

Grey Ballard wins ACM Doctoral Dissertation Honorable Mention Award

Grey Ballard (8966) has won Honorable Mention for the 2013 Doctoral Dissertation Award presented by the Association for Computing Machinery (ACM). Grey is a 2014 Sandia Truman Fellow (<https://info.sandia.gov/newscenter/interactive/index.php/2013/08/truman-4/>).

He shares the award with Shayan Oveis Gharan of the University of California, Berkeley. They will share a \$10,000 prize, with financial sponsorship provided by Google Inc. Sanjam Garg, a Josef Raviv Memorial Postdoctoral Fellow at IBM T.J. Watson Research Center, won the Doctoral Dissertation Award for his dissertation, “Candidate Multilinear Maps,” which he completed at the University of California, Los Angeles.

Grey’s dissertation, “Avoiding Communication in Dense Linear Algebra,” explores fundamental computations within dense linear algebra, and whether significant improvement of the current algorithms for these computations is possible given the communication they require and their performance in practice. He received B.S. and M.A. degrees from Wake Forest University, and a Ph.D. degree from the University of California, Berkeley.

“I’m interested in improving fundamental computations — those used by a wide range of computational scientists — so that they return accurate solutions more quickly, allowing scientists to work more interactively with their data, solve larger problems, and increase the quality of their simulations,” he says. “I am especially excited about applying core ideas from my thesis work to problems important to Sandia; for example, we are currently improving the performance of algebraic multigrid within Trilinos by modeling and avoiding communication in the key underlying algorithms.”

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