Nikhil Jain

E-mail nikhil.jain@acm.org Web http://nikhil-jain.github.io/

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*, UIllinois
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*, UIllinois
2009–2011 **Blue Scholar**, *IBM Research*, New Delhi
Summer 2007 **Research Scholar**, *Polytechnic Institute of NYU*

Awards

NERSC Award for Innovative Use of HPC, 2017
IBM PhD fellowship, 2014
Andrew and Shana Laursen fellowship, 2011
Fernbach Postdoctoral fellowship, 2016
HPC Challenge Class 2, SC 2011

Research Interests

Parallel computing, High performance computing networks, Data Analytics for Performance, Applications of parallel computing, Runtime systems, Parallel programming paradigms, Collective operations on parallel systems

Representative Publications

[6] **Nikhil Jain**, Abhinav Bhatele, Louis Howell, David Bohme, Ian Karlin, Edgar Leon, Misbah Mubarak, Noah Wolfe, Todd Gamblin, and Matthew Leininger. Predicting the Performance Impact of Different Fat-tree Configurations. *SC 2017*.

[5] **Nikhil Jain**, Abhinav Bhatele, Xiang Ni, Todd Gamblin, and Laxmikant V. Kale. Partitioning Low-diameter Networks to Eliminate Inter-job Interference. *IPDPS 2017*.

[4] **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*.

[3] **Nikhil Jain**, Abhinav Bhatele, Xiang Ni, Nicholas J. Wright, Laxmikant Kale. Maximizing Network Throughput on the Dragonfly Interconnect. *SC 2014*.

[2] **Nikhil Jain**, Abhinav Bhatele, Michael Robson, Todd Gamblin, Laxmikant Kale. Predicting Application Performance using Supervised Learning on Communication Features. *SC 2013*.

[1] **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, Cluster '17, HPC Asia '18, IPDPS '18, PMBS '17, SC '18, SCSC '16 '17, Supercomputing Asia '18
Other Reviewing	TPDS, IJHPCA, JPDC, Biophysical, PACT '17, IPDPS '14 '17, Cluster '12
Memberships	ACM, IEEE

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