFICATION:** M.Sc, M. Phil, Ph. D.

**DESIGNATION:** Assistant Professor

**RESEARCH AREAS:** Applied Cryptography and Information Security

### **EDUCATION**

M. Sc, M. Phil, Ph. D. from Chaudhary Charan Singh University Campus, Meerut, U.P. INDIA

### **OTHER INFORMATION**

- Qualified Joint CSIR-UGC National Eligibility Test (NET) for Lecturership held on 30-12-2001

### **TEACHING EXPERIENCE**

1. *Assistant Professor* (March 2015----)  
Chaudhary Charan Singh University, Meerut, Uttar Pradesh, India
2. *Assistant Professor* (June 2010 – March 2015)  
Agra College, Agra, Uttar Pradesh, India
3. *Assistant Professor* (April 2010 – June 2010)  
Vijay Singh Pathik (Post Graduate) Govt. Degree College, Kairana, Muzaffarnagar, U.P., India
4. *Lecturer* (March 2006 – April 2010)  
Government Polytechnic, Firozabad, Uttar Pradesh, India

**DATE OF RETIREMENT:** 14-04-2040

### **PROFESSIONAL ACTIVITY**

- Associate Editor on *IEEE Systems Journal*, (**Impact Factor: 3.987**). (from Oct. 2020).
- Advisory Editor on *Engineering Reports*, **Wiley**. (From Aug. 2019)
- Associate Editor on *AEÜ - International Journal of Electronics and Communications*, **Elsevier (SCI) (Impact Factor: 2.115)**. (from Aug. 2018)
- Associate Editor on *Telecommunication Systems*, **Springer (SCI) (Impact Factor: 1.527)**. (from Sep. 2018).

- Associate Editor on *Human Centric Computing and Information sciences*, **Springer (SCI-E) (Impact Factor: 1.967)**. (from Oct. 2018)
- Associate Editor on *International Journal of Communication Systems*, **Wiley (SCI-E) (Impact Factor: 1.717)**. (from July 2018)
- Associate Editor on *Transactions on Emerging Telecommunications Technologies*, **Wiley (SCI-E) (Impact Factor: 1.606)**. (from Sep. 2018)
- Associate Editor on *Information Technology and Control*, **Kaunas University of Technology, Lithuania (SCI-E) (Impact Factor: 0.8)**. (from Oct 2018)
- Associate Editor on *KSII Transactions on Internet and Information Systems*, published from Taiwan **(SCI-E) (Impact Factor: 0.611)**. (from July 2017)
- Associate Editor on *Information Security: A Global Perspective*, **Taylor & Francis (ESCI, Scopus)**. (from Oct. 2018)
- Associate Editor on *International Journal of Wireless Information Networks*, **Springer. (ESCI, Scopus)**. (from Sep. 2018)
- Associate Editor on *Journal of Reliable Intelligent Environments*, **Springer. (ESCI, Scopus)** (from Dec. 2018)
- Associate Editor on *Array*, **Elsevier** (from Jan. 2019)
- Associate Editor on *Security and Privacy*, **Wiley**. (from July 2018)
- Associate Editor on *Iran Journal of Computer Science*, **Springer**. (from Jan. 2019)
- Associate Editor on *Azerbaijan Journal of High Performance Computing*, published by Azerbaijan State Oil and Industry University, Azerbaijan. (from Sep. 2018)
- Associate Editor on *International Journal of Smart Sensor Technologies and Applications (IJSSTA)*, **IGI Global** (from April 2019)
- Associate Editor on *Electrical Science & Engineering*, **Bilingual Publishing CO (Singapore)** (from April 2019)
- Guest Editor of the Special Issue “Privacy-aware Resource Management solutions in Internet of Things” for *Transactions on Emerging Telecommunications Technologies*, **Wiley (SCI-E) (2019 Impact Factor: 1.594)**.
- Guest Editor of the Special Issue “Security and Privacy Solutions for Smart City” for *EURASIP Journal on Wireless Communications and Networking*, **Springer (SCI-E) (Impact Factor: 1.830)**.
- Guest Editor of the Special Issue “Internet of Vehicles in Smart City” for *Annals of Telecommunications*, **Springer (SCI-E) (2019 Impact Factor: 1.546)**, 2020.
- Guest Editor of the Special Issue "Security and Privacy in Edge Consumer Electronics" for *IEEE Consumer Electronics Magazine*, **(SCI-E) (2019 Impact Factor: 3.273)**, 2020.
- Guest Editor of the Special Issue “Sustainable Security Solutions for Internet of Vehicles” for *Computers and Electrical Engineering*, **Elsevier (SCI-E) (2019 Impact Factor: 2.663)**, 2020.
- Guest Editor of the Special Issue “Green energy-efficient computing solutions in IoT Communications” for *International Journal of Communication Systems*, **Wiley (SCI-E) (2019 Impact Factor: 1.319)**, 2020.
- Lead Guest Editor of the Special Issue “Towards Automotive Cybersecurity” for *Transactions on Emerging Telecommunications Technologies*, **Wiley (SCI-E) (Impact Factor: 1.606)**, 2020.
- Lead Guest Editor of the Special Issue “Smart Sensors in Vehicular Communication Networks: Principles, Algorithms, Systems and Applications” for *International Journal of Communication Systems*, **Wiley (SCI-E) (Impact Factor: 1.717)**, 2019.
- Guest Editor of the Special Issue “Big-data and IoT in e-Healthcare” for *Computers and Electrical Engineering*, **(SCI-E) Elsevier (Impact Factor: 1.747)**, 2019.

- Guest Editor of the Special Issue “Distributed Big Data Processing in SCADA Communication Networks” for *EURASIP Journal on Wireless Communications and Networking*, (SCI-E) **Springer** (Impact Factor: 2.407), 2019.
- Guest Editor of the Special Issue on “Future Networking Applications Plethora for Smart Cities” for *Peer-to-Peer Networking and Applications*, (SCI-E) **Springer** (Impact Factor: 1.514), 2019.
- Guest Editor of the Special Issue on “Quantum Computation for Big Data in Large Scale Applications (AMMCS19)” for *Concurrency and Computation: Practice and Experience*, **Wiley**, (SCI-E), (Impact Factor: 1.114), 2019.
- Technical Program Committee Member for International Conference on Network Security & Blockchain Technology (ICNSBT 2021) <http://www.csikolkata.org/icnsbt2021/> Organised by computer society of India, Kolkata, December 02-04, 2021, Indian statistical institute Kolkata, India.
- General Chair for The 12<sup>th</sup> International Workshop on security in e-Science and e-research (ISSR 2020), October 23-25, Nanjing, China <http://www.spaccs.org/issr2020/OrganisingCommittee.php>
- Organizing Committee Member for International Conference on Networks and Cryptology (NETCRYPT) June 14-16, 2019, Jawaharlal Nehru University, Delhi, India. <http://netcrypt.in/netcrypt/index.php/committees/organising-committee>
- Technical Program Committee Member for International Conference on Mathematics and Computing (ICMC 2022) 6-8 January 2022, Vellore Institute of Technology, Vellore, Tamilnadu, India. ICMC - 2022 (vit.ac.in)
- Technical Program Committee Member for 2021 International Conference on Advanced Computing and Intelligent Technologies (ICACIT 2021) during March 20-21, 2021 Jointly organized by Università Di Siena, Italy and Galgotias University India. [www.icacit.in](http://www.icacit.in)
- Technical Program Committee Member for 17th International Conference on Intelligent Environments (IE2021), June 21- June 21, 2021, Middlesex University Dubai, Dubai, United Arab Emirates, <https://mdx.ac.ae/ie2021>
- Technical Program Committee Member for 7th International conference on Mathematics and Computing (ICMC 2021), Indian Institute of Engineering Science and Technology (IIST), Shibpur, Kolkata, India, January 12-15, 2021
- Technical Program Committee Member for International Conference on Urban Intelligence and Applications (ICUIA'2020), Taiyuan, China, August 14-17, 2020. <http://covis.cse.unt.edu/ICUIA20/>
- Technical Program Committee Member for 16<sup>th</sup> International Conference on Intelligent environments (IE2020), June 22-25, 2020, Madrid, Spain.
- Technical Program Committee Member for International Conference on Urban Intelligence and Applications 2020 (ICUIA'20), May 28-31, 2020, Taiyuan, China.
- Technical Program Committee Member for 6<sup>th</sup> International Conference on Data Science and Machine Learning Applications (CDMA 2020), May 03-05, 2020, Riyadh, Saudi Arabia. <http://www.ieeepsu.org/cdma>
- Technical Program Committee Member for 6th International Conference on Mathematics and Computing (ICMC'2020), March 18-20, 2020, Sikkim University, Sikkim, India.
- Technical Program Committee Member for 15th International Conference on Intelligent Environments (IE'19) during June 24-27, 2019, Rabat, Morocco.
- Technical Program Committee Member for 5<sup>th</sup> International Conference on Mathematics and Computing (ICMC 2019) during February 07-09, 2019 at Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar, India.

- Technical Program Committee Member for 3<sup>rd</sup> International Conference on New Trends in Information and Communications Technology Applications (NTICT' 2018), October 02-04, 2018, Baghdad, Iraq. <http://www.uoitc.edu.iq/conf/>
- Technical Program Committee Member for International Workshop on Cyberspace Security (IWCSS 2018), October 08-12, 2018, Guangzhou, China, <http://www.smart-world.org/2018/iwcss/>
- Technical Program Committee Member for International Conference on Information Society and Smart Cities (ISC 2018), June 6-7, 2018, Oxford City, United Kingdom. <http://isc-conference.org/>
- Technical Program Committee Member for International Conference on Energy Engineering (ESG 2018), June 4-5, 2018, Oxford City, United Kingdom. <http://esg-conference.org/>
- Technical Program Committee Member for 3<sup>rd</sup> International conference on Mathematics and Computing (ICMC, 2018), Jan. 9-11, 2018, IIT (BHU), Kolkata, India.
- Technical Program Committee Member for an International Conference on Information Technology and Applied Mathematics (ICITAM 2017), October 30-November 01, 2017 at Haldia, India.
- Technical Program Committee Member for 4<sup>th</sup> International Congress on Technology, Communication and Knowledge (ICTCK 2018) in January 2018, Islamic Azad University of Mashhad, Iran.
- Technical Program Committee Member for 3<sup>rd</sup> International conference on Mathematics and Computing (ICMC, 2017), Jan. 17-21, 2017, Haldia Institute of Technology, Kolkata, India.
- Technical Program Committee Member for International conference on Computing for Sustainable Global Development (9<sup>th</sup> INDIACom-2015), Organized by Bharti Vidyapeeth, New Delhi, India, 16-18 March 2015
- Technical Program Committee Member for IEEE International Symposium on Biometrics & Security Technologies (ISBAST'14), Kualalampur, Malaysia, 26-28 August 2014.
- Technical Program Committee Member for IEEE International Symposium on Biometrics & Security Technologies (ISBAST'13), Chengdu, China, 2-5 July 2013, <http://isbast13.csie.ntust.edu.tw>

#### **INVITED TALKS/SERVED AS RESOURCE PERSON**

- 1) Gave a lecture as resource person on "Analysis of Authenticated Encryption Protocols" on 5<sup>th</sup> February 2019 in CEP course on the topic "Method for Analysis of Cryptoalgorithms" organized by Scientific Analysis Group, Defence Research Development Organization (DRDO), Delhi during 4<sup>th</sup>—8<sup>th</sup>, February 2019.
- 2) Gave two lectures as resource person on "Cryptographic Primitives" in Faculty Development Programme on "Challenges before the academia in the era of gadgets, e-communications and artificial intelligence" (15<sup>th</sup> Dec. - 28<sup>th</sup> Dec. 2018), organized by The Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi, Delhi, 18<sup>th</sup> Dec. 2018.
- 3) Gave two lectures as resource person on "Cryptographic Protocols" in Scientific Analysis Group (SAG), Special Training Programme on "Cryptology and Information Security" (CIS 2017) (04<sup>th</sup> Sep. - 15<sup>th</sup> Sept. 2017), Defence Research Development Organization (DRDO), Delhi, 8<sup>th</sup> Sept. 2017.
- 4) Gave two lectures as resource person on "Cryptographic Protocols and Authentication Techniques" in Scientific Analysis Group (SAG), Special training Programme on "Cryptology and Information Security" (CIS 2016) (29<sup>th</sup> Aug.- 9<sup>th</sup> sept. 2016), Defence Research Development Organization (DRDO), Delhi, 5<sup>th</sup> Sept. 2016.

### **RESEARCH GUIDANCE**

#### **(Ph. D.)**

Supervising 3 doctoral students

#### **(M.Phil)**

Supervised 6 M.Phil students

### **RESEARCH PROJECT**

	<b>Title</b>	<b>Duration</b>	<b>Total Grant Received</b>	<b>Name of the Sponsoring/Funding Agency</b>
<b>1.</b>	Privacy Preserving Authentication Protocols for Wireless Sensor Networks	2 Years	600000/-	University Grants Commission (UGC), New Delhi, India

### **ORIENTATION/REFRESHER COURSES ATTENDED**

- Refresher Course in Mathematics and Statistics from UGC Academic Staff College, Punjabi University, Patiala, 12 -31 May 2014.
- Refresher Course in Mathematics and Statistics from UGC Academic Staff College, Devi Ahilya University, Indore, 27<sup>th</sup> July to 16<sup>th</sup> August 2018.
- Orientation Programme from UGC Academic Staff College, Aligarh Muslim University, Aligarh, 21 Sept -16 Oct 2012.

### **WORKSHOPS ATTENDED**

- National Instructional Workshop on Cryptology (NIWC-2014), Organized by Motilal Nehru National Institute of Technology Allahabad & Cryptology Research Society of India, 5-9 June, MNNIT, Allahabad
- Workshop on *MATLAB and LATEX: Simulation with Documentation (SIMDOC-2014)*, Motilal Nehru National Institute of Technology Allahabad, 30 June - 5 July 2014.
- Workshop on Role of IQAC for accretion in Higher Education, Ch. Charan Singh University, Meerut, India, 23 March 2015

### **MEMBERSHIP OF PROFESSIONAL BODIES**

- ✓ Life Time Member of Indian Mathematical Society (Membership No: S-253 or S-06-253)
- ✓ Life Time Member of Indian Science Congress (Membership No: L12156)
- ✓ Life Time Member of Cryptology Research Society of India (Membership No: L/0640)

## **SUMMARY OF PUBLICATIONS**

- Publications in Web of Science (WoS): **160**
- Publications in Scopus: **218**
- Web of Science (WoS) h-index: **39**
- Scopus h-index: **41**
- Scopus Citations: **6004**
- Web of Science (WoS) Citations: 4491
- ORCID iD: **orcid.org/0000-0003-4929-5383**

## **List of Selected Papers Published in WoS Journals**

- 1) Khalid Mahmood, Salman Shamshad, **Saru Kumari\***, Muhammad Khurram Khan, Mohammad S. Obaidat; Comment on "Lightweight Secure Message Broadcasting Protocol for Vehicle-to-Vehicle Communication". Oct. 2020, *IEEE Systems Journal* 15(1) 1366 – 1368, March 2021, **DOI: 10.1109/JSYST.2020.3029895**, Print ISSN: 1932-8184 Electronic ISSN: 1937-9234 CD-ROM ISSN: 2373-7816 (**2019 SCI Impact Factor: 3.987**)
- 2) Mahdi Nikooghadam, Haleh Amintoosi\*, **Saru Kumari**; A Provably Secure ECC-based Roaming Authentication Scheme for Global Mobility Networks. *Journal of Information Security and Applications, Elsevier* June 2020, Volume 54, October 2020, 102588, <https://doi.org/10.1016/j.jisa.2020.102588>, ISSN: 2214-2126 (**2019 SCI Impact Factor: 2.327**)
- 3) Hu Xiong, Yanan Zhao\*, Yingzhe Hou, Xin Huang, Chuanjie Jin, Lili Wang, **Saru Kumari**; Heterogeneous Signcryption with Equality Test for IIoT environment. *IEEE Internet of Things Journal* July 2020, DOI: 10.1109/JIOT.2020.3008955, ISSN: 23274662 (**2019 SCI Impact Factor: 9.936**)
- 4) Hu Xiong, Yan Wu\*, Chuanjie Jin, **Saru Kumari**; Efficient and Privacy-Preserving Authentication Protocol for Heterogeneous Systems in IIoT. *IEEE Internet of Things Journal* May 2020, May 2020, 7(12) 11713 – 11724, June 2020 **DOI: 10.1109/JIOT.2020.2999510**, ISSN: 23274662 (**2018 SCI Impact Factor: 9.515**)
- 5) Shashidhara R, Sriramulu Bojjagani, Anup Kumar Maurya, Saru Kumari\*, Hu Xiong; A Robust User Authentication Protocol with Privacy-preserving for Roaming Service in Mobility Environments. *Peer-to-Peer Networking and Applications, Springer*, 28 June 2020, **13**, 1943–1966, Nov. 2020 <https://doi.org/10.1007/s12083-020-00929-y> Print ISSN1936-6442 Online ISSN1936-6450 (**2018 SCI Impact Factor: 2.397**)
- 6) Fan Wu, Xiong Li\*, Lili Xu, **Saru Kumari**; A privacy-preserving scheme with identity traceable property for smart grid. *Computer Communication, Elsevier* 157 (May 2020) 38-44 ISSN: 0140-3664 <https://doi.org/10.1016/j.comcom.2020.03.047> (**2019 SCI Impact Factor: 2.816**)
- 7) Salman Shamshad, Khalid Mahmood, **Saru Kumari\***, Muhammad Khurram Khan; Comment on "Insider Attack Protection: Lightweight Password-Based Authentication Techniques Using ECC. *IEEE Systems Journal*, May 2020, 15(1), 877 – 880, March 2021,

- DOI:** 10.1109/JSYST.2020.2986377, Print ISSN: 1932-8184 Electronic ISSN: 1937-9234 CD-ROM ISSN: 2373-7816 **(2018 SCI Impact Factor: 4.463)**
- 8) Hu Xiong, Zhiqing Kang, Jinhao Chen, Junyi Tao, Chen Yuan, and Saru Kumari\*; A Novel Multi-Server Authentication Scheme Using Proxy Re-Signature with Scalability and Strong User Anonymity. Online Jan. 2020, *IEEE Systems Journal* 15(2) 2156-2167, **June 2021**, **DOI:** 10.1109/JSYST.2020.2983198 Print ISSN: 1932-8184 Electronic ISSN: 1937-9234 CD-ROM ISSN: 2373-7816 **(2018 SCI Impact Factor: 4.463)**
  - 9) Muhammad Arslan Akram, Khalid Mahmood, **Saru Kumari\***, Hu Xiong; Comment on "Towards Secure and Provable Authentication for Internet of Things: Realizing Industry 4.0". *IEEE Internet of Things Journal*, March 2020, 7(5), 4676 – 4681, **DOI:** 10.1109/JIOT.2020.2977475 May 2020, ISSN: 23274662 **(2018 SCI Impact Factor: 9.515)**
  - 10) Muhammad Asad Saleem, Khalid Mahmood, **Saru Kumari\***; Comment on AKM-IoV: "Authenticated Key Management Protocol in Fog Computing-Based Internet of Vehicles Deployment" *IEEE Internet of Things Journal*, Feb 2020, 7(5), 4671 – 4675 May 2020, **DOI:** 10.1109/JIOT.2020.2975207, ISSN: 23274662 **(2018 SCI Impact Factor: 9.515)**
  - 11) Tsu-Yang Wu, Zhiyuan Lee, Mohammad S. Obaidat, **Saru Kumari\***, Chine-Ming Chen\*; An authenticated Key Exchange Protocol for Multi-server Architecture in 5G Networks. *ACCEPTED IEEE Access* Jan. 2020 Electronic ISSN: 2169-3536 **(2018 SCI Impact Factor: 3.557)**
  - 12) Qian Mei, Hu Xiong, Jinhao Chen, Minghao Yang, **Saru Kumari\*** and Muhammad Khurram Khan; Efficient Certificateless Aggregate Signature with Conditional Privacy-preserving in IoV. *IEEE Systems Journal*, Feb. 2020, 15(1) 245 –256, March 2021, **DOI:** 10.1109/JSYST.2020.2966526, Print ISSN: 1932-8184 Electronic ISSN: 1937-9234 CD-ROM ISSN: 2373-7816 **(2018 SCI Impact Factor: 4.463)**
  - 13) Vinod Kumar, Musheer Ahmad, Dheerendra Mishra, Saru Kumari\*, Muhammad Khurram Khan; RSEAP: RFID based secure and efficient authentication protocol for vehicular cloud computing. *Vehicular Communications, Elsevier* Online: Nov. 2019, Vol.22, April 2020, <https://doi.org/10.1016/j.vehcom.2019.100213> ISSN: 2214-2096 (2018 SCI Impact Factor: 3.530)
  - 14) Khalid Mahmood, Aniqah Rehman, Pradeep Chaudhary, Xiong Li, Fan Wu, **Saru Kumari\***; Revised Anonymous Authentication Protocol for Adaptive Client-Server Infrastructure. *International Journal of Communication Systems, Wiley*, Oct. 2019, 33(4) March 2020, Online ISSN: 1099-1131 **(2018 Impact factor: 1.278)**
  - 15) Km Renuka, Sachin Kumar, **Saru Kumari**, Chien-Ming-Chen\*; Cryptanalysis and Improvement of a Privacy-Preserving Three-Factor Authentication Protocol for Wireless Sensor Networks. *Sensors, MDPI*, 19(21), 4625; Oct. 2019, ISSN 1424-8220; CODEN: SENS99 doi:10.3390/s19214625 **(2018 SCI Impact Factor: 3.031)**
  - 16) **Saru Kumari**, Km. Renuka\*; A Provably Secure Biometrics and ECC Based Authentication and Key Agreement Scheme for WSNs. *International Journal of Communication Systems, Wiley*, Nov. 2019, 33(3)Feb.2020, DOI: 10.1002/dac.4194 Online ISSN: 1099-1131 **(2019 Impact factor: 1.319)**
  - 17) **Saru Kumari\***, Km. Renuka; Design of a Password Authentication and Key Agreement Scheme to Access E-HealthCare Services. *Wireless Personal Communications, Springer*, 1-19, Sep. 2019, 117 (1), 27-45 March 2021 (Online: Sep. 2019) DOI: <https://doi.org/10.1007/s11277-019-06755-7> ISSN: 0929-6212 (Print) 1572-834X (Online) **(2019 SCI Impact Factor: 1.061)**

- 18) Yanan Zhao, Yingzhe Hou, Lili Wang, **Saru Kumari\***, Muhammad Khurram Khan, Hu Xiong; An Efficient Certificateless Aggregate Signature Scheme for Internet of Vehicles. *Transactions on Emerging Telecommunications Technologies*, Wiley, August 2019, 31(5) May 2020, Online ISSN: 2161-3915 DOI: 10.1002/ett.3708 (2019 SCI Impact Factor: 1.594)
- 19) Vinod Kumar, Musheer Ahmad, Adesh Kumari, Saru Kumari\*, Muhammad Khurram Khan; SEBAP: A secure and efficient biometric-assisted authentication protocol using ECC for vehicular cloud computing. *International Journal of Communication Systems*, Wiley, 21 pages, July 2019, 34(2), **January 2021**, <https://doi.org/10.1002/dac.4103>, Online ISSN: 1099-1131 (2019 Impact factor: **1.319**)
- 20) Li Chen\*, Ke Zhang, **Saru Kumari**, Muhammad Khurram Khan, Zhiyin Kong, Pradeep Chaudhary; An Efficient Certificateless Key Exchange Protocol for Heterogeneous Networks in Human-centered IoT Systems. *International Journal of Communication Systems*, Wiley, DOI: 10.1002/dac.4093, Oct. 2019, 1-9, Online ISSN: 1099-1131 (2018 **Impact factor: 1.278**)
- 21) Km. Renuka, **Saru Kumari**, Xiong Li\*; Design of a Secure Three-Factor Authentication Scheme for Smart Healthcare. *Journal of Medical Systems*, Springer, April 2019, 12 pages, Vol.43, 133, April 2019 DOI: **10.1007/s10916-019-1251-3** Print ISSN 0148-5598 Online ISSN 1573-689X (**2018 SCI Impact Factor: 3.557**)
- 22) **Saru Kumari**, Pradeep Chaudhary, Chien-Ming-Chen\*; Muhammad Khurram Khan, "Questioning Key Compromise Attack on Ostad-Sharif et al.'s Authentication and Session key Generation Scheme for Healthcare Applications, *IEEE Access*, 4 pages, March 2019. DOI: 10.1109/ACCESS.2019.2905731 **Electronic ISSN: 2169-3536 (2018 SCI Impact Factor: 3.557)**
- 23) Km. Renuka, **Saru Kumari**, Dongning Zhao\*, Li Li\*; "Design of a Secure Password-based Authentication Scheme for M2M Networks in IoT enabled Cyber-Physical systems" *IEEE Access*, 7, 51014 – 51027, April 2019. DOI: 10.1109/ACCESS.2019.2908499 **Electronic ISSN: 2169-3536 (2018 SCI Impact Factor: 3.557)**
- 24) JiLiang Li, WeiGuo Zhang\*, Vivek Dabra, Kim-Kwang Raymond Choo, **Saru Kumari**, Dieter Hogrefe; AEP-PPA: An Anonymous, Efficient and Provably-Secure Privacy-Preserving Authentication Protocol for Mobile Services in Smart Cities. *Journal of Network and Computer Applications*, Elsevier, vol. 134, pp. 52-61, Feb. 2019 <https://doi.org/10.1016/j.jnca.2019.02.003> ISSN: 1084-8045 (**2015 SCI Impact Factor: 3.991**)
- 25) Fan Wu\*, Lili Xu, Xiong Li, **Saru Kumari**, Marimuthu Karuppiah, Mohammad S. Obaidat; A Lightweight and Provably Secure Key Agreement System for a Smart Grid with Elliptic Curve Cryptography, *IEEE Systems Journal*, November 2018, 13(3) 2830-2838, September 2019 <https://doi.org/10.1007/s12652-018-1015-9> Print ISSN: 1932-8184 Electronic ISSN: 1937-9234 CD-ROM ISSN: 2373-7816 (**2019 SCI Impact Factor: 3.987**)
- 26) Xiong Li\*, Shanpeng Liu, Fan Wu, **Saru Kumari**, Joel J. P. C. Rodrigues; Privacy Preserving Data Aggregation Scheme for Mobile Edge Computing Assisted IoT Applications, *IEEE Internet of Things Journal*, Oct. 2018, 6(3)4755-4763, June 2019, DOI: 10.1109/JIOT.2018.2874473 **ISSN2327-4662 (2017 SCI impact factor: 5.863)**
- 27) Pankaj Kumar, **Saru Kumari\***, Vishnu Sharma, Xiong Li, Arun Kumar Sangaiah, S. K. Hafizul Islam; Secure CLS and CL-AS schemes designed for VANETs. *Journal of Supercomputing*, Springer, March 2018, 75(6)3076-3098, June 2019, <https://doi.org/10.1007/s11227-018-2312-y> ISSN: 0920-8542 (Print) 1573-0484 (Online) (2017 SCI **Impact Factor: 1.326**)



- 28) Marko Kompara\*, **Saru Kumari**, Marko Hölbl; Analysis and improvement of a secure key management protocol for e-health applications. *Computers and Electrical Engineering Elsevier*, 73 (Jan. 2019) 97–113, ISSN: 0045-790 (**SCI-E, Impact factor: 1.570**)
- 29) JiLiang Li, Kim-Kwang Raymond Choo, WeiGuo Zhang\*, **Saru Kumari**, Joel J. P. C. Rodrigues, Muhammad Khurram Khan, Dieter Hogrefe; EPA-CPPA: An Efficient, Provably-Secure and Anonymous Conditional Privacy-Preserving Authentication Scheme for Vehicular Ad Hoc Networks. *Vehicular Communications, Elsevier*, Vol. 13, 104-113 July 2018. <https://doi.org/10.1016/j.vehcom.2018.07.001> ISSN: 2214-2096 (**2017 SCI Impact Factor: 3.289**)
- 30) Khalid Mahmood, Xiong Li\*, Shehzad Ashraf Chaudhry, Husnain Naqvi, **Saru Kumari**, Arun Kumar Sangaiah, Joel J.P.C. Rodrigues; Pairing based anonymous and secure key agreement for smart grid edge computing infrastructure. *Future Generation Computer Systems, Elsevier*, 88, 491-500, 2018. <https://doi.org/10.1016/j.future.2018.06.004> ISSN: 0167-739X (**2015 SCI Impact Factor: 2.430**)
- 31) Azeem Irshad\*, Muhammad Sher, Shehzad Ashraf Chaudhry, **Saru Kumari**, Xiong Li, Bander A. Alzahrani, Fan Wu; An anonymous and efficient multiserver authenticated key agreement with offline registration centre. *IEEE Systems Journal*, 20 June 2018 , 13(1), 436 – 446, March 2019, DOI: 10.1109@JSYST.2018.2838450, ISSN: 1932-8184 (**2015 SCI Impact Factor: 3.882**)
- 32) Rifaqat Ali, Arup Kumar Pal, **Saru Kumari\***, Arun Kumar Sangaiah, Xiong Li, Fan Wu; An enhanced three factor based authentication protocol using wireless medical sensor networks for healthcare monitoring. *Journal of Ambient Intelligence and Humanized Computing, Springer*, Sep. 2018 <https://doi.org/10.1007/s12652-018-1015-9> ISSN: 1868-5137 (Print) 1868-5145 (Online) (**2015 SCI Impact Factor: 0.835**)
- 33) Marimuthu Karupiah\*, Ashok Kumar Das, Xiong Li, **Saru Kumari**, Fan Wu, Shehzad Ashraf Chaudhry, R.Niranchana; Secure Remote User Mutual Authentication Scheme with Key Agreement for Cloud Environment. *Mobile Networks and Applications, Springer*, May 2018, 24(3) 1046-1062, June 2019 <https://doi.org/10.1007/s1103> (Print ISSN1383-469X, Online ISSN1572-8153) May 2018 (SCI Impact Factor: 3.259)
- 34) Wenfen Liu, Gang Zhou, Jianghong Wei\*, Xuexian Hu, **Saru Kumari**; Security enhanced and cost-effective user authentication scheme for wireless sensor networks. *Information Technology and Control* 47(2) May 2018, DOI: <http://dx.doi.org/10.5755/j01.itc.47.2.16397> Print ISSN: 1392-124X, Online ISSN: 2335-884X (2016 SCI Impact Factor: 0.475) (UGC Start-up Grant)
- 35) JiLiang Li, WeiGuo Zhang\*, **Saru Kumari**, Kim-Kwang Raymond Choo, Dieter Hogrefe; Security analysis and improvement of a mutual authentication and key agreement solution for wireless sensor networks using chaotic maps. *Transactions on Emerging Telecommunications Technologies, Wiley*, Feb 2018, 29(6) DOI: 10.1002/ett.3295 Online ISSN: 2161-3915 (**2017 SCI Impact Factor: 1.535**) (**UGC Start-up Grant**)
- 36) **Saru Kumari\***, Ashok Kumar Das, Xiong Li, Fan Wu, Muhammad Khurram Khan, Qi Jiang, SK Hafizul Islam; A Provably Secure Biometrics-based Authenticated Key Agreement Scheme for Multi-server Environments. *Multimedia Tools and Applications, Springer*, Feb. 2017 Vol. 77(2), 2359-2389, Jan. 2018, DOI: 10.1007/s11042-017-4390-x, ISSN: 1380-7501 (Print) 1573-7721 (Online) (**2015 SCI Impact Factor: 1.331**)
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- 2) Muhammad Khurram Khan, **Saru Kumari**, Xiaomin Wang, Rahul Kumar; Security Issues of Chen et al.’s Dynamic ID-based Authentication Scheme. *12th IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC 2014)*, DOI: 10.1109/DASC.2014.31 August 24-27, pp. 125-128, 2014, Dalian, China. **Electronic ISBN: 978-1-4799-5079-9; CD-ROM ISBN: 978-1-4799-5078-2; Print on Demand(PoD) ISBN: 978-1-4799-5080-5**
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- 4) **Saru Kumari**, Muhammad Khurram Khan, Xiong Li, Rahul Kumar; Notes on “A Password-Based Remote User Authentication Scheme without Smart Card.” *IEEE International Symposium on Biometrics & Security Technologies (ISBAST’14)*, DOI: 10.1109/ISBAST.2014.7013105, pp. 116-119, 26-27 August 2014. Kuala Lumpur, Malaysia. **Electronic ISBN: 978-1-4799-6444-4; CD-ROM ISBN: 978-1-4799-6443-7; Print on Demand(PoD) ISBN: 978-1-4799-6445-1**
- 5) Muhammad Khurram Khan, **Saru Kumari**, Mridul Kumar Gupta; Cryptanalysis of Truong et al.’s Fingerprint Biometric Remote Authentication Scheme Using Mobile Device. *Brain Inspired Cognitive Systems (BICS), Beijing, China, 2013, Lecture Notes in Artificial Intelligence (LNAI)*, 2013. pp. 271-277, doi>10.1007/978-3-642-38786-9\_31. ISBN: 978-3-642-38785-2

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- 2) Manoj Kumar, Mridul Kumar Gupta, **Saru Kumari**; Cryptanalysis of Enhancements of a Password Authentication Scheme over Insecure Networks. *Proceedings of 4<sup>th</sup> International Conference on Contemporary Computing (IC3)*, JIIT Noida, India, 8-10 August, vol.168, pp. 524-532, 2011. ISBN 978-3-642-22605-2

### **JOURNAL'S REVIEWER**

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