

Samuel McCauley

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EDUCATION

STONY BROOK UNIVERSITY
Stony Brook, NY, USA
Ph.D. Computer Science
Advised by Prof. Michael Bender
Expected Graduation July 2016

TUFTS UNIVERSITY
Medford, MA, USA
B.S. Computer Science and Mathematics
Advised by Prof. Lenore Cowen
Graduated May 2010

RESEARCH EXPERIENCE

Chateaubriand Fellowship, ENS Lyon 2015-2016
Currently working with Professor Frédéric Vivien on scheduling malleable task graphs.

Research Assistant, City University of Hong Kong 2015
Worked with Professor Minming Li on online scheduling with calibrations.

Research Assistant, Stony Brook University 2011-2016
Worked with Professor Michael Bender on algorithms and data structures for external memory and scheduling algorithms.

NSF EAPSI Fellowship, National University Singapore 2014
Worked with Professor Seth Gilbert creating a data structure to efficiently deal with negative range queries for databases, and on applications to dynamic graph separators such as distance oracles and VLSI.

Graduate Student Intern, Sandia National Laboratories 2012-2014
Worked with Vitus Leung on implementing the scheduler component for the Structural Simulation Toolkit, including several experimental schedulers and allocators.

Research Assistant, Tufts University 2009
Worked with Professor Lenore Cowen and Professor Benjamin Hescott on discrete mathematics, particularly analyzing coin sets.

TEACHING EXPERIENCE

École Normale Supérieure:

ER01: Data Structures for Big Data Winter 2015
With Professors Martin Farach-Colton and Michael Bender

SUNY Old Westbury:

Computer Programming 1 Spring 2014

Stony Brook University Teaching Assistantships:

Graduate Algorithms (**TA of the year 2010**) Fall 2012, Fall 2010
Theory of Computation Summer 2011
Technical Writing Spring 2011

Tufts University Teaching Assistantships:

Discrete Mathematics Fall 2009, Spring 2010

PUBLICATIONS IN CONFERENCE PROCEEDINGS

SPAA	Cache-Adaptive Analysis M. A. Bender, E. D. Demaine, R. Ebrahimi, J. T. Fineman, R. Johnson, A. Lincoln, J. Lynch, and S. McCauley	2016
FUN	Resource Optimization for Program Committee Members: A Subreview Article M. A. Bender, S. McCauley, B. Simon, S. Singh, and F. Vivien.	2016
PODS	Anti-Persistence on Persistent Storage: History-Independent Sparse Arrays and Dictionaries M. A. Bender, J. Berry, R. Johnson, T. M. Kroger, S. McCauley, C. A. Phillips, B. Simon, S. Singh, and D. Zage	2016
LATIN	The I/O Complexity of Computing Prime Tables M. A. Bender, R. Chowdhury, A. Conway, M. Farach-Colton, P. Ganapathi, R. Johnson, S. McCauley, B. Simon, and S. Singh	2016
ITCS	Rational Proofs with Multiple Provers J. Chen, S. McCauley, and S. Singh	2016
ISAAC	Run Generation Revisited: What Goes Up May or May Not Come Down M. A. Bender, S. McCauley, A. McGregor, S. Singh, and H. Vu	2015
WAOA	Scheduling Parallel Jobs Online with Convex and Concave Parallelizability. R. Ebrahimi, S. McCauley, and B. Moseley	2015
IPDPS	Two-Level Main Memory Co-Design: Multi-Threaded Algorithmic Primitives, Analysis, and Simulation M. A. Bender, J. Berry, S. D. Hammond, K. S. Hemmert, S. McCauley, B. Moore, B. Moseley, C.A. Phillips, D. Resnick, and A. Rodrigues Selected as Best Paper	2015
COCOON	The Range 1 Query (R1Q) Problem M. A. Bender, R. Chowdhury, P. Ganapathi, S. McCauley, and Y. Tang	2014
SODA	Cache-Adaptive Algorithms M. A. Bender, R. Ebrahimi, J. T. Fineman, G. Ghasmiesfeh, R. Johnson, and S. McCauley	2014
SPAA	Efficient Scheduling to Minimize Calibrations M. A. Bender, D. P. Bunde, V. J. Leung, S. McCauley, and C. A. Phillips	2013
FUN	The Kissing Problem: How to End a Gathering When Everyone Kisses Everyone Else Goodbye M. A. Bender, R. Bose, R. Chowdhury, and S. McCauley	2012

JOURNAL PUBLICATIONS

TCS	The Range 1 Query (R1Q) Problem M. A. Bender, R. Chowdhury, P. Ganapathi, S. McCauley, and Y. Tang	2016
SUSCOM	Simulation and Optimization of HPC Job Allocation for Reducing Communication and Cooling Costs J. Meng, S. McCauley, F. Kaplan, V. Leung, and A. K. Coskun	2014
TOCS	The Kissing Problem: How to End a Gathering When Everyone Kisses Everyone Else Goodbye M. A. Bender, R. Bose, R. Chowdhury, and S. McCauley	2013