

Bryan Chadwick

New York, NY

<http://bryanchadwick.com>
bryan@bryanchadwick.com

Education

Ph.D. in Computer Science, Northeastern University, January 2011

Concentration: Programming Languages & Software Eng.

Dissertation: Functional Adaptive Programming

Advisor: Karl Lieberherr

M.S. in Computer Science, Northeastern University, May 2005

Concentration: Programming Languages

B.S. in Computer Science, Massachusetts College of Liberal Arts, May 2002

Minors: Physics and Mathematics.

Professional Experience

Languages: Java, C#, C++, C, Scheme, OCaml/ML, JavaScript, Haskell, Scala, Python, Perl, PHP, SQL

Systems/Technologies: Linux, Android, Windows, NUnit, JUnit, MSTest, NAnt, MSBuild, T-SQL, MySQL, MVC, LINQ, NHibernate, Entity Framework, ADO.NET, Mercurial, TFS, Subversion

Senior Developer, Broadway Technology, New York, NY **07/2015 – Present**

Development and maintenance of internal and client systems from server-side components in Python and C++ to applications for foreign-exchange and fixed-income Trading/Dealing in C#.

Lead Software Eng, Thomson Reuters Elite, Boston, MA **12/2011 – 07/2015**

Lead Engineer on *Contact Networks* and *BD-Premier* products, using C#, MS SQL, JavaScript (Backbone/Marionette), and Web APIs in MS MVC 4. Responsible for implementing and optimizing multi-threaded synchronization processes from LDAP and MS Exchange, SQL-based import and background data processing, as well as Web API and front-end JavaScript development. Developed a signature extraction component for mining contact information from email-bodies using sequence-based machine-learning. Led the project's move to TFS 2012, Entity Framework 6, MSTest, and MSBuild using TFS automated builds/testing. Developed a custom extension for Visual Studio to support NUnit style test-cases within MSTest. In charge of builds, automation, integration/release, and company taxonomy management applications and tools.

Developer, Garfield Group Interactive, Newton, MA **7/2011 – 12/2011**

Front-end and back-end website implementation and maintenance for Java/JSP, PHP, and Silverstripe based sites/web-apps. Linux, Bash, MySQL, Tomcat, and Apache server configuration and maintenance.

Lecturer, Northeastern University, Boston, MA **9/2010 – 7/2011**

Responsible for lectures, running labs, managing the course website, creating assignments and exams, and managing grades in Northeastern's introductory undergraduate courses (Fundamentals of Computer Science 1 and 2), two courses per semester. Developed Java libraries to support the development of complex, visual, interactive games using Java Swing and Android Platforms.

Research Assistant, Northeastern University, Boston, MA **5/2008 – 9/2010**

Completed doctoral research on generic, polytypic, and adaptive object-oriented programming and tools. Peer reviewed conference and journal submissions/publications and assisted with Algorithms and Software Development courses. Developed DemeterF, a code, traversal, and parser generator for Java and C#, including traversal, multiple-dispatch, and HTTP libraries for Java, C#, and PLT Scheme/Racket. Ported the JavaCC parser generator to generate C# parsers.

Software Eng. Intern, Synopsys Inc., Marlborough, MA **6/2005 – 9/2007**

Worked on compiler implementation and analyses for hardware description languages (*e.g.*, Verilog/System Verilog). Developed optimizations in C and C++ focusing on activation-record elimination and basic-block fusion for hardware simulation/execution. Implemented a prototype multi-threaded event-based simulator for hardware simulation, also in C and C++.

Teaching Experience

Northeastern University, Boston, MA

Instructor	<i>Fundamentals of CS 1</i>	2008, 2010, 2011
Instructor	<i>Fundamentals of CS 2</i>	2011
Teaching Assistant	<i>Object-Oriented Design</i>	2005, 2006

Publications: Journal, Conference, and Workshop

B. Chadwick and K. Lieberherr. *A Functional Approach to Generic Programming using Adaptive Traversals*. In Higher-Order and Symbolic Computation, 2010 (Festschrift for Mitch Wand).

B. Chadwick and K. Lieberherr. *Algorithms for Traversal-Based Generic Programming*. In ICFP '10, WGP Workshop. ACM, 2010.

B. Chadwick and K. Lieberherr. *Weaving Generic Programming and Traversal Performance*. In AOSD '10. ACM, 2010.

B. Chadwick and K. Lieberherr. *A Type System for Functional Traversal-Based Aspects*. In AOSD '09, FOAL Workshop. ACM, 2009.