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# Eric Hennigan

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## Education

**Irvine, CA** **University of California, Irvine** **June 2008 – July 2013 (est.)**

- Ph.D. Student (Advanced to Candidacy) in Computer Science
- Awarded opportunity to act as Instructor of Record while still a graduate student
  (only 2 students have done this in my advisor's 13 years of service)
- ICS Dean's Fellowship for three years
- Advisor: Michael Franz, Secure Software and Languages Lab
  Committee: Athina Markopoulou, Ian Harris, Brian Demsky, Robert Newcomb

**Los Angeles, CA** **University of California, Los Angeles** **Sept. 2001 – July 2004**

- B.S. Physics, B.S. Applied Mathematics

## Research (Web Security)

- **Instruction Set Extension For Information Flow Security.** April 2012
  International Symposium on Code Generation and Optimization (CGO)
  ACM Student Research Competition, Poster
- **Information Flow in Web Browsers.** Presentation Dec. 2011
  SoCal Programming Languages and Systems Workshop
  Eric Hennigan, Christoph Kerschbaumer
- **Implementation Details of Dynamic Information Flow Security.** UCI Tech Report July 2011
  Eric Hennigan, Christoph Kerschbaumer, Stefan Brunthaler, Michael Franz
- **Tracking Information Flow for Dynamically Typed Programming Languages by Instruction Set Extension.** UCI Tech Report June 2011
  Eric Hennigan, Christoph Kerschbaumer, Stefan Brunthaler, Michael Franz
- **Bytecode-Based Security for JavaScript.** Poster Session and Lightning Talk Dec. 2010
  SoCal Programming Languages and Systems Workshop
  Eric Hennigan, Christoph Kerschbaumer
- **End-to-End Security: Information Flow in the AdHoc Dynamic Environment.** March 2009
  International Symposium on Code Generation and Optimization (CGO), Poster
  Fourteenth International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS), Poster
  Alexander Yermolovich, Eric Hennigan, Michael Franz

## Teaching Experience

**Irvine, CA** **University of California, Irvine** **Sept. 2009 – Present**

- **Concepts in Programming Languages I**, Instructor of Record Summer 2011
  Duties: Lecturing, Grading
  Overall Evaluation: Mean 8.00, Median 8.00, Std. Dev. 0.91
  Scale: 0=worst, 9=best; 35/38 surveyed
- **Introduction to Computer Science II**, Instructor of Record Winter 2011
  Duties: Lecturing, Grading, Management (3 TA's)
  Overall Evaluation: Mean 7.54, Median 8.00, Std. Dev. 1.34
  Scale: 0=worst, 9=best; 53/169 surveyed

## Teaching Experience

**Irvine, CA** — **University of California, Irvine** — **Sept. 2009 – Present**

- **Compilers and Interpreters I**, Teaching Assistant — Spring 2010
  Duties: Discussion Section, Concepts Review, Project Advice, Grading
  Overall Evaluation: Mean 8.14, Median 9.00, Std. Dev. 1.41
  Scale: 0=worst, 9=best; 30/147 surveyed
- **Internet and Public Policy**, Teaching Assistant — Winter 2009
  Duties: Discussion section, Materials Review, Grading
  Overall Evaluation: Mean 4.82, Median 5.00, Std. Dev. 3.01
  Scale: 0=worst, 9=best; 20/61 surveyed
- **Concepts in Programming Languages I**, Teaching Assistant — Fall 2009
  Overall Evaluation: Mean 8.14, Median 9.00, Std. Dev. 1.16
  Scale: 0=worst, 9=best; 39/127 surveyed

**Fullerton, CA** — **California State University, Fullerton** — **March 2012 – Present**

- **Introduction to Programming**, Instructor — Spring 2012
  Duties: Lecturing, Creating Laboratory Exercises & Quizzes, Grading
  Overall Evaluation: Course in progress.

## Employment

**Research Physicist** — **Physics and Computational Science** — **Dec 2004 – July 2005**
**China Lake Naval Air and Weapons Center**

- Implementation and application of numerical techniques to solving theoretical problems (Fortran 95)
- Finite element analysis and frequency domain analysis on metamaterials.
- Numerical simulation of materials with negative refraction index using Delauny triangular meshing

**Imagery Analyst** — **Weapons Engagement Office** — **July 2005 – July 2008**
**Software Developer** — **China Lake Naval Air and Weapons Center**

- Took the lead on custom software projects, balancing both time and resource constraints
- Developed software tools still in use
- Sole implementor of PSS-SOF Linux clone (30KLOC, C++): software targeting system used in Iraq to generate accurate GPS coordinates of targets during battle.
- Implementor of cross-platform tool for checking standards and formatting of images in the National Imagery Transmission Format. This program is still in use for maintaining a custom database of metadata from 4TB of imagery.

## Teaching Philosophy

- Provide knowledge with the context needed to understand it. Real world examples are best.
- Don't praise the person, praise the work/effort/process.
- Provide fast feedback appropriate to the knowledge level of the learner.
- Ask challenging questions within the student's ability to answer. Lead them through a Socratic dialog.
- Force the student to reflect: How they learned, the process, the result, and how it generalizes.
- Learning itself is a process/algorithm.
- We reinforce our learning through discussion, analysis, and evaluation of alternatives.
- Know what, how, and why we have abstractions. They save us time working, but not time learning.
- Education is about personal growth.
- Expertise is about putting in those 10,000 hours of deliberate practice.

## Selected Student Feedback

- I like that the lecture feels more like a discussion since dialogue occurs rather than a professor just talking the entire time. I also like the examples given in class because they are usually real world scenarios. Oh, and the class website was probably the best I have seen, which is really helpful when you have to read it almost every day for each project.
- His lectures became very engaging and clear. He really focuses on understanding the concepts and main ideas, which is great, rather than being picky about details. He is extremely approachable, super helpful, and dedicates a ton of time to making this course as great as he can.
- He obviously enjoys the material that we cover. Based on the occasional tangential remarks he makes in class and the things he discusses with students or the TA during our breaks – it is clear that he has an enthusiasm for the subject matter. Enthusiasm can be contagious.
- Realizes the students' weak points, and tries to strengthen them.
- Extremely helpful. Would take another course with this TA without thinking twice. Great at explaining stuff but leaving the major thinking to us.