Curriculum Vitae
Matthew Fluet

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Research Interests

Programming languages, including type systems, program semantics, and compiler technology

Education

- Cornell University   Ithaca, NY
  Ph.D. Computer Science   *August 2006*
    Thesis: Monadic and Substructural Type Systems for Region-based Memory Management
    Advisor: Greg Morrisett

- Harvey Mudd College   Claremont, CA
  B.S. Mathematics   *June 1999*
    Senior Thesis: Searching for Optimal Strategies in Knock 'm Down
    Advisor: Arthur Benjamin

Publications

Refereed Journal Publications

- Matthew Fluet and Greg Morrisett, Monadic Regions, *The Journal of Functional Programming*, ???(???):pages ???–???, ??? 2006.
  Accepted for publication.

- Matthew Fluet and Riccardo Pucella, Phantom Types and Subtyping, *The Journal of Functional Programming*, ???(???):pages ???–???, ??? 2006.
  Accepted for publication.

- Arthur T. Benjamin and Matthew T. Fluet, What's Best?, *The American Mathematical Monthly*, 107(6):pages 560–562, June-July 2000.

Refereed Conference and Workshop Publications

- Matthew Fluet, Greg Morrisett, and Amal Ahmed, Linear Regions Are All You Need, In *ESOP'06: Proceedings of the Fifteenth European Symposium on Programming*, pages 7–21. Springer-Verlag, March 2006.

Publications (continued)

- Amal Ahmed, Matthew Fluet, and Greg Morrisett, A Step-Indexed Model of Substructural State, In *ICFP'05: Proceedings of the Tenth ACM SIGPLAN International Conference on Functional Programming*, pages 78–91. ACM Press, September 2005.

- Matthew Fluet and Riccardo Pucella, Practical Datatype Specializations with Phantom Types and Recursion Schemes, In *ML'05: Proceedings of the ACM SIGPLAN Workshop on ML*, pages 203–228. Elsevier, September 2005.

- Greg Morrisett, Amal Ahmed, and Matthew Fluet, L^3: A Linear Language with Locations, In *TLCA'04: Proceedings of the Seventh International Conference on Typed Lambda Calculi and Applications*, pages 293–307. Springer-Verlag, April 2005.

- Matthew Fluet and Greg Morrisett, Monadic Regions, In *ICFP'04: Proceedings of the Ninth ACM SIGPLAN International Conference on Functional Programming*, pages 103–114. ACM Press, September 2004.

- Matthew Fluet, Monadic Regions, In *SPACE'04: Informal Proceedings of the Second ACM SIGPLAN Workshop on Semantics, Program Analysis, and Computing Environments for Memory Management.* January 2004.
  Lightly refereed (not considered a formal (citable) publication).

- Matthew Fluet and Dan Wang, Implementation and Performance Evaluation of a Safe Runtime System in Cyclone, In *SPACE'04: Informal Proceedings of the Second ACM SIGPLAN Workshop on Semantics, Program Analysis, and Computing Environments for Memory Management.* January 2004.
  Lightly refereed (not considered a formal (citable) publication).

- Matthew Fluet and Riccardo Pucella, Phantom Types and Subtyping, In *TCS'02: Proceedings of the Second IFIP International Conference on Theoretical Computer Science*, pages 442–460. Kluwer Academic Press, August 2002.

- Matthew Fluet and Stephen Weeks, Contification Using Dominators, In *ICFP'01: Proceedings of the Sixth ACM SIGPLAN International Conference on Functional Programming*, pages 2–13. ACM Press, September 2001.

Technical Reports and Unrefereed Publications

- Amal Ahmed, Matthew Fluet, and Greg Morrisett, A Step-Indexed Model of Substructural State, Technical Report TR-16-05, Harvard University, July 2005.

- Amal Ahmed, Matthew Fluet, and Greg Morrisett, L^3: A Linear Language with Locations, Technical Report TR-24-04, Harvard University, July 2004.

- Matthew Fluet, Monadic Regions: Formal Type Soundness and Correctness, Technical Report TR2004-1936, Cornell University, April 2004.

- Stuart Allen, Bob Constable, and Matthew Fluet, Expressing and Implementing the Computational Content Implicit in Smullyan's Account of Boolean Valuations, Technical Report TR2004-1933, Cornell University, March 2004.

Publications (continued)

- Matthew T. Fluet, *Searching for Optimal Strategies in Knock 'm Down (Senior Thesis)*, Mathematics, Harvey Mudd College, May 1999.

Employment

- Cornell University   Ithaca, NY
  Research Assistant and Teaching Assistant   *September 1999 – present*

- InterTrust STAR Lab   Santa Clara, CA
  Research Intern   *Summer 2001*
  Explored methods of specifying and using the semantics of machine instructions.
  Continued development of the native x86 backend for MLton.

- NEC Research Institute   Princeton, NJ
  Research Intern   *Summer 2000*
  Implemented a native x86 backend for MLton, a Standard ML compiler.

- Northwoods Software Corporation   Nashua, NH
  Summer Student   *Summer 1999*
  Designed and implemented automatic layout algorithms for undirected and directed graphs.

Teaching Experience

- Cornell University, Teaching Assistant   Ithaca, NY
  CSCI 486: Applied Logic (taught by Dr. Bob Constable and Dr. Christoph Kreitz) *Spring 2003*
  CSCI 611: Advanced Programming Languages (taught by Dr. Andrew Myers)   *Fall 2000*

- Harvey Mudd College, Grader/Tutor   Claremont, CA
  CSCI 80: Logic for Computer Science (taught by Dr. Josh Hodas)   *Spring 1999*
  CSCI 131: Programming Languages (taught by Dr. Josh Hodas)   *Spring 1999, Spring 1998*
  MATH 165: Numerical Analysis (taught by Dr. Lisette de Pillis)   *Fall 1998*

Professional Service

- Program committee: Workshop on ML, 2006

Fellowships

- National Science Foundation (NSF) Graduate Research Fellowship   *March 1999*

Honors and Awards

- The Chavin Prize (for an outstanding senior thesis in Mathematics) *May 1999*

References

- Greg Morrisett
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