

Samuel McCauley

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EDUCATION

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

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

RESEARCH EXPERIENCE

Post Doc, IT University of Copenhagen <i>Currently working on scalable similarity search and locality-sensitive hashing.</i>	2016-2018
Chateaubriand Fellowship, École Normale Supérieure, Lyon <i>Worked with Professor Frédéric Vivien on scheduling malleable task graphs.</i>	2015-2016
Research Assistant, City University of Hong Kong <i>Worked with Professor Minming Li on online scheduling with calibrations.</i>	2015
Research Assistant, Stony Brook University <i>Worked with Professor Michael Bender on external memory and scheduling algorithms.</i>	2011-2016
NSF EAPSI Fellowship, National University Singapore <i>Worked with Professor Seth Gilbert on range queries and dynamic distance oracles and VLSI.</i>	2014
Graduate Student Intern, Sandia National Laboratories <i>Worked with Vitus Leung on the scheduler component for the Structural Simulation Toolkit.</i>	2012-2014
Research Assistant, Tufts University <i>Worked with Professors Lenore Cowen and Benjamin Hescott on discrete mathematics and coin sets.</i>	2009

TEACHING EXPERIENCE

IT University of Copenhagen:	
Algorithm Design Project	Spring 2017
Applied Algorithms	Fall 2016
École Normale Supérieure, Lyon:	
ER01: Data Structures for Big Data <i>With Professors Martin Farach-Colton and Michael Bender</i>	Winter 2015
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

APDCM	Minimizing I/Os in Out-of-Core Task Tree Scheduling L. Marchal, S. McCauley, B. Simon, and F. Vivien	2017
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

- JPDC **Two-Level Main Memory Co-Design: Multi-Threaded Algorithmic Primitives, Analysis, and Simulation** 2017
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
- TOCS **Scheduling Parallel Jobs Online with Convex and Concave Parallelizability** 2016
R. Ebrahimi, S. McCauley, and B. Moseley
- TCS **The Range 1 Query (R1Q) Problem** 2016
M. A. Bender, R. Chowdhury, P. Ganapathi, S. McCauley, and Y. Tang
- SUSCOM **Simulation and Optimization of HPC Job Allocation for Reducing Communication and Cooling Costs** 2014
J. Meng, S. McCauley, F. Kaplan, V. Leung, and A. K. Coskun
- TOCS **The Kissing Problem: How to End a Gathering When Everyone Kisses Everyone Else Goodbye** 2013
M. A. Bender, R. Bose, R. Chowdhury, and S. McCauley