Soumadip Biswas

Contact Information

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Education

Indian Institute of Technology Kharagpur, Kharagpur, India.

Ph.D., Dept. of Computer Science & Engineering *2014—present.*

- Supervisors: Dr. Arobinda Gupta and Dr. Sandip Chakraborty

M.Tech., School of Information Technology *2010—12*

- Supervisor: Dr. Soumya K. Ghosh

West Bengal University of Technology, Kolkata, India.

B.Tech., Computer Science & Engineering *2006—10*

Industry Experience

Software Engineer, Citrix R & D India Pvt. Ltd. *2012—2014*

I had worked as a developer for an application virtualization tool called XenApp. I was responsible for fixing problems faced in deployed products by providing feature enhancements and bug fixes. During this time I have gained experience in i) remote and local debugging, ii) distributed systems problems, iii) responsible coding and iv) communications. Also, in some occasions, I had helped in achieving multi-party consensus.

I had received a promotion from Software Engineer 1 to Software Engineer 2 within 10 months of joining.

Academic Experience

Research Scholar, *Indian Institute of Technology Kharagpur.* *2014—present*

***Handover and Load Balancing in Dense LTE Network for Users in Vehicles**: Reduction in the number handover is desirable for providing good quality of service. However in a densely deployed LTE network, for high speed users, achieving this has its own set of problems. We aim to provide some solutions in this regard.*

***Teaching Assistant**: Algorithms, Distributed Systems, Parallel and Distributed Systems, Programming and Data Structures, Advanced Graph Theory, Performance Modeling of Computer Networks, Computational Complexity, Geospatial Information System, Internet and Web Technology.*

***Projects Mentored**: Distributed Chat, Distributed logging, Collaborative Download, Cluster Middleware, Publish Subscribe System, P2P System, Vector Clock, Distributed Clock Synchronization.*

Masters Thesis, *Indian Institute of Technology Kharagpur.* *2011—12*

***Geospatial Services in Cloud Infrastructure**: In this work, using only open-source tools, we successfully deployed first generation IaaS cloud. We further demonstrated that data intensive geospatial services (e.g. WFS, WMS, WPS) can be safely deployed in a cloud environment by utilizing SaaS while respecting privacy of multiple participating parties.*

Bachelor Project, *West Bengal University of Technology.* *2009—10*

***Web Enabled Cluster Computing with Customized Load Balancing**: In this work we provided a proof of concept that large computation can be remotely performed over commodity hardware and low-bandwidth connection by utilizing beowulf cluster and MPI.*

Research Interests

Cellular Networks, Computer Networks, Software Defined Networking, Algorithms, Applied Machine Learning.

Activities & Interests

Association with Social Organization

- Coordinator at Gopali Youth Welfare Society (NGO) *2015—16*
- Board Member at Gopali Youth Welfare Society (NGO) *2016—17*

Interests

- Photography.
- Swimming, Table-tennis, Bike trips.
- Drawing, Solving Puzzles.

Achievements

- Ph.D Scholarship awarded by MHRD, Govt. of India for 2014—19.
- M.Tech Scholarship awarded by MHRD, Govt. of India for 2010—12.
- All India Rank 330 (99.69^{th} $\%ile$) in GATE 2010.

Skills

Technical:

- Programming: Python, C, C++, Shell scripting, SQL.
- Framework: Network Simulator (NS3), LENA, SUMO.
- Database: MySQL.
- OS: Linux, Windows.

Communication:

- English (C2), Bengali (C2, Native).
- Hindi (C1), French (A1).

References

Arobinda Gupta
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Soumya K. Ghosh
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E-mail: skg@iitkgp.ac.in

Publications (Conference)

1. **S. Biswas**, S. Chakraborty, and A. Gupta, "Reducing Spurious Handovers in Dense LTE Networks based on Signal Strength Look-ahead," IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob) 2018, Limassol, Cyprus, 2018.
2. **S. Biswas**, A. Gupta, and S. Chakraborty, "A Framework for eNB Load Balancing in Dense LTE Networks," IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC) 2019, Istanbul, Turkey, 2019.

Publications (Journal)

1. **S. Biswas**, A. Gupta, and S. Chakraborty, "Load-balanced User Associations in Dense LTE Networks", Computer Networks, Vol. 189, 2021.

Publications (Other)

1. **S. Biswas**, S. Chakraborty, and A. Gupta, "*Poster*: Balanced User Association in Dense LTE Networks," IEEE International Conference on Computer Communications (INFOCOM) 2019, Paris, France, 2018.