



Soumadip Biswas, *Ph.D.*

SUMMARY	<i>Computer Science researcher specializing in cellular networking, distributed systems, and graph algorithms. Over 10 years of academic and research experience including PhD from IIT Kharagpur. Strong publication record in IEEE and Elsevier venues. Experienced in teaching core CS courses and mentoring projects. Former Software Engineer at Citrix with expertise in scalable systems. Currently Associate Professor at IEM.</i>		
CONTACT INFORMATION	Website: soumadip.github.io Email1: soumadip.cse@gmail.com Email2: soumadip.b@iitkgp.ac.in Email3: soumadip.biswas@iem.edu.in	LinkedIn: in/soumadipbiswas Mobile1: +91 7501552243	
EDUCATION	Indian Institute of Technology Kharagpur , Kharagpur, India. Ph.D. , Dept. of Computer Science & Engineering <i>2014—23.</i> • Thesis Title: <i>Algorithms for Handover Management in Dense LTE Networks under Vehicular Mobility</i> • Advisors: Dr. Arobinda Gupta and Dr. Sandip Chakraborty • Submitted in April 2022 and defended on 24 Jan 2023 M.Tech. , School of Information Technology <i>2010—12</i> • Thesis Title: <i>Geospatial Services in Cloud Infrastructure</i> • Advisor: Dr. Soumya K. Ghosh West Bengal University of Technology , Kolkata, India. B.Tech. , Computer Science & Engineering <i>2006—10</i>		
RESEARCH INTERESTS	Advances in Computer and Cellular Networking, Graph Theory and Algorithms, Distributed Systems and Algorithms, and Operating Systems.		
TEACHING AND ACADEMIC EXPERIENCE	Associate Professor , <i>Institute of Engineering and Management, Kolkata.</i> <i>May 2022—present</i> Courses: – <i>Data Structures and Algorithms (Theory and Lab)</i> – <i>Formal Languages and Automata Theory</i> – <i>Design and Analysis of Algorithms (Theory and Lab)</i> – <i>Advanced Programming with OOP (Theory and Lab)</i> – <i>Operating Systems (Theory and Lab)</i> – <i>Distributed Systems (Elective)</i> – <i>Graph Theory (Elective)</i> Administrative Responsibilities: – <i>Member, Board of Studies</i> – <i>Member, Career Growth Cell</i>		

	– <i>SPoC, Department FDP</i> – <i>Class Teacher</i> – <i>Organizing Committee Member, Student Workshops</i>
	Guest Faculty (semester-wide) , <i>Indian Association for the Cultivation of Science.</i> <i>Autumn 2022, Autumn 2023, Autumn 2024</i> – <i>Introduction to Computing (with C and Python)</i>
	Research Scholar , <i>Indian Institute of Technology Kharagpur.</i> <i>2014—22</i> <i>Algorithms for Handover Management in Dense LTE Networks under Vehicular Mobility:</i> <i>Developed algorithms to reduce spurious handovers in dense LTE networks; validated using NS3/LENA. Published results in IEEE WiMob, PIMRC, INFOCOM (Poster), and Elsevier Computer Networks.</i> <i>Gained experience in problem modelling, experimental evaluation, and large-scale networking simulations.</i> <i>Teaching Assistant:</i> <i>Supported courses: Algorithms, Distributed Systems, Parallel & Distributed Systems, Programming & Data Structures, Advanced Graph Theory, Performance Modeling of Networks, Computational Complexity, GIS, Internet & Web Technology.</i> <i>Projects Mentored:</i> <i>Distributed Chat, Distributed Logging, Collaborative Download, Cluster Middleware, Publish-Subscribe Systems, P2P Systems, Vector Clock, Distributed Clock Synchronization.</i>
	Masters Thesis , <i>Indian Institute of Technology Kharagpur.</i> <i>2011—12</i> <i>Geospatial Services in Cloud Infrastructure:</i> <i>Built an open-source IaaS cloud and demonstrated secure deployment of geospatial services (WFS/WMS/WPS) using SaaS abstractions.</i>
	Bachelor Project , <i>West Bengal University of Technology.</i> <i>2009—10</i> <i>Web-Enabled Cluster Computing with Customized Load Balancing:</i> <i>Designed a Beowulf cluster over commodity hardware with an MPI-based load balancer for remote high-compute applications.</i>
INDUSTRY EXPERIENCE	Software Engineer , <i>Citrix R & D India Pvt. Ltd.</i> <i>2012—2014</i> <i>Developed and maintained core modules of XenApp, using C++ and C#.</i> <i>Delivered feature enhancements and bug fixes for large-scale, production deployments.</i> <i>Gained hands-on experience in remote/local debugging, distributed systems issues, and collaborative engineering processes.</i> <i>Promoted from Software Engineer I → II within one year.</i> <i>Industry insights contributed to development of practical teaching modules in Distributed Systems.</i>
ACHIEVEMENTS	● <i>Ph.D Scholarship awarded by MHRD, Govt. of India for 2014—19.</i> ● <i>M.Tech Scholarship awarded by MHRD, Govt. of India for 2010—12.</i> ● <i>All India Rank 330 (99.69th %ile) in GATE 2010.</i>
SKILLS	Technical: ● <i>Programming: Python, C, C++, Shell scripting, SQL.</i> ● <i>Framework: Network Simulator (NS3), LENA, SUMO.</i> ● <i>Database: MySQL.</i> ● <i>OS: Linux, Windows.</i> Communication: ● <i>English (C2), Bengali (C2, Native).</i> ● <i>Hindi (C1).</i>

PUBLICATION
SUMMARY

- 1 Journal (Elsevier)
- 2 International Conferences (IEEE WiMob, IEEE PIMRC)
- 1 Poster (IEEE INFOCOM)

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 Abstract: Balanced User Association in Dense LTE Networks***," IEEE International Conference on Computer Communications (INFOCOM) 2019, Paris, France, 2018.

REFERENCES

- Arobinda Gupta, Professor
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- Soumya K. Ghosh, Professor
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