**Prof. Gautam Barua**
Professor

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Joined the Institute in June 2016

## About

- Professor, Dept of Computer Science and Engineering
- Director IIIT Guwahati 01/6/2013 - April 2024
- B.Tech, M.Tech, IIT Bombay : 1976, 1978
- Ph.D, University of California, Santa Barbara, USA: 1981
- Faculty IIT Kanpur: 1982 - 1995
- Faculty IIT Guwahati: 1995 - 2016
- Director IIT Guwahati: 2003 - 2013

## Research Interests

1. Operating Systems
   - *File Systems*
   - *NVM Systems*
2. Networks
   - *Routing*
   - *Software Defined Networks*
   - *Internet Pricing*
3. Dabase Management Systems
   - *Concurrency Control*
   - *Memory DBMS Systems*

## Teaching (recent)

- Computer Organization
- Operating Systems
- Dabase Management Systems
- Internet Protocols

## Publication

### Conference

◉ Radhika Sukapuram, Ranjan Patowary, and Gautam Barua, "Loss-freedom, Order-preservation and No-buffering: Pick Any Two During Flow Migration in Network Functions", Proceedings, 2021 IEEE 29th International Conference on Network Protocols (ICNP) , (2021), pages. 1-11, Proceedings, 2021 IEEE 29th International Conference on Network Protocols (ICNP)

◉ Radhika Sukapuram, Ranjan Patowary, and Gautam Barua, "Loss-freedom, Order-preservation and No-buffering: Pick Any Two During Flow Migration in Network Functions", Proceedings, 2021 IEEE 29th International Conference on Network Protocols (ICNP) , (2021), pages. 1-11, Proceedings, 2021 IEEE 29th International Conference on Network Protocols (ICNP)

◉ Radhika Sukapuram and Gautam Barua, "PPCU: Proportional Per-packet Consistent Updates for Software Defined Networks", The IEEE International Conference on Network Protocols (ICNP16), November, (2016), Singapore.

◉ Radhika Sukapuram and Gautam Barua, "CCU: Algorithm for Concurrent Consistent Updates for a Software Defined Network", National Conference on Communications, NCC-2016, March, (2016),

◉ Rohit Tripathi and Gautam Barua, "Pricing with Bandwidth Guarantees for Clients with multi-ISP Connections", The 16th International Conference on Distributed Computing and Networking (ICDCN 2015), January 3-5, (2015), Goa.

◉ Radhika Sukapuram and Gautam Barua, "Enhanced Algorithms for Consistent Network Updates", IEEE Conference on Network Function Virtualization and Software Defined Networks, November 18-21, (2015), San Francisco, California.

◉ Lipika Deka and Gautam Barua, ""Consistent Online Backup in Transactional File Systems"", IEEE Transactions on Knowledge and Data Engineering,November,Volume 26, No.11, (2014), pages. 2676-2688.,

◉ Sharvanath Pathak and Gautam Barua, "A Lazy Commit Protocol for Mobile Transactions", Fourth IEEE International Advanced Conference on Computing (IACC 2014), February 2014, Gurgaon, India., (2014),

◉ Rohit Tripathi and Gautam Barua, "Dynamic Internet Pricing and Bandwidth Guarantees with Nash Equilibrium", APNOMS 2014, The 16th Asia-Pacific Network Operations and Management Symposium, September 17-19, (2014), National Chiao Tung University, Taiwan.

◉ Ravi Tandon and Gautam Barua, ""Recovery Protocols For Flash File Systems"", The 9th International Conference on Distributed Computing and Internet Technologies (ICDCIT 2013), February 2013, Bhubaneswar., (2013),

### Journal

◉ Radhika Sukapuram and Gautam Barua, "PPCU: Proportional Per-packet Consistent Updates for SDNs using Data Plane Time Stamps", Computer Networks,vol. 155, (2019), pages. 72-86, Elsevier

◉ Radhika Sukapuram and Gautam Barua,, "ProFlow: Proportional Per-Bidirectional-Flow Consistent Updates", IEEE Transactions on Network and Service Management,vol. 16, (2019), pages. 675-689,

◉ Chandan Kalita, Gautam Barua, Priya Sehgal, "DurableFS: a file system for NVRAM", CSI Transactions on ICT, CSIT, (2019), Computer Society of India

◉ Chandan Kalita, Gautam Barua, Priya Sehgal, "DurableFS: a file system for NVRAM", CSI Transactions on ICT, CSIT, (2019), Computer Society of India

◉ Rohit Tripathi and Gautam Barua, "Dynamic internet pricing with service level agreements for multihomed clients, Netnomics", September,Volume 17, Issue 2, (2016), pages. 121–156, Springer.

◉ Lipika Deka and Gautam Barua, "On-line Consistent Backup in Transactional File Systems,", First ACM Asia-Pacific Workshop on Systems (APSys2010), August 2010, New Delhi., (2015),

◉ Lipika Deka and Gautam Barua, "Implementation and Evaluation of Consistent Online Backup in Transactional File Systems", Computer Society of India Journal of Computing,Volume 2, No. 3, (2013),

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