

SOURAV KANTI ADDYA

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RESEARCH INTEREST

Cloud Computing, FOG Computing, IoT, Blockchain

CAREER SUMMARY

Assistant Professor at Dept of CSE, NITK Surathkal, India (December, 2019- till date).

PDF at IIT Kharagpur, India (May, 2018-December, 2019).

PhD from NIT Rourkela, India (Jan, 2013-Feb, 2018).

Research Visitor at San Diego State University, CA, USA (Jan-Mar, 2015).

M. Tech from NIT Rourkela (2010).

KEY PUBLICATIONS

Journals

PUBLISHED/ACCEPTED

- **Sourav Kanti Addya***, Ashok Kumar Turuk, Anurag Satpathy, Bibhudatta Sahoo and Mahasweta Sarkar, *A Strategy For Live Migration of Virtual Machines In A Cloud Federation*, **IEEE Systems Journal**, 13(3), Pages 2877 - 2887, 2019 DOI: 10.1109/JSYST.2018.2872580.
- Anurag Satpathy, **Sourav Kanti Addya***, Ashok Kumar Turuk, Bansidhar Majhi, Gadadhar Sahoo, *Crow Search Based VM Placement Strategy in Cloud Data Centers with Live Migration*, **Computers & Electrical Engineering, An International Journal, Elsevier**, 69, Pages 334-350, 2018.
- **Sourav Kanti Addya***, Ashok Kumar Turuk, Bibhudatta Sahoo, Anurag Satpathy and Mahasweta Sarkar, *A Game Theoretic Approach to Estimate Fair Cost of VM Placement in Cloud Data Center*, **IEEE Systems Journal**, 12(4), Pages 3509-3518, 2018 DOI: 10.1109/JSYST.2017.2776117.
- **Sourav Kanti Addya***, Ashok Kumar Turuk, Bibhudatta Sahoo, Mahasweta Sarkar and Sanjay Kumar Biswash, *Simulated Annealing based VM Placement Strategy to Maximize the Profit of Cloud Service Providers*, **Engineering Science and Technology, an International Journal (JESTECH), Elsevier**, 20 (4), Pages 1249-1259, 2017.

Patent

- **Sourav Kanti Addya***, Ashok Kumar Turuk, Bibhudatta Sahoo, and Anurag Satpathy, *A Stable Cloud-Alliance to Provide Uninterruptable Service*, **Indian Patent Filed**, File No. 201931006455, Date Feb 19, 2019.

International Conferences

- 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 GLOBECOM**, Waikoloa, Hawaii, USA, December 9 - 13, 2019.
- **Sourav Kanti Addya**, Anurag Satpathy, Bishakh Chandra Ghosh, Sandip Chakraborty and Soumya K. Ghosh, *Power and Time aware VM Migration for Multi-tier Applications over Geo-distributed Clouds*, in proc. of the **2019 IEEE International Conference on Cloud Computing (IEEE CLOUD 2019)**, Milan, Italy, July 08-13, 2019. (Acceptance Rate: 20.8%)

- Bishakh Chandra Ghosh, **Sourav Kanti Addya**, Anurag Satpathy, Soumya K. Ghosh and Sandip Chakraborty, *Towards a Democratic Federation for Infrastructure Service Provisioning*, in proc. of the **2019 IEEE International Conference on Services Computing (IEEE SCC 2019)**, Milan, Italy, July 08-13, 2019. (Acceptance Rate: 17%)
- **Sourav Kanti Addya***, Anurag Satpathy, Sandip Chakraborty and Soumya K Ghosh, *Optimal VM Coalition Selection for Multi-Tier Applications Over Multi-Cloud Broker Environment*, in proc. of the **11th International Conference on Communication Systems & Networks (IEEE/ACM COMSNETS 2019)**, Bangalore, January 07 - 11, 2019.
- **Sourav Kanti Addya***, Ashok Kumar Turuk, Bibhudatta Sahoo and Mahasweta Sarkar, *A Hybrid Queuing Model for Virtual Machine Placement in Cloud Data Center*, in proc. of the **IEEE International Conference on Advanced Networks and Telecommunications Systems (IEEE ANTS 2015)**, Kolkata, India, December 15-18, 2015

Book Chapters

- **Sourav Kanti Addya***, Bibhudutta Sahoo and Ashok Kumar Turuk, *Virtual Machine Placement Strategy for Cloud Data Center*, In Enterprise Management Strategies in the Era of Cloud Computing, IGI Global, 261-287, ISBN- 978-1-466-68339-6 (April 2015).

Posters and Demos

- Bishakh Chandra Ghosh, **Sourav Kanti Addya***, Nishant Baranwal Somy, Shubha Brata Nath, Sandip Chakraborty, Soumya K Ghosh, *Caching Techniques to Improve Latency in Serverless Architectures*, in proc. of the **12th International Conference on Communication Systems & Networks (IEEE/ACM COMSNETS 2020)**, Bangalore, January 07 - 11, 2020. (Accepted)
- **Sourav Kanti Addya***, Ashok Kumar Turuk, *VM Placement Technique*, **4th International Conference On Advanced Computing And Communication Systems (ICACCS)**, India Conference (INDICON), 2014 Annual IEEE, Pune, India, December 2014.

* corresponding author

EDUCATION

- # **National Institute of Technology, Rourkela, India** *February 2018*
PhD in Computer Science & Engineering
Enrolment: January 3, 2013; **Submission:** August 31, 2017; **Degree Award:** February 13, 2018
Area: Cloud Computing
Thesis title: *Virtual Machine Placement and Pricing on Cloud Data Center*.
Supervisor: Dr. Ashok Kumar Turuk
- # **National Institute of Technology, Rourkela, India** *June 2010*
M.Tech in Computer Science & Engineering
July 2008 to June 2010
Thesis title: *A Technique for Communication of Distance Node On Key Pre-distribution In Wireless Sensor Networks*.
Supervisor: Dr. Ashok Kumar Turuk
- # **West Bengal University of Technology, India** *June 2007*
B.Tech in Computer Science & Engineering
July 2003 to June 2007

TECHNICAL STRENGTHS

Computer Languages	C++, Python.
Simulator	CloudSim 3.0.3
Hardware	Raspberry Pi 3

RESEARCH EXPERIENCE/ INTERNSHIP

- # Institute **Post-Doctoral Fellow** in Department of Computer Science and Engineering at **Indian Institute of Technology, Kharagpur, India** with Dr. Soumya Kanti Ghosh and Dr. Sandip Chakraborty from *May 2018 - December 2019*.
- # **Research Visitor** at Wireless Networking Research Lab, **San Diego State University, CA, USA** under Dr. Mahasweta Sarkar from *January-March 2015*.
- # **Research Intern** on Key Pre-distribution in Sensor Network at **Indian Statistical Institute, Kolkata** under supervision of Prof. Bimal K. Roy from *11 May 2009- 15 July 2009*.

PROFESSIONAL ACTIVITY

- # **TPC member** of COMSNETS 2020, Bangalore, India.
- # **TPC member** of IoTsm 2018, Imperial College London, London, UK.
- # **Co-editor** of edited book titled Resource management and efficiency in cloud computing, publisher IGI GLOBAL, November 2016, ISBN13: 9781522517214.
- # **TPC member** of IEEE GLOBECOMM 2015, San Diego, USA.
- # **Reviewer** of Mobile Networks and Applications, Springer.
- # **Reviewer** of IEEE System Journal, IEEE Transactions on Sustainable Computing..
- # **Reviewer** of Computers & Electrical Engineering, An International Journal, Elsevier.

PROFESSIONAL SOCIETY MEMBERSHIP

- # **Associate Life Member** of Cryptology Research Society of India.
- # **Member** IEEE, ACM.

ACHIEVEMENTS

- # Graduate Aptitude Test in Engineering (GATE) Percentile 93.59 on Computer Science in 2008.
- # Received MHRD, Govt. of India fellowship for PhD in 2013.
- # Received grand from TEQIP II, MHRD, Govt. of India for Foreign Internship at San Diego State University, USA in 2015.

MENTORING

- # **Shubha Brata Nath**, PhD scholar, Dept. of CSE, IIT Kharagpur, working on *Microservice placement in Fog-Cloud*, 2018- continuning.

- # **Bishakh Chandra Ghosh**, PhD scholar, Dept. of CSE, IIT Kharagpur, working on *Cloud Federation*, 2018- continuing.
- # **Anurag Satpathy**, Thesis title: *Virtual Machine Placement in Cloud Data Center*, work done at NIT Rourkela, Graduated (M. Tech) from BIT Mesra, 2017.
- # **Soumay Ranjan Moharana**, Thesis title: *Key Distribution in IoT Networks*, work done at NIT Rourkela, Graduated (M. Tech) from BIT Mesra, 2017.

EXTRA CURRICULUM ACTIVITIES

- # Elected Cultural Secretary of NIT Rourkela 2009-2010.
- # Photography
- # **PUBLICATION: RAI**, an anthology of Bengali poems published by Prathivas in Kolkata Book fair 2010.

PERSONAL INFORMATION

Date of Birth: March 16, 1985
Nationality: Indian
Marital Status: Married
Parents: Late Susanta Bhusan Addya & Mrs Gitanjali Addya

REFERENCES

- # **Dr. Soumya K. Ghosh** *Professor & National Geospatial Chair Professor (DST)*
Department of Computer Science & Engineering
Indian Institute of Technology Kharagpur- 721302, West Bengal, India.
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- # **Dr. Sajal K. Das, IEEE Fellow** *Professor & Daniel St. Clair Endowed Chair*
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- # **Dr. Ashok Kumar Turuk** *Professor & Head*
Department of Computer Science & Engineering
National Institute of Technology Rourkela- 769008, Odisha, India.
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- # **Dr. Sandip Chakraborty** *Assistant Professor*
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