Dr. Suraj Sharma, Associate Professor

Centre/School/Special Centre: Engineering & Technology

Department: Computer Science and Engineering

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Qualification:

- Ph.D. Computer Science & Engineering – NIT Rourkela
- M.Tech. Computer Science & Engineering – NIT Rourkela
- B.E. Computer Science & Engineering – Pt. Ravishankar Shukla University Raipur
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Area of Interest/Specialization:

- Internet of Things, Cloud Computing, Wireless Sensor Networks.
- Cyber Security, Blockchain, Machine Learning, Deep Learning.

Experience: 10+ Years

- IIIT Bhubaneswar

Research Projects:

- **Principal Investigator** in the Research and Development project titled "Machine Learning Disease Models" funded by Rekwardih Co. Ltd. Taiwan approved on 01/August/2022 at IIIT Bhubaneswar.
- **CO-Principal Investigator** in the Research and Development project titled "Secure Digitization of Land Record using Blockchain Technology" funded by the Department of Science and Technology (DST) Government of Odisha approved on 06/March/2020 at IIIT Bhubaneswar.

Awards and Honors:

- **Editor** for the Book on Cloud Computing Infrastructure for Enabling Future Technology Advancement, Nova Science Publishers, New York, USA, 2021.
- **Guest Editor** for the Special Issue on Blockchain and Edge Computing Techniques or Emerging IoT Applications, International Journal of Information System Modelling and Design (IGI Global), 2021.
- **Guest Editor** for the Special Section on AI-Driven Security Solutions for the Internet of Everything & IEEE Consumer Electronics Magazine, 2020.
- **Managing Editor** for the Special Issue on Privacy and Security in Evolving Internet of Multimedia Things, ACM Transactions on Multimedia Computing, Communications and Application, 2019.
- **Guest Editor** for the Special Issue on Towards Secure and Scalable Fog/Edge Computing, Computers & Electrical Engineering Journal, Elsevier, 2017.
- **Best Research Scholar** Department of Computer Science and Technology, during research scholar week 2015 at NIT Rourkela.

Best Peer Reviewed Publication (up-to 10):

- Rathin Chandra Shit, **Suraj Sharma**. "Ray-tracing assisted fingerprinting for localization in IoT Health 4.0", Transactions on Emerging Telecommunications Technologies, Wiley, Pages 1 – 16, June 2022.
  [https://doi.org/10.1002/ett.4573] [**IF: 3.310**] [ISSN: 2161-3915]

- Amiya Kumar Sahu, **Suraj Sharma**, Rohit Raja. "Deep Learning based Continuous Authentication for IoT enabled Healthcare Service", Computers and Electrical Engineering, Pergamon, Elsevier, Volume 99, Pages 1 - 14, April 2022.
  [https://doi.org/10.1016/j.compeleceng.2022.107817] [**IF: 4.152**] [ISSN: 0045-7906]

- Rathin Chandra Shit, **Suraj Sharma**, K Yelamarthi, Deepak Puthal. "AI-Enabled Fingerprinting and Crowdsource-Based Vehicle Localization for Resilient and Safe Transportation Systems", IEEE Transactions on Intelligent Transportation Systems, Volume 22, Issue 7, Pages 4660-4669, July 2021.
  [https:// 10.1109/TITS.2021.3053942] [**IF: 6.492**] [ISSN: 1524-9050]

- Amiya Kumar Sahu, **Suraj Sharma**, Deepak Puthal, "Lightweight Multi-party Authentication and Key Agreement Protocol in IoT-based E-Healthcare Service", ACM Transactions on Computing Communication and Applications, Volume 17, Issue 2S, Pages 1 - 20, June 2021.
  [https://dl.acm.org/doi/abs/10.1145/3398039] [**IF: 3.144**] [ISSN: 1551-6857]

- Jian Xu, **Suraj Sharma** , Qingyu Meng, Jun Wu, Xuyun Zhang. "Efficient and Lightweight Data Streaming Authentication in Industrial Automation and Control Systems", IEEE Transactions on Industrial Informatics, Volume 17, Issue 6, Pages 4279-4287, January 2021.
  [https:// 10.1109/TII.2020.3008012] [**IF: 10.215**] [ISSN: 1551-3203]

- X Xu, Q Huang, H Zhu, **Suraj Sharma**, X Zhang, L Qi, MZA Bhuiyan. "Secure Service Offloading for Internet of Vehicles in SDN-Enabled Mobile Edge Computing", IEEE Transactions on Intelligent Transportation Systems, Volume 22, Issue 6, Pages 3720 - 3729, June 2021.
  [https:// 10.1109/TITS.2020.3034197] [**IF: 6.492**] [ISSN: 1524-9050]

- Rathin Chandra Shit, **Suraj Sharma**, Deepak Puthal, Rajiv Ranjan, Aad Van Moorsel, Albert Y. Zomaya, "Ubiquitous Localization (UbiLoc): A Survey and Taxonomy on Device Free Localization for Smart World", IEEE Communications Surveys & Tutorials, Volume 21, No. 4, Pages 3532-3564, November 2019.
  [https://doi.org/ 10.1109/COMST.2018.2798591][**IF: 23.7**] [ISSN: 1553877X]

- Rathin Chandra Shit, **Suraj Sharma**, Deepak Puthal, Albert Y.Zomaya, "Localization of Things (LoT): A Review and Taxonomy of Sensor localization in IoT Infrastructure", IEEE Communication Survey and Tutorials, Volume 20, Issue 3, Pages 2028-2061, Jan 2018.
  [https://doi.org/10.1109/COMST.2018.2798591] [**IF: 23.7**] [ISSN: 1553877X]

- **Suraj Sharma**, Deepak Puthal, Sanjay Kumar Jena, Albert Y. Zomaya, Rajiv Ranjan. "Rendezvous based Routing Protocol for Wireless Sensor Networks with Mobile Sink", The Journal of Supercomputing, Springer, Volume 73, Issue 3, Pages 1168–1188, March 2017.
  [http://dx.doi.org/10.1007/s11227-016-1851-3] [**IF:2.6**][ISSN: 1573-0484]

- **Suraj Sharma**, Sanjay Kumar Jena. "Cluster based Multipath Routing Protocol for Wireless Sensor Networks", ACM SIGCOMM Computer Communication Review (CCR), Volume 45, Number 2, Pages 14-20 , April 2015. [http://dx.doi.org/10.1145/2766330.2766333] [IF: **2.712**][ISSN: 01464833]

Recent Books/Book Chapters/Monographs etc.:

- Soubhagya Ranjan Mallick, **Suraj Sharma**. "Recent Challenges and Future Research Scope in Smart Healthcare Using a Blockchain-Based IoT Environment: A Systematic Analysis" Book Chapter on Cloud Computing Infrastructure for Enabling Future Technology Advancement, Nova, Pages 177-193, May 2022.
- Amiya Kumar Sahu, **Suraj Sharma**, Ashish Nanda. "A Secure Lightweight Mutual-Authentication and Key-Agreement Protocol for Healthcare System" Book Chapter on Intelligent Data Security Solutions for e-Health Applications in Book Series Intelligent Data-Centric Systems, Elsevier, Pages 293-308, 2020. ISBN: ISBN 978-0-12-819511-6. Doi: https://doi.org/10.1016/B978-0-12-819511-6.00016-9.
- **Suraj Sharma**. "Energy Efficient Routing Protocols in Wireless Sensor Networks Basics, Concepts, Protocols", LAP LAMBERT Academic Publishing Germany, ISBN:978-3-659-89731-3, 2016.

Research Supervision:
- PhD Completed: 03   PhD Ongoing: 00

Administrative Responsibilities:
- In-charge Workshop and Training in the Department of CSE, GGV Bilaspur.
- MOOC Coordinator in the Department of CSE, GGV Bilaspur.
- Convener, Online Reporting (JOSAA-CSAB-2022), SoS(E&T), GGV Bilaspur.

Additional Information:

International /National Patent Granted:
- **Suraj Sharma**, Sumit Srivastava, Jaspal Bagga, Naresh Kumar Nagwani, Amit Kumar Dewangan, Kallepalli Rohit Kumar, Jharna Chopra, Amrita Verma, "A System for Identification of Personality Traits and A Method Thereof", Patent number: 2021104218, Commonwealth of Australia, Australian Patent, 25th August 2021.
- Rohit Raja, **Suraj Sharma**, Sharad Chandra Srivastava, Sumit Srivastava et al., "A System and Methods for Object Detection and Object Tracking for Traffic Surveillance", Patent number: 389902, Application number: 202121026466, Government of India, 14th June 2021.
- **Suraj Sharma**, Amit Kumar Dewangan, Ajay Kushwaha, Manoj Kumar Chande, Neelabh Sao, Komati Sathish, Rohit Raja, Sumit Srivastava, "An Internet of Things based Smart Parking System and Its Method Thereof", Patent number: 2021102314, Commonwealth of Australia, Australian Patent, 2nd June 2021.
- Sharad Chandra Srivastava, Sumit Srivastava, Aakanksha Sharaff, **Suraj Sharma**, Akhilesh Kumar Shrivas, S K Saritha, S. R Tandan, Swati Jain, Upasana Sinha, Anand Nayyar, Abhishek Sharma, "Home Automation based on User Detection Using Internet of Things", Patent number: 2021100439, Commonwealth of Australia, Australian Patent, 7th April 2021.
- Ramesh Chandra Panda, Rohit Raja, Somnath B. Thigale, Dinesh Kumar, Bijendra Kumar, Krishna Mohan Agarwal, Aditya Sinha, Apoorva Parashar; Monalisa Pattanayak, Sharad Chandra Srivastava, Aakanksha Sharaff, S. K. Saritha, D. Kishan, **Suraj Sharma**, "Novel 3D Printed Bionic Prosthetic Leg", Patent number: 2021100285, Commonwealth of Australia, Australian Patent, 7th April 2021.