

CURRENT

4th Year PhD student, University of Illinois, Urbana Champaign. Advisor: **Prof. Indranil Gupta**. CGPA: 3.73/4.0
Research interests: NoSQL Databases, Streaming and Graph Systems, Supercomputing, Actor Programming.

EDUCATION

07/2007-05/2009 *Masters in Computer Science & Engineering, Indian Institute of Technology, Kharagpur*
CGPA: 9.6/10

06/2003-05/2007 *Bachelors in Information Technology, Jadavpur University* CGPA: 9.11/10

WORK EXPERIENCE

05/2015 - 08/2015 **Microsoft Research, Bangalore**, Designation: *Research Intern*,
Fault Tolerance in Distributed Dataflow Systems. Implemented replication and checkpointing based fault recovery in a distributed dataflow system.

05/2013 - 08/2013 **IBM Research, Almaden**, Designation: *Graduate Research Trainee*,
Faster Hive queries by intelligent data placement on SSD, Ramdisk. Worked on Hadoop, Hive, Impala, SSD, Ramdisk, RCFfile.

06/2009 - 07/2012 **Adobe Systems Pvt Ltd**, Designation: *Computer Scientist*,
Developed in Adobe InDesign, Adobe Illustrator. Worked on PDF, Color Management, Transparency. Features included PDF Accessibility, Object Export Options, UI Architecture.

Teaching Assistant MOOC on Cloud Computing Concepts at Coursera (Spring 2015), Advanced Distributed Systems (Spring 2014 and 2015), Systems Programming (Fall 2012) at UIUC, Advanced Graph Theory (Fall 2008) and Software Engineering M.Tech Lab (Spring 2009) at CSE, IIT KGP

PUBLICATIONS

Journal

- Mainak Ghosh, Wenting Wang, Gopalakrishna Holla, Indranil Gupta, **Morphus: Supporting Online Reconfigurations in Sharded NoSQL Systems**, IEEE Transactions On Emerging Topics in Computing, Volume 4, Issue 0, DOI: 10.1109/TETC.2015.2498102, 2016.
- Mainak Ghosh, Anitha Varghese, Arobinda Gupta, Arzad A. Kherani, Skanda N. Muthaiah, **Detecting misbehaviors in VANET with integrated root-cause analysis**, Ad Hoc Networks, Volume 8, Issue 7, September 2010, Pages 778-790, ISSN 1570-8705, DOI: 10.1016/j.adhoc.2010.02.008.

Conference

- Mainak Ghosh, Indranil Gupta, Shalmoli Gupta, Nirman Kumar, **Fast Compaction Algorithms for NoSQL Databases**, Proc. IEEE International Conference on Distributed Computing Systems (ICDCS), 2015. (Acceptance Rate = 13%)
- Ala' Alkhalidi, Indranil Gupta, Vijayanth Raghavan, Mainak Ghosh, **Leveraging Metadata in NoSQL Storage Systems**, Proc. IEEE International Conference on Cloud Computing (CLOUD), 2015. (Acceptance Rate = 15%)
- Mainak Ghosh, Wenting Wang, Gopalakrishna Holla, Indranil Gupta, **Morphus: Supporting Online Reconfigurations in Sharded NoSQL Systems**, Proc. IEEE International Conference on Autonomic Computing (ICAC), 2015. (Acceptance Rate = 20%)
- Mainak Ghosh, Anitha Varghese, Arzad A. Kherani, and Arobinda Gupta. 2009. **Distributed misbehavior detection in VANETs**. In Proceedings of the 2009 IEEE conference on Wireless Communications & Networking Conference (WCNC'09). IEEE Press, Piscataway, NJ, USA, 2909-2914.

Short Paper/Poster

- Yosub Shin, Mainak Ghosh, Indranil Gupta, (**Parqua: Online Reconfigurations in Virtual Ring-Based NoSQL Systems**, Proc. IEEE International Conference on Cloud and Autonomic Computing (ICAC), 2015. (Acceptance Rate = 24%)
- Mainak Ghosh, Anitha Varghese, Arobinda Gupta, Arzad A. Kherani, and Skanda Muthaiah. 2009. **Misbehavior detection scheme with integrated root cause detection in VANET**. In Proceedings of the sixth ACM international workshop on Vehicular InterNetworking (VANET '09). ACM, New York, NY, USA, 123-124.

Thesis

- Master Thesis: Mainak Ghosh. **Misbehavior Detection in Vehicular Ad-Hoc Network (VANET)**, Department of Computer Science and Engineering, IIT Kharagpur, WB 721302, India, May 2009. Advisor: Prof. Arobinda Gupta

ACHIEVEMENTS

- Ranked 1st in M.Tech Programme, Indian Institute of Technology, Kharagpur (Silver Medal Awarded).
- Best M.Tech Thesis Awarded by Department of Computer Science and Engineering, IIT Kharagpur
- Ranked 5th in B.Tech by CGPA and 3rd by percentage in Department of Information Technology, Jadavpur University.
- Promoted to Member Technical Staff(MTS) II from MTS I within 6 months and Computer Scientist in 2 years (Adobe).

SOFTWARE KNOWLEDGE

- **Programming Languages:** C, C++, C#, Java, Python.
- **Known Codebases:** Cassandra, MongoDB, GraphLab, Druid.

Urbana, Illinois, USA
From India currently on F1 Visa
January 21, 2016