JUSTIN POMBRIO

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Research Interests Programming languages, with an emphasis on syntactic sugar. Teaching.

Education

Brown University, Providence, RI
PhD in Computer Science — *May 2018*
Masters in Computer Science — *May 2014*

Worcester Polytechnic Institute, Worcester, MA — *May 2011*
Bachelor of Science in Computer Science
Bachelor of Science in Mathematical Science

Publications

Resugaring: Lifting Languages through Syntactic Sugar (thesis) — *Brown 2018*
Preston Tunnell Wilson, Justin Pombrio, Shriram Krishnamurthi

*Inferring Type Rules for Syntactic Sugar — *PLDI 2018*
Justin Pombrio, Shriram Krishnamurthi

Can We Crowdsource Language Design? — *Onward! 2017*
Preston Tunnell Wilson, Justin Pombrio, Shriram Krishnamurthi

Teaching Programming Languages by Experimental and Adversarial Thinking — *SNAPL 2017*
Justin Pombrio, Shriram Krishnamurthi, Kathi Fisler

Inferring Scope through Syntactic Sugar — *ICFP 2017*
Justin Pombrio, Shriram Krishnamurthi, Mitchell Wand

Slimming Languages by Reducing Sugar: A Case for Semantics-Altering Transformations — *Onward! 2015*
Junsong Li, Justin Pombrio, Joe Gibbs Politz, Shriram Krishnamurthi

Hygienic Resugaring of Compositional Desugaring — *ICFP 2015*
Justin Pombrio, Shriram Krishnamurthi

Resugaring: Lifting Evaluation Sequences through Syntactic Sugar — *PLDI 2014*
Justin Pombrio, Shriram Krishnamurthi

A Tested Semantics forGetters, Setters, and Eval in JavaScript — *DLS 2012*
Joe Gibbs Politz, Matt Carroll, Benjamin S. Lerner, Justin Pombrio, Shriram Krishnamurthi

**Distinguished Artifact Award*

Experience

Graduate TA for PL Course, Brown — *Fall 2013, 2014, 2015, 2016*
I constructed the programming assignments for the course and automated their grading. These assignments are the majority of the students' coursework; there are no exams. We grade both code and test cases. Automatically grading test cases is an interesting challenge: ask me about it. I also developed a teaching approach for programming languages called Mystery Languages, and won a Presidential Award for Excellence in Teaching from Brown in 2018.

Kayak, Concord, MA — *June 2011 – June 2012*
Kayak is a travel search engine. My most significant contribution was to redesign the ad management framework used by Kayak's account managers.

Major Qualifying Project, WPI — *March 2010 – May 2011*
My research project involved verifying cryptographic protocols using geometric logic. (Unpublished.)

Chitika, Marlborough, MA — *May – Aug 2008*
Chitika is an internet advertising company. Among other things, I automated their click-fraud detection.

Conference Talks: PLDI'14, ICFP'15, Onward'15, NEPLS'15, ICFP'17, PLDI'18

Artifact Evaluation Committee Reviewer: PLDI'16

Co-Organizer of Racket Summer School 2017