

CURRICULUM VITAE

Dr. Saru Kumari

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 12th 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
- 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 16th 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 6th 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 5th 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 3rd 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 3rd 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 4th International Congress on Technology, Communication and Knowledge (ICTCK 2018) in January 2018, Islamic Azad University of Mashhad, Iran.
- Technical Program Committee Member for 3rd 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 (9th 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 5th February 2019 in CEP course on the topic "Method for Analysis of Cryptgorithms" organized by Scientific Analysis Group, Defence Research Development Organization (DRDO), Delhi during 4th—8th, 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" (15th Dec. - 28th Dec. 2018), organized by The Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi, Delhi, 18th 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) (04th Sep. - 15th Sept. 2017), Defence Research Development Organization (DRDO), Delhi, 8th 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 the Aug.- 9th sept. 2016), Defence Research Development Organization (DRDO), Delhi, 5th Sept. 2016.

RESEARCH GUIDANCE

(Ph. D.)

Supervising 3 doctoral students

(M.Phil)

Supervised 6 M.Phil students

RESEARCH PROJECT

	Title	Duration	Total Grant Received	Name of the Sponsoring/Funding Agency
1.	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, 27th July to 16th 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 Karuppiah*, 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**)
- 37) **Saru Kumari***, Marimuthu Karuppiah, Ashok Kumar Das, Xiong Li, Fan Wu, and Vidushi Gupta; Design of a secure anonymity-preserving authentication scheme for session initiation protocol using elliptic curve cryptography. *Journal of Ambient Intelligence & Humanized Computing, Springer*, Vol. 9(3) 643-653, 2018, Feb. 2017, DOI 10.1007/s12652-017-0460-1.

ISSN: 1868-5137 (print version) ISSN: 1868-5145 (electronic version) **(2015 SCI Impact Factor: 0.835)**

- 38) Xiong Li*, Fan Wu, **Saru Kumari**, Lili Xu, Arun Kumar Sangaiah, Kim-Kwang Raymond Choo; A provably secure and anonymous message authentication scheme for smart grids. *Journal of Parallel and Distributed Computing*, **Elsevier**, Nov. 2017, Volume 132, October 2019, Pages 242-249, <https://doi.org/10.1016/j.jpdc.2017.11.008> ISSN: 0743-7315 (2017 SCI **Impact Factor: 1.930**)
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