MENU

Dr. Shubha Brata Nath
Assistant Professor (CSE)

PhD (IIT Kharagpur)

Department of Computer Science & Engineering

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Joined the Institute in October 2023

About

I am an Assistant Professor in Department of Computer Science and Engineering at Indian Institute of Information Technology Guwahati (IIITG). I joined IIITG in October 2023. I have completed Ph.D. from the Department of Computer Science and Engineering, Indian Institute of Technology Kharagpur in 2023. I have completed M.E. in Software Engineering from Jadavpur University, Kolkata in 2016 with a national level GATE scholarship. I have done B.Tech. in Computer Science & Engineering from Institute of Engineering & Management, Kolkata (under West Bengal University of Technology) in 2010. I have worked as a Lecturer at DTTE, Govt. of NCT of Delhi. I also have an industry experience as a Systems Engineer at Tata Consultancy Services Limited. I work in the following research areas: Cloud Computing, Fog Computing, Serverless Computing.

Personal Webpage: https://sites.google.com/view/shubha-brata-nath/home

Research Interests

- Cloud Computing
- Fog Computing
- Serverless Computing

My work focuses on developing efficient solutions addressing different problems of Cloud Computing, Fog Computing, and Serverless Computing. I have been working on these research areas for over 7 years including the duration of my Ph.D.

Apart from the top journals, I have publications in several top reputed international conferences such as COMSNETS, IEEE/IFIP IM, IEEE ICC, IEEE GLOBECOM (Core Rank - B).

Teaching

At IIITG, I am teaching the following courses:

1. Computer Security (CS361)
2. Computer Organization and Architecture (CS104)
3. IT Workshop II (Cloud Computing) (CS351)

Publication

Journal

- Ajay Sherawat, Shubha Brata Nath, and Sourav Kanti Addya, "Optimizing Completion Time of Requests in Serverless Computing", Journal of Network and Systems Management,32, (2024), pages. 1-28, Springer.

- Sriyanjana Adhikary, Samiran Chattopadhyay, Biswajit Ghosh, Sankhayan Choudhury, Shubha Brata Nath, and Nilkantha Garain, "Reliable routing in Wireless Body Area Network using optimum number of relay nodes for enhancing network lifetime", Journal of Ambient Intelligence and Smart Environments,14, (2022), pages. 135-153, IOS Press.

- Shubha Brata Nath, Subhrendu Chattopadhyay, Raja Karmakar, Sourav Kanti Addya, Sandip Chakraborty, and Soumya K Ghosh, "Containerized deployment of micro-services in fog devices: a reinforcement learning-based approach", The Journal of Supercomputing,78, (2022), pages. 1-29, Springer.

- Anish Poonia, Shreya Ghosh, Akash Ghosh, Shubha Brata Nath, Soumya K Ghosh, and Rajkumar Buyya, "CONFRONT: Cloud-fog-dew based monitoring framework for COVID-19 management", Internet of Things,16, (2021), Elsevier.

Conference

- Pravar Chaurasia, Shubha Brata Nath, Sourav Kanti Addya, and Soumya K Ghosh, "Automating the Selection of Container Orchestrators for Service Deployment", 14th International Conference on Communication Systems & Networks (COMSNETS 2022), (2022), IEEE.

- Shubha Brata Nath, Sourav Kanti Addya, Sandip Chakraborty, and Soumya K Ghosh, "Container-based Service State Management in Cloud Computing", IFIP/IEEE International Symposium on Integrated Network Management (IM 2021), (2021), IFIP/IEEE.

- Shubha Brata Nath, Sourav Kanti Addya, Sandip Chakraborty, Soumya K Ghosh, "Green Containerized Service Consolidation in Cloud", IEEE International Conference on Communications (IEEE ICC 2020), (2020), IEEE.

- Bishakh Chandra Ghosh, Sourav Kanti Addya, Nishant Baranwal Somy, Shubha Brata Nath, Sandip Chakraborty, and Soumya K Ghosh, "Caching Techniques to Improve Latency in Serverless Architectures", 12th International Conference on Communication Systems & Networks (COMSNETS 2020), (2020), IEEE.

- Shubha Brata Nath, Subhrendu Chattopadhyay, Raja Karmakar, Sourav Kanti Addya, Sandip Chakraborty, Soumya K Ghosh, "PTC: Pick-Test-Choose to Place Containerized Micro-services in IoT", IEEE Global Communications Conference (IEEE Globecom 2019), (2019), IEEE.

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