

# Nikhil Jain

## Professional Preparation

- 2009 **B.Tech., Computer Science & Engineering**, Indian Institute of Technology, Kanpur
- 2009 **M.Tech., Computer Science & Engineering**, Indian Institute of Technology, Kanpur
- 2016 **Ph.D., Computer Science**, University of Illinois at Urbana-Champaign

## Appointments

- 2016–present **Fernbach Postdoctoral Fellow**, Center for Applied Scientific Computing, LLNL
- 2011–2016 **Research Assistant**, Parallel Programming Laboratory, Ullinois
- Summer 2014 **Research Intern**, Center for Applied Scientific Computing, LLNL
- Summer 2012 **Research Intern**, Center for Applied Scientific Computing, LLNL
- Spring 2011 **Visiting Scholar**, Parallel Programming Laboratory, Ullinois
- 2009–2011 **Blue Scholar**, IBM Research, New Delhi
- Summer 2007 **Research Scholar**, Polytechnic Institute of NYU

## Awards

Fernbach Postdoctoral fellowship, 2016. IBM PhD fellowship, 2014. HPC Challenge Class 2, SC 2011. Andrew and Shana Laursen fellowship, 2011.

## Select Publications

- [1] **Nikhil Jain**, Abhinav Bhatele, Xiang Ni, Todd Gamblin, and Laxmikant V. Kale. Partitioning Low-diameter Networks to Eliminate Inter-job Interference. *IPDPS 2017*.
- [2] **Nikhil Jain**, Abhinav Bhatele, Sam White, Todd Gamblin, and Laxmikant Kale. Evaluating HPC Networks via Simulation of Parallel Workloads. *SC 2016*.
- [3] **Nikhil Jain**, Eric Bohm, Eric Mikida, Subhasish Mandal, Minjung Kim, Prateek Jindal, Qi Li, Sohrab Ismail-Beigi, Glenn J. Martyna, and Laxmikant V. Kale. OpenAtom: Scalable Ab-Initio Molecular Dynamics with Diverse Capability. *ISC HPC 2016*.
- [4] Abhinav Bhatele, **Nikhil Jain**, Yarden Livnat, Valerio Pascucci, and Peer-Timo Bremer. Analyzing Network Health and Congestion in Dragonfly-based Systems. *IPDPS 2016*.
- [5] **Nikhil Jain**, Abhinav Bhatele, Jae-Seung Yeom, Mark F. Adams, Francesco Miniati, Chao Mei, Laxmikant Kale. Charm++ & MPI: Combining the Best of Both Worlds. *IPDPS 2015*.
- [6] Ehsan Totoni, **Nikhil Jain**, Laxmikant Kale. Power Management of Extreme-scale Networks with On/Off Links in Runtime Systems. *TOPC 2014, Journal*.
- [7] **Nikhil Jain**, Abhinav Bhatele, Xiang Ni, Nicholas J. Wright, Laxmikant Kale. Maximizing Network Throughput on the Dragonfly Interconnect. *SC 2014*.
- [8] **Nikhil Jain**, Abhinav Bhatele, Michael Robson, Todd Gamblin, Laxmikant Kale. Predicting application performance using supervised learning on communication features. *SC 2013*.
- [9] Abhinav Bhatele, **Nikhil Jain**, William Gropp and Laxmikant Kale. Avoiding Hot-spots on Two-level Direct Networks. *SC 2011*.
- [10] **Nikhil Jain** and Yogish Sabharwal. Optimal Bucket Algorithms for large MPI Collectives on Torus Interconnect. *ICS 2010*.

## Synergistic Activities

Book Chapter	Programming Models for Parallel Computing
TPC	COMHPC '16, SCSC '16 '17
Other Reviewing	TPDS, IJHPCA, JPDC, Biophysical, IPDPS '14 '17, Cluster '12
Memberships	ACM, IEEE

**Graduate and Postdoctoral Advisors:** Todd Gamblin (LLNL), Abhinav Bhatele (LLNL), Laxmikant V. Kale (Uillinois)