

Curriculum Vitae

Eric Griffis

8760 Longden Ave.
San Gabriel, CA 91775

(626) 320-3098
egriffis@umich.edu

**Research
Interests** Programming Languages
Collaborative Software Systems

Education University of Michigan, Ann Arbor

Ph.D. Pre-Candidate, Computer Science and Engineering 2020-present
Advisor: Cyrus Omar

University of California, Los Angeles

M.S., Computer Science 2011–2015

Specialized in programming languages and software systems
Capstone: *Treep: an explicitly multi-phased programming language*
Advised by Todd Millstein

B.S., Mathematics of Computation 2008–2011

Publications

Eric Griffis, Paul Martin, and James Cheney. “Semantics and provenance for processing element composition in dispel workflows.” In *Proceedings of the 8th Workshop on Workflows in Support of Large-Scale Science*, pp. 38-47. ACM, 2013.

**Research
Experience** University of Edinburgh, School of Informatics

Research Fellow Summer 2014

- Designed a provenance tracking API based on a CCS-style formalism of Linda
- Implemented the API in Python for the dispel4py deployment platform
- Tested deployments to large heterogeneous clusters running Apache Storm and MPI

Research Fellow Summer 2013

- Produced formal syntax and operational semantics for Dispel, a data-intensive distributed programming language
- Implemented a prototype interpreter in Racket

University of California, Los Angeles

Graduate Student Researcher Fall 2012

- Modified the Lua runtime to prevent side effects
- Implemented and benchmarked an experimental dataflow programming language on top of it

Teaching Experience

University of California, Los Angeles

Teaching Assistant

Fall 2014

COM SCI 111: Operating System Principles

Teaching Assistant

Spring 2014

PIC 10A: Introduction to Programming

Teaching Assistant

Fall 2013

PIC 20A: Principles of Java with Applications

Professional Experience

Instructor | Co-founder

2016–2019

Creator Playground

San Marino, CA

- Coached children ages 8-12 to become confident creators and inventors
- Designed lessons and activities for getting started with advanced consumer technologies including robotics, virtual reality, 3-D printing, and photogrammetry
- Supervised field trips to local maker spaces, museums, and laboratories

Software Architect | Acting CTO

2015–2016

Advanced Robotics & Artificial Intelligence

Culver City, CA

- Developed the company's technical vision from seed to angel investment
- Led three software engineers and a child psychologist in ed-tech product R&D
- Built data processing pipelines for artificial intelligence and machine learning applications
- Built context-aware chat bot apps for Android mobile platform

Technology Director | Founder

2010–2015

EM Data Technology

Arcadia, CA

- Created scalable Web applications and data processing systems
- Managed Web and data processing services for small to medium sized businesses

Software Consultant

2008–2009

Jet Propulsion Laboratory

Pasadena, CA

- Built a Web portal for indexing data sets and derived works shared across geographically distributed teams
- Analyzed a Web media de-classification portal and reported on potential performance improvements

Lead Programmer

2005–2006

Hypermedia Systems

Los Angeles, CA

- Maintained billing system serving 5K+ transactions per second
 - Doubled throughput by improving search and sort performance
- Negotiated technical requirements and timelines for internal software products
- Delegated programming tasks to a small team of Perl developers

Linux Administrator | Tool Developer

FrontBridge Technologies

2003–2004

Marina Del Rey, CA

- Automated Linux deployments for a multi-national Web presence
- Built Web apps and back-end data services for sales and support teams

Linux Administrator | Web Developer | Co-founder

NetConcentric

2001–2002

Las Vegas, NV

- Created a high-volume Web hosting environment serving 8 million personal Web sites
- Built an in-browser Web page editor serving 10K+ concurrent users
- Purchased computer hardware and data center services

Unix Administrator

Overture

2000–2001

Pasadena, CA

- Developed UNIX monitoring and administration automation systems
- Administered security-oriented Linux clusters
- Managed backup tapes
- Advised co-workers on advance Linux usage

Web Support Lead

Earthlink Network

1997–1999

Pasadena, CA

- Delegated tasks to a small team of e-mail support specialists
- Automated distribution of incoming support e-mails based on message contents

**Invited
Talks**

“Algebraic Racket in Action.” RacketCon. Salt Lake City, Utah. July 2019.

“Dataflow network programming with Neuron.” RacketCon. St. Louis, Missouri. September 2018.

Talks

“Semantics and Provenance for Processing Element Composition in Dispel Workflows.” OSDC PIRE Video conference. September 2013.

“A platform for expressive and secure data sharing with untrusted third parties.” The SoCal Programming Languages and Systems Workshop, UCSD. San Diego, California. December 2011.

Reports

Eric Griffis, Jeffrey A. Vaughan, and Todd Millstein. *A platform for expressive and secure data sharing with untrusted third parties*. Technical Report 120017, University of California, Los Angeles, 2011.

Design and construction of scalable ad-hoc software overlay networks Winter 2015
UCLA COM SCI 239 project: Dynamic software overlay network visualizations.

pGrasp: A high-level distributed programming language Winter 2014

Distributed Graph-store Processing Spring 2013
UCLA COM SCI 246 project: Graph rewriting as a form of distributed computing.

Grasp: A fully pluggable term rewriting system Winter 2013
UCLA COM SCI 239 project: A multi-stage programming language.

The taming of the view Winter 2011
UCLA COM SCI 199 project: Leveraging Wadler's views mechanism for drop-in performance gains.

Open-source Software

Algebraic Racket – algebraic structures for untyped Racket
A Haskell-inspired Racket dialect for functional meta-programming

Neuron – decentralized software organisms
A distributed functional programming framework

Event-lang – synchronizable event programming
A DSL for synchronization-based concurrency

Cmx – a calculus of mediated exchange
A DSL for multi-party synchronous rendezvous

Community Service

K.L. Carver Elementary School PTA
San Marino, CA

Safety Chair 2015–2018

- Represented Carver PTA at school functions and district safety meetings
- Directed safety operations for parking and traffic management volunteers
- Organized Safe-Routes-to-School program with a team of parent volunteers
- Organized annual Bike Rodeo event with local police and fire departments

Carnival Construction Chair 2015–2017

- Oversaw setup and tear-down of temporary structures and heavy equipment for annual 1,000-person outdoor fundraising event
- Coordinated vendor and volunteer activity on the day of the event

Awards

Golden Nugget 2016
For outstanding contributions to the Carver community.

Mr. Carver 2015
For outstanding service and volunteerism to Carver School.