

Soumya K. Ghosh, PhD

Professional Preparation

2002	PhD	Computer Science & Engineering	Indian Institute of Technology (IIT) Kharagpur, India
1996	M Tech	Computer Science & Engineering	Indian Institute of Technology (IIT) Kharagpur, India
1990	BE	Electronics & Communication	National Institute of Technology (formerly, REC), Durgapur, India (<i>University Gold Medal</i>)

Appointments

2014–Present	Professor, Computer Science & Engineering, Indian Institute of Technology Kharagpur, India
2009–2014	Associate Professor, School of Information Technology, Indian Institute of Technology Kharagpur, India
2003–2009	Assistant Professor, School of Information Technology, Indian Institute of Technology Kharagpur, India
1999–2003	Computer Operation Manager, Computer & Informatics Centre, Indian Institute of Technology Kharagpur, India
1991–1999	Scientist, Indian Space Research Organization, Department of Space, Government of India

Research Interests

Geographic information system, Spatial web services, Spatial data analytics, Cloud computing

Publications (*Recent, Selected*)

- Nirnay Ghosh, Soumya K Ghosh, Sajal K Das, “SelCSP - A Framework to Facilitate Selection of Cloud Service Providers”, IEEE Transactions on Cloud Computing (TCC), vol. 3, no. 1, pp. 66-79, 2015
- Shrutilipi Bhattacharjee, Soumya K. Ghosh, “Performance evaluation of semantic kriging: a euclidean vector analysis approach”, IEEE Geoscience and Remote Sensing Letters (IEEE GRSL), vol. 12, no. 6, pp. 1185-1189, February 2015
- Soumya Maity, Soumya K Ghosh, “PoliCon: A policy conciliation framework for heterogeneous mobile ad hoc networks”, Wiley: Security and Communication Networks, vol. 8, no. 3, pp. 418-430, February 2015
- Partha Goswami, Soumya K. Ghosh, Debasish Datta, On methodologies to estimate optical-layer power consumption and cost for long-haul WDM networks with optical reach constraint. Photonic Network Communications, Springer, vol. 29, no. 1, pp. 12-31, February, 2015
- Nirnay Ghosh, Debangshu Chatterjee, Soumya K Ghosh, Sajal K Das, “Securing loosely-coupled collaboration in cloud environment through dynamic detection and removal of access conflicts”, IEEE Transactions on Cloud Computing (TCC), 2014, DOI: 10.1109/TCC.2014.2361527
- Pushpita Chatterjee, Uttam Ghosh, Indranil Sengupta, Soumya K Ghosh, “A trust enhanced secure clustering framework for wireless ad hoc networks, Wireless Networks”, Springer, vol. 20, no. 7, pp. 1669-1684, October 2014
- Arindam Chaudhuri, Soumya Maity, Soumya K Ghosh, “QOS prediction for network data traffic using hierarchical modified regularized least squares rough support vector regression”, 30th ACM Symposium On Applied Computing (ACM-SAC 2015), Salamanca, Spain, April 13-17, 2015
- Nirnay Ghosh, Ishan Chokshi, Mithun Sarkar, Soumya K Ghosh, Anil K Kaushik, Sajal K Das, “NetSecuritas - An Integrated Attack Graph-based Security Assessment Tool for Enterprise Networks”, 16th ACM SIGCOMM

International Conference on Distributed Computing and Networking (ICDCN 2015), pp. 1- 10, Goa, India, 4-7 January 2015

- Shrutilipi Bhattacharjee, Pabitra Mitra, and Soumya K Ghosh, “Spatial Interpolation to Predict Missing Attributes in GIS using Semantic Kriging”, IEEE Transactions on Geoscience and Remote Sensing, vol. 52, no. 8, pp. 4771-4780, August 2014
- Arkadeep Kundu, Soumya K Ghosh, “Game Theoretic Attack Response Framework for Enterprise Networks”, 10th International Conference on Distributed Computing and Internet Technologies (ICDCIT 2014), Springer LNCS 8337, 263--274, Bhubaneswar, India, February 5-9, 2014
- Soumya Maity and Soumya K Ghosh, Conflict Resolution in Heterogeneous Co-allied MANET: A Formal Approach, 15th International Conference on Distributed Computing and Networking (ICDCN-2014), Springer LNCS 8314, 332-346, Coimbatore, India, 4-7 January, 2014

Research Collaborations

- Prof. Sajal K Das, IEEE Fellow, Chair, Department of Computer Science, Daniel St. Clair Endowed Chair Professor at Missouri University of Science and Technology, Rolla, Missouri, USA
- Prof. Rajkumar Buyya, IEEE Fellow, Director, Cloud Computing and Distributed Systems (CLOUDS) Laboratory, Department of Computing and Information Systems, The University of Melbourne, Melbourne, USA

Synergistic Activities

- Invited Speaker, 2015, Indo-Tunisia Workshop on Geo-spatial Science and Technology, January 19-23, 2015, Bangalore, India
- Invited talk, 2013, Cloud Computing and Distributed Systems (CLOUDS) Laboratory, University of Melbourne, Australia, July 16, 2013
- Invited Talk, Advanced Wireless and Mobile Network Technologies, NIT Warangal, India, October 2013.
- Invited Talk, Center for Secure Information Systems, George Mason University, Arlington, USA, December, 2012 (Title: Risk-based Permission Authorization for Interoperations in Loosely-coupled Geospatial Cloud)
- Invited Talk, Department of Computer Science and Engineering, University of Texas, Arlington, USA, December, 2012 (Title: Securing Collaboration between Loosely-coupled Geospatial Clouds)
- Invited Talk, Department of Software & Information Systems, University of North Carolina, Charlotte, USA, May 2011 (Title: Geospatial Data Sharing and Integration)
- Invited Speaker, 2010, 10th National Spatial Data Infrastructure (NSDI-10) Workshop, December 23-24, 2010, New Delhi, India
- Invited Member, Technical Advisory Committee, State Spatial Data Infrastructure (SSDI), West Bengal, India

Institute Responsibilities, Professional Activities

- Head, Institute Information Cell, IIT Kharagpur
- Setting up of IIT Kharagpur Cloud Computing infrastructure (“Meghamala”)
- Member, IEEE, Member, ACM

Graduate Advising

- PhD Thesis (completed - 8nos)
 - T. Tuithung (IIT Kharagpur), Raj Kumar PV (IIT Kharagpur), Padmalochan Bera (IIT Kharagpur), Sobhana N.V. (IIT Kharagpur), Pushpita Chatterjee (IIT Kharagpur), Rashmi Ranjan Rout (IIT Kharagpur), Soumya Maity (IIT Kharagpur) , Nirnay Ghosh (IIT Kharagpur)
- MS/MTech Thesis (completed – 45nos)