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 University of Colorado, Boulder
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PROFESSIONAL PREPARATION

University of Wisconsin, Madison	Madison, WI	Computer Science	BS 2005
Toyota Technological Institute at Chicago	Chicago, IL	Computer Science	MS 2007
University of Chicago	Chicago, IL	Computer Science	PhD 2012
University of Maryland, College Park	College Park, MD	Computer Science	Postdoc 2015

APPOINTMENTS

University of Colorado, Boulder (Boulder, CO) Assistant Professor , Department of Computer Science	2015–present
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PUBLICATIONS

Five Publications Most Relevant to Proposed Work

1. Cyrus Omar, Ian Voysey, Michael Hilton, Jonathan Aldrich, Matthew A. Hammer. Hazelnut: A Bidirectionally Typed Structure Editor Calculus In *Proceedings of the Principles of Programming Languages (POPL)*, 2017.
2. Matthew A. Hammer, Bor-Yuh Evan Chang, David Van Horn A Vision for Online Verification-Validation. In *Proceedings of the International Conference on Generative Programming and Component Engineering (GPCE) 2016*
3. Matthew A. Hammer, Joshua Dunfield, Kyle Headley, Nicholas Labich, Jeffrey S. Foster and Michael Hicks. Incremental Computation with Names. In *Proceedings of the Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA)*, 2015.
4. Matthew A. Hammer, Yit Phang Khoo, Michael Hicks and Jeffrey S. Foster. Adapton: Composable, Demand-driven Incremental Computation In *Proceedings of the Programming Language Design and Implementation (PLDI)*, 2014.
5. Yan Chen, Joshua Dunfield, Matthew A. Hammer and Umut A. Acar. Implicit Self-Adjusting Computation for Purely Functional Programs. *Journal of Functional Programming (JFP)*, 2014.

Five Other Publications

1. Aseem Rastogi, Matthew A. Hammer and Michael Hicks. Wysteria: A Programming Language for Generic, Mixed-Mode Multiparty Computations In *Proceedings of the 35th IEEE Symposium on Security and Privacy (IEEE S&P)*, 2014.
2. Aseem Rastogi, Piotr Mardziel, Matthew A. Hammer and Michael Hicks. Knowledge Inference for Optimizing Secure Multi-party Computation. In *Proceedings of the Programming Languages and Analysis for Security (PLAS)*, 2013.
3. Matthew A. Hammer, Georg Neis, Yan Chen and Umut A. Acar. Self-Adjusting Stack Machines In *Proceedings of the Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA)*, 2011.
4. Matthew A. Hammer, Umut A. Acar and Yan Chen. CEAL: A C-Based Language for Self-Adjusting Computation. In *Proceedings of the Programming Language Design and Implementation (PLDI)*, 2009.
5. Matthew A. Hammer and Umut A. Acar. Memory Management for Self-Adjusting Computation. In *Proceedings of the International Symposium on Memory Management (ISMM)*, 2008.

SYNERGISTIC ACTIVITIES

1. Co-Developing VMF, a VM architecture and semantics for online verification-validation. Papers to appear in GPCE 2016, and under submission.
2. Co-Developing ADAPTON, a general framework for writing libraries and runtime systems for incremental computation. Papers appeared in PLDI 2014 and OOPSLA 2015.
3. Co-Developed WYSTERIA, a functional programming language for secure multi-party computation. Papers appeared in IEEE S&P 2014 and PLAS 2013.
4. Developed CEAL, a C-Based language for incremental computation. Papers appeared at OOPSLA 2011, PLDI 2009 and ISMM 2008.