

# Ian Wehrman

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## Summary

A software engineer with experience prototyping, designing, implementing and shipping features used by hundreds of thousands of users. A technical leader with experience orchestrating collaborations across organizations. Passionate about user experience. Deep expertise in JavaScript and the web platform.

## Experience

**Senior Research Engineer**, Adobe, Creative Technologies Lab, Jan 2014 – present

Technical lead for a team in the Digital Imaging organization focused on user experience. Responsible for the design, architecture and engineering of Photoshop CC features like [Search](#), [Design Space](#), [Generator](#) and others.

**Computer Scientist**, Adobe, Web Platform & Authoring Group, Mar 2013 – Jan 2014

Core architectural and feature work for [Brackets](#) and [Edge Code](#).

**Research Intern**, Adobe, Creative Technologies Lab, Nov 2012 – Feb 2013

Code hinting infrastructure and [JavaScript hinting implementation](#) for the Brackets text editor.

**Graduate Research Assistant**, University of Texas at Austin, 2006 – 2012

**Research Intern**, Microsoft Research Cambridge, Programming Principles Group, Jun – Sep 2009

Logical correctness reasoning for low-level synchronization primitives and fine-grained concurrent data structures on multiprocessor x86 computer systems.

**Research Intern**, Microsoft Research Cambridge, Programming Principles Group, Jun – Sep 2008

Algebraic models of concurrency.

**Research Intern**, Microsoft Research Redmond, Software Reliability Group, May – Aug 2007

Lightweight type annotations for automated C-program verification.

**Graduate Research Assistant**, Washington University in St. Louis, 2005 – 2006

Automated theorem proving with term-rewriting systems. Type theory.

**Co-Founder**, Labfire, Inc., 2001 – 2003

Web application development based on a purpose-built Java server framework.

## Education

**Ph.D. Computer Science**, The University of Texas at Austin, 2012

Dissertation: *Weak-Memory Local Reasoning*

**M.S. Computer Science**, Washington University in St. Louis, 2006

Thesis: *Knuth-Bendix Completion with Modern Termination Checking*

**B.S. Computer Science**, Webster University, 2004

## Patents

### Filed

Ian Wehrman, John Fitzgerald, Joel Brandt, Jesper Bache, David Tristram, Barkin Aygun. *Inter-Context Coordination to Facilitate Synchronized Presentation of Image Content*. 2015.

## Academic Publications

### Journals

C. A. R. Hoare, Bernhard Möller, Georg Struth, Ian Wehrman. *Concurrent Kleene Algebra and its Foundations*. *Journal of Logic and Algebraic Programming*: 80(6), Relations and Kleene Algebras in Computer Science, pp. 266-296, 2011.

Ian Wehrman, C. A. R. Hoare, Peter W. O’Hearn. *Graphical Models of Separation Logic*. *Information Processing Letters*: 109(17): pp. 1001-1004, 2009.

Ian Wehrman, David Kitchin, William R. Cook and Jayadev Misra. *A Timed Semantics of Orc*. *Theoretical Computer Science*: 402 (2-3), pp. 234-248, 2008.

### Conferences

C. A. R. Hoare, Bernhard Möller, Georg Struth, Ian Wehrman. *Concurrent Kleene Algebra*. 20th Intl Conference on Concurrency Theory: pp. 399-414, 2009.

C. A. R. Hoare, Bernhard Möller, Georg Struth, Ian Wehrman. *Foundations of Concurrent Kleene Algebra*. 11th Intl Conference on Relational Methods in Computer Science: pp. 166-186, 2009.

Sajeeva Pallemulle, Ian Wehrman and Kenneth Goldman. *Byzantine Fault Tolerant Execution of Long-Running Distributed Applications*. 18th IASTED Intl Conference on Parallel and Distributed Computing and Systems, 2006.

Ian Wehrman, Aaron Stump and Edwin Westbrook. *Slothrop: Knuth-Bendix Completion with a Modern Termination Checker*. 17th Intl Conference on Rewriting Techniques and Applications: pp. 287-296, 2006.

Edwin Westbrook, Aaron Stump and Ian Wehrman. *A Language-based Approach to Functionally Correct Imperative Programming*. 10th ACM SIGPLAN Intl Conference on Functional Programming: pp. 268-279, 2005.

### Book Chapters

C. A. R. Hoare, Ian Wehrman, Peter W. O’Hearn. *Graphical Models of Separation Logic*. In “Engineering Methods and Tools for Software Safety and Security.” IOS Press, 2009.

### Workshops

Ian Wehrman, Josh Berdine. *A Proposal for Weak-Memory Local Reasoning*. *Syntax and Semantics of Low-Level Languages*, 2011.

Ian Wehrman, David Kitchin, William R. Cook and Jayadev Misra. *A Timed Semantics of Orc (excerpt)*. 2nd Workshop on Event-Based Semantics, 2008.

Aaron Stump and Ian Wehrman. *Property Types: Semantic Programming for Java*. 13th Intl Workshop on Foundations and Developments of Object-Oriented Languages, 2006.

Ian Wehrman and Aaron Stump. *Mining Propositional Simplification Proofs for Small Validating Clauses*. 3rd Workshop on Pragmatics of Decision Procedures in Automated Reasoning. ENTCS, Volume 144, Issue 2, pp. 79-91, 2006.