Eric Walkingshaw

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Overview

Computer scientist, engineer, and leader applying deep knowledge from nearly 20 years in software development. Expert at programming language design and implementation, including compilers, type systems, and verification, but can tackle any problem. Track record of building high-quality software in both research and industry settings. Led a team that consistently delivered software on time and to spec over a 4.5-year project. Excellent writer. Experienced teacher, mentor, and public speaker. Ideal work uses my expertise and makes the world better.

Experience

Software Engineer, Savant Power 7/2021–11/2022

Developed smart/green energy software systems in Rust and Objective-C.
- Led design and implementation of scriptable simulated energy systems.
- Integrated Tesla Powerwall with the Savant Power host system.

Major contributor to Frame, a DSL based on Harel's statecharts.
- Led design and implementation of Rust code generator and runtime system.

Assistant Professor, Oregon State University 9/2014–6/2021

40+ academic publications in programming languages and software engineering.

Recruited, managed, mentored, and funded a strong, diverse research group.

Won $1.6M, 4.5-year grant to improve robustness of highly configurable systems.
- Led team of faculty, students, and staff working on the project.
- Designed and implemented the DSL that was our core technical contribution.
- Delivered software on-time that passed all evaluations.

Taught courses on PL theory, functional programming, and modularity.
- Designed curriculum; developed course materials, assignments, evaluations.
- Delivered multiple lectures per week to up to 200+ students.
- Earned consistently excellent course evaluations.

Organized, chaired, and obtained funding for events at international conferences.

Peer-reviewed and made publishing/funding recommendations for conferences, journals, and government agencies.

Founded and led a well-attended programming languages reading group.

Faculty advisor for the OSU Functional Programming Club.

Visiting Researcher, University of Marburg, Germany 7/2013–9/2014

Collaborated with an international team on programming languages research.

Organized and led weekly seminars on human factors of PL and modularity.

Other experience

Instructor, Oregon State University	1/2013–6/2013
Graduate Research Assistant, Oregon State University	9/2007–6/2013
Software Developer, Institute for Systems Biology, Seattle	10/2006–6/2007
Software Developer, Teranode, Seattle	1/2005–6/2006
Student Software Developer, Applied Physics Lab, UW	5/2003–12/2004

Education

Ph.D. Computer Science, 2013
Oregon State University

M.S. Computer Science, 2011
Oregon State University

B.S. Computer Science + minor Applied Math, 2006
University of Washington

B.A. English, 2006
University of Washington

A.A., 2002
Edmonds Community College

Skills and expertise

Software engineering

- Expert functional programmer.
- Produce clean, modular, tested, reusable code in any paradigm.
- Working knowledge of dozens of languages in every paradigm. Can learn any language fast.

Programming languages

- Design and implement DSLs, type systems, compilers, and associated infrastructure.
- Define and prove safety properties of programs/languages.
- Apply human-factors research to improve usability.

Communication

- Excellent writer.
- Experienced public speaker.
- Effective mentor and manager.
- Cross-disciplinary collaborator.

Languages and tools

- *Expert:* Rust, Haskell, Java, Git, LaTeX, Linux, XML, JSON.
- *Experienced:* C, Objective-C, Excel, relational DBs, SQL, MIPS asm, Ruby, Coq, SML.
- *Knowledgeable:* JS, Python, OCaml, Agda, much more…