# James Bornholt

**Education** 

**Contact** Computer Science and Engineering

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Box 352350

Seattle, WA 98195-2350

University of Washington

Seattle, WA, USA

PhD, Computer Science and Engineering

September 2014 – present

Advisors: Luis Ceze, Dan Grossman, and Emina Torlak

• Member of the programming languages and computer architecture groups

**Australian National University** 

Canberra, Australia

Bachelor of Philosophy with First Class Honours and the University Medal

January 2010 - December 2013

• Majors in Computer Science and Mathematics

• Thesis: *Abstractions and Techniques for Programming with Uncertain Data*, advised by Steve Blackburn

**Experience** University of Washington

Seattle, WA, USA

Graduate Student Researcher

September 2014 – present

Microsoft Research

Canberra, Australia

Software Engineer

January 2014 – September 2014

Microsoft Research

Microsoft Research

Redmond, WA, USA

Research Intern, Research in Software Engineering (RiSE) group

November 2012 – February 2013

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Redmond, WA, USA

Research Intern, Research in Software Engineering (RiSE) group

November 2011 – February 2012

Google Summer of Code

Jikes RVM Summer 2011

### **Publications**

## **Conference Papers**

A. Sampson, J. Bornholt, and L. Ceze. *Hardware-Software Co-Design: Not Just a Cliché*. In SNAPL 2015, Asilomar, CA, USA, May 2015.

J. Bornholt, T. Mytkowicz, and K.S. McKinley. *Uncertain* $\langle T \rangle$ : A First-Order Type for Uncertain Data. In ASPLOS 2014, Salt Lake City, UT, USA, March 2014. ACM SIGPLAN Research Highlight, November 2014. Selected for IEEE Micro's Top Picks from the Computer Architecture Conferences, 2015.

### **Workshop Papers**

J. Bornholt, N. Meng, T. Mytkowicz, and K.S. McKinley. *Programming the Internet of Uncertain*  $\langle T \rangle$  *hings.* In SCAW 2015, colocated with HPCA 2015, San Francisco, CA, USA, February 2015.

J. Bornholt, T. Mytkowicz, and K.S. McKinley. *There's Something About Bayes: Effective Probabilistic Programming for the Rest of Us.* In APPROX 2014, colocated with PLDI 2014, Edinburgh, UK, June 2014.

#### **Posters**

J. Bornholt. *Uncertain* $\langle T \rangle$ : A First-Order Type for Uncertain Data. In PLDI 2013, Seattle, WA, USA, July 2013. Winner, PLDI Student Research Competition, 2013. Second Place, ACM Student Research Competition Grand Final, 2014.

J. Bornholt, T. Mytkowicz, and K.S. McKinley. *The Model Is Not Enough: Understanding Energy Consumption in Mobile Devices*. In Hot Chips 24, Cupertino, CA, USA, August 2012.

# Teaching

# Tutor, University of Washington

January 2015 - present

• CSE 341 (Programming Languages)

### Service

### **Students Advised**

• Emily McAlister, B. Software Eng., ANU, 2014 (co-advised with Steve Blackburn and Kathryn McKinley) Thesis: The Relationship Between Software and Hardware Energy Consumption on Android Mobile Devices

### **Committee Membership**

• PLDI Artifact Evaluation Committee, 2015

### **External Reviews**

- CAV 2015
- ACM Transactions on Embedded Computing (TECS) 2015
- ASPLOS 2015

### **Awards**

- IEEE Micro Top Picks from the Computer Architecture Conferences, for Uncertain $\langle T \rangle$ , 2015
- ACM SIGPLAN Research Highlight, for Uncertain $\langle T \rangle$ , 2014
- David Notkin Endowed Graduate Fellowship, University of Washington, 2014–2015
- Second Place, ACM Student Research Competition Grand Finals (undergraduate category), 2014
- ANU University Medal for Computer Science, 2013
- Winner, ACM PLDI Student Research Competition (undergraduate category), 2013
- ANU Erin Brent Computer Science Prize, 2013
- ANU College of Engineering and Computer Science Dean's Prize, 2013
- ANU Boyapati Computer Science and Mathematics Prize, 2010, 2011 and 2012