J. Garrett Morris

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Academic Appointments

University of Kansas   *Lawrence, Kansas*
Assistant Professor   August 2017–present

Education and Professional Preparation

University of Edinburgh   *Edinburgh, Scotland*
Post-doctoral Research Associate   October 2013–July 2017

Portland State University   *Portland, Oregon*
Post-doctoral Research Associate   June 2013–September 2013

Portland State University   *Portland, Oregon*
Ph.D. in Computer Science.   June 2013
Dissertation: *Type Classes and Instance Chains: A Relational Approach*
Adviser: Mark P. Jones

Dartmouth College   *Hanover, New Hampshire*
A.B. with High Honors in Computer Science.   June 2005
Adviser: Doug McIlroy

Publications

Wen Kokke, J. Garrett Morris, Philip Wadler. Towards Races in Linear Logic. In *Coordination Models and Languages - 21st IFIP WG 6.1 International Conference*, volume 11533 of *Lecture Notes in Computer Science*, pages 37–53, Springer, 2019.

J. Garrett Morris, James McKinna. Abstracting Extensible Data Types; or, rows by any other name. In *Proc. ACM Prog. Lang.* 3, POPL (January 2019).

Simon Fowler, Sam Lindley, J. Garrett Morris, Sára Decova. Exceptional asynchronous session types: session types without tiers. In *Proc. ACM Prog. Lang.* 3, POPL (January 2019).

Jack Williams, J. Garrett Morris and Philip Wadler. The Root Cause of Blame: Contracts for Intersection and Union Types. In *Proc. ACM Prog. Lang.* 2, OOPSLA (October 2018).

J. Garrett Morris and Richard A. Eisenberg. Constrained Type Families. In *Proc. ACM Program. Lang.* 1, ICFP, Article 42 (August 2017), 28 pages.

Jack Williams, J. Garrett Morris, Philip Wadler, and Jakub Zalewski. Mixed Messages: Measuring Conformance and Non-Interference in Type Script. In *Proceedings of the 31st European Conference on Object-Oriented Programming*, ECOOP '17, Barcelona, Spain, 2017. Schloss Dagstuhl–Leibniz-Zentrum für Informatik.

J. Garrett Morris. The Best of Both Worlds: Linear Functional Programming without Compromise. In *Proceedings of 21st ACM SIGPLAN international conference on Functional Programing*, ICFP '16, Nara, Japan, 2016. ACM.

Sam Lindley and J. Garrett Morris. Talking Bananas: Structural Recursion for Session Types. In *Proceedings of 21st ACM SIGPLAN international conference on Functional Programing*, ICFP '16, Nara, Japan, 2016. ACM.

Sam Lindley and J. Garrett Morris. Embedding Session Types in Haskell. In *Proceedings of the 9th ACM SIGPLAN symposium on Haskell*, Haskell '16, Nara, Japan, 2016. ACM.

Robert Atkey, Sam Lindley, and J. Garrett Morris. Conflation Confers Concurrency. In *A List of Successes that can Change the World - Essays Dedicated to Philip Wadler on the Occasion of his 60th birthday*, volume 9600 of *Lecture Notes in Computer Science*, pages 32–55, Springer, 2016.

J. Garrett Morris. Variations on Variants. In *Proceedings of the 8th ACM SIGPLAN symposium on Haskell*, Haskell '15, Vancouver, British Columbia, 2015. ACM.

Sam Lindley and J. Garrett Morris. A Semantics for Propositions as Sessions. In *24th European Symposium on Programming*, ESOP '15, London, UK, 2015. Springer.

J. Garrett Morris. A Simple Semantics for Haskell Overloading. In *Proceedings of the 7th ACM SIGPLAN symposium on Haskell*, Haskell '14, Gothenburg, Sweden, 2014. ACM.

Sam Lindley and J. Garrett Morris. Sessions as Propositions. In *PLACES 14*.

J. Garrett Morris and Mark P. Jones. Instance chains: Type-class programming without overlapping instances. In *Proceedings of the 15th ACM SIGPLAN international conference on Functional programming*, ICFP '10, Baltimore, Maryland, 2010. ACM.

J. Garrett Morris. Experience report: Using Hackage to inform language design. In *Proceedings of the third ACM symposium on Haskell*, Haskell '10, Baltimore, Maryland, 2010. ACM.

Presentations

On Extensibility, at the University of Iowa Computer Science Colloquium, Iowa City, IA, 2018.

On Unsatisfiability, at the Midwest Programming Languages Summit, Madison, WI, 2018.

On Unsatisfiability, at the Haskell Implementers Workshop, Oxford, UK, 2017.

A Row By Any Other Name, at a meeting of IFIP Working Group 2.8, Edinburgh, UK, 2017.

Semantical Analysis of Type Classes, at the Workshop on Coalgebra, Horn Clause Logic Programming, and Types, Edinburgh, UK, 2016.

The Best of Both Worlds: Linear Functional Programming without Compromise, at a meeting of COST action CA15125 (EUTYPES), Lisbon, Portugal, 2016.

Embedding Session Types in Haskell, at a meeting of COST action IC1201 (Behavioral Types), Lisbon, Portugal, 2016.

The Best of Both Worlds: Linear Functional Programming without Compromise, at ICFP, Nara, Japan, 2016.

Talking Bananas: Structural Recursion for Session Types, at ICFP, Nara, Japan, 2016.

Substructural Types with Class, at the Workshop on Type Inference and Automated Proving, Dundee, UK, 2015.

Variations on Variants, at the Haskell Symposium, Vancouver, BC, 2015.

Lightweight Functional Session Types in Links, at the Workshop on Communication and Concurrency: Practicalities of Programming with Sessions, Glasgow, UK, 2015.

Propositions as Sessions, Semantically, invited talk at the University of Glasgow, Glasgow, UK, 2015.

A Simple Semantics for Haskell Overloading, at the Haskell Symposium, Vancouver, BC, 2014.

Recursive Session Types and Linear Logic, at a meeting of COST action IC1201 (Behavioral Types), Grenoble, France, 2014.

Instance Chains: Type-Class Programming without Overlapping Instances, at ICFP, Baltimore, MD, 2010.

Using Hackage to Inform Language Design, at the Haskell Symposium, Baltimore, MD, 2010.

Other Employment

Advanced Micro Devices	*Sunnyvale, California*
Co-op engineer	June 2010–September 2010
Raybeam Solutions, Inc.	*Boston, Massachusetts*
Independent contractor	December 2007–August 2008
Autonomy	*San Francisco, California*
Consultant	February 2007–November 2007
Aetion Technologies	*Columbus, Ohio*
Software Architect	August 2005–November 2006
Dartmouth College	*Hanover, New Hampshire*
Undergraduate Teaching Assistant	January 2002–June 2005

National and International Service

Program committee, 2019 Workshop on Type-driven Development, Berlin, Germany, 2019.

Program committee, 2019 European Symposium on Programming, Prague, Czech Republic, 2019.

Program committee, 30th Symposium on Implementation and Application of Functional Languages, Boston, MA, 2018.

Program committee and distinguished paper committee, 2018 ACM SIGPLAN International Conference on Functional Programming, St. Louis, MO, 2018

Program committee, 2017 Workshop on New Object-Oriented Languages, Vancouver, BC, 2017.

Program committee, 29th Symposium on Implementation and Application of Functional Languages, Bristol, UK, 2017.

Program committee, 2017 ACM SIGPLAN Symposium on Haskell. Oxford, UK, 2017.

Program committee, Workshop on Coalgebra, Horn-Clause Logic Programming, and Types, Edinburgh, UK, 2016.

Program committee, 2016 Workshop on New Object-Oriented Languages, Amsterdam, 2016.

Program committee, 2015 ACM SIGPLAN Symposium on Haskell. Vancouver, BC, 2015.

Organizer, Communication and Concurrency: Practicalities of Programming with Sessions (with Roly Perera, Dimitrios Kouzapas). Glasgow, 2015.

University and Departmental Service

Awards committee, KU Department of Electrical Engineering and Computer Science, 2017–present.

Supervision

PhD students

Andrei Elliot, University of Kansas, 2018–present.

Apoorv Ingle, University of Kansas, 2018–present.

Co-supervisor, Wen Kokke, (2016–2017), with P. Wadler (lead supervisor).

Co-supervisor, Jack Williams, (2015–2017), with P. Wadler (lead supervisor).

Co-supervisor, Jakub Zalewski, (2016–2017), with P. Wadler (lead supervisor).

MS students

Apoorv Ingle, University of Kansas, 2017–2018. Topic: "Resource Aware Functional Languages".

Jack Williams, MSc. Computer Science, University of Edinburgh, 2014. (Sole supervisor, before he undertook Ph.D. studies.) Topic: "Concurrent Data Structures in Linear Logic".