

# John Champaign

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## EDUCATION:

### **Doctor of Philosophy, Computer Science      University of Waterloo      2008-Present**

- Thesis: “Peer-Based Educational Tutoring Systems: A Corpus-Oriented Approach”
- Supervised by Robin Cohen
- Member of the Artificial Intelligence group
- 2<sup>nd</sup> stage exam completed April 21<sup>st</sup>, 2010
- Research focused on User Modeling and Intelligent Tutoring Systems
- Courses on Human-Computer Interaction (CS 889), Preference Elicitation (CS 886), Medical Image Processing (CS 870), and Bayesian Data Analysis (CS 886)
  
- Computer Science Graduate Student Association Treasurer (Sept 2009 to Present)
- Volunteered for activities such as Ontario Universities Fair, Fall Open House and new graduate student orientation.

### **Masters of Mathematics, Computer Science      University of Waterloo      2002-2004**

- Thesis: “An Empirical Study of Software Packaging Stability”
- Supervised by Andrew Malton
- Member of the Software Architecture Group (SWAG)
  
- Courses in Artificial Intelligence (CS 686), Component-Based Design (CS 854), Intelligent Computer Interfaces (CS 785), and Software Evolution (CS 846)

### **Bachelor’s of Science in Computer Science      Queen’s University      1995-2000**

- Honours degree
- Undergraduate thesis supervised by David Lamb
- TA for “Software Abstraction and Specification”

## PRESENTATIONS:

- Paper or poster presentations at each venue listed under publications
- Presentations for NSERC Strategic Research Network hSITE (Healthcare Support through Information Technology Enhancements): September 2009 (Toronto), June 2010 (Montreal) (poster)
- Presented results for feedback during Masters work at Consortium for Software Engineering Research (CSER) at the University of Victoria (2003).
- Lectured, based on Masters thesis, for two undergraduate classes that were discussing relevant material at the University of Waterloo.
- Various presentations in graduate level courses

## PUBLICATIONS:

- **John Champaign** and Robin Cohen, “Peer-Based Intelligent Tutoring Systems: A Corpus-Oriented Approach”, *In Proceedings of Intelligent Tutoring Systems (ITS) (Young Researchers Track)*, Pittsburgh, Pennsylvania, June, 2010 (3 pages)
- **John Champaign** and Robin Cohen, “An Annotations Approach to Peer Tutoring”, *In Proceedings of Educational Data Mining (EDM)*, Pittsburgh, Pennsylvania, June, 2010 (10 pages)
- **John Champaign** and Robin Cohen, “A Distillation Approach to Refining Learning Objects”, *In Proceedings of Educational Data Mining (EDM)*, Pittsburgh, Pennsylvania, June, 2010 (2 pages)
- **John Champaign**, “Peer-Based Intelligent Tutoring Systems: A Corpus-Oriented Approach”, *In Proceedings of Canadian Conference on AI (AI)*, Ottawa, Ontario, May, 2010 (4 pages) (**One of only 6 students chosen for full presentation at the Graduate Symposium**)
- **John Champaign** and Robin Cohen, “A Model for Content Sequencing in Intelligent Tutoring Systems Based on the Ecological Approach and Its Validation Through Simulated Students”, *In Proceedings of FLAIRS Conference (Intelligent Tutoring Track)*, Daytona Beech, Florida, May, 2010 (6 pages)
- **John Champaign** and Robin Cohen, “A Multiagent, Ecological Approach to Content Sequencing”, *In Proceedings of Multi-Agent Systems for Education and Interactive Entertainment (MASEIE) workshop at Ninth International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Toronto, Ontario, May, 2010 (6 pages)
- **John Champaign**, Andrew Malton and Xinyi Dong, “Stability and Volatility in the Linux Kernel”, *In Proceedings of IWPSE-03 International Workshop on Principles of Software Evolution*, Helsinki, Finland, June, 2003 (10 pages)
  
- Robin Cohen and **John Champaign**, “Towards peer-based learning to support medical assistance in homecare settings”, *Learning Technology Newsletter* 12(3), June, 2010 (in submission)

## AWARDS AND HONOURS:

Name of Award	Value (CDN\$)	Location	Period held (yyyy/mm - yyyy/mm)
OGSST	15,000	University of Waterloo	2008/05-2009/04
OGSST	15,000	University of Waterloo	2009/05-2010/04

## TEACHING EXPERIENCE:

Course	Term	Role	Description
University of Waterloo Software Engineering	Spring 10	Marking work reports	-Marked work reports for upper year undergraduate students, evaluating them based on their engineering approach to a work related topic and their ability to communicate in a written report

<b>Course</b>	<b>Term</b>	<b>Role</b>	<b>Description</b>
CS 492 (nominated for TA Award)	Winter 10	Teaching Assistant	-Assisted with development of course website -Moderated “role playing exercises” (mock debates) in one class per week throughout term -Marked essays, provided students with feedback and assisted with student evaluation -Lectured (open discussion) on piracy, open source software and copyright infringement
CS 115	Winter 10	Instructional Assistant	-Worked with first year students in a weekly lab environment to help them learn to program in Scheme -Assisted in proctoring and marking midterm and final exams
CS 115	Fall 09	Instructional Assistant	As above.
Unix Consulting	Spring 09	Consultant	-Helped students and faculty to use the computing resources and troubleshoot technical problems
CS 492	Winter 09	Teaching Assistant	As above.
Unix Consulting	Fall 08	Consultant	As above.
CS 135	Spring 08	Teaching Assistant	-Marked assignments and assisted in proctoring and marking final exam
University of Waterloo Software Engineering	Spring 03	Marking work reports	As above.
Unix Consulting	Spring 03	Consultant	As above.
CS 450	Winter 03	Teaching Assistant	-Marked assignments and assisted in proctoring and marking final exam
Unix Consulting	Fall 02	Consultant	As above.
Unix Consulting	Spring 02	Consultant	As above.

## PROFESSIONAL SERVICES:

- Member of the FLAIRS 2011 program committee (invited June 18<sup>th</sup>, 2010)
- Reviewer for ICIS 2010 (May, 2010)
- Reviewer for AAAI-2010 (February, 2010)
- Reviewer for UMAP-2009 (February, 2009)

## WORK EXPERIENCE:

**Founder                      John Champaign Software                      Toronto, ON                      2001-Present**

- Started my own software development company, creating educational software for autistic children (<http://champaign.no-ip.org> - more information and demonstration).
- The Java program, deployed in Windows, Linux, and Mac OS environments, communicates with a server, uses a Swing-based GUI and is highly configurable to the needs of different students.
- Operated company independently, managing business challenges such as sales and marketing, in addition to developing the technology.
- Consulted and worked closely with two licensed clinical psychologists to develop appropriate educational software for autistic children.
- Marketed software to teachers, school districts, psychologists, educational therapists, and psychology clinics.
- Presented concepts and software to psychologists at the Ann Martin Center, who were excited by the software and the innovation leading to it.

**Contract                      Telus                      Toronto, ON                      March 5-  
Developer                      August 6, 2007**

- Contracted as a Java developer, but due to client need, the focus shifted to contributing to a massive data clean up project
- Data clean up involved scripting database queries, producing and verifying cleanup scripts, collaborating with different parts of the Telus organization (Billing, Engineering, etc.) and reconciling their different views of the data
- Worked with MyEclipse, Weblogic and Oracle

**Contract Developer                      Paton Publishing                      Toronto, ON                      July 17-Sep. 1, 2006**

- Completed a short-term contract, converting the existing magazine website (<http://www.popmagazine.com>) to an EZ Publish based CMS
- As the sole technical employee, responsibilities included every element of the deployment, recommending and deploying software, building the site, helping Paton negotiate with vendors and their hosting company, and instructing non-technical staff on use of the final product
- After an extensive comparison of available Mailing-List Managers (MLM), recommended and integrated a MLM (<http://www.myemma.com>), which took into consideration Paton's unique needs

**Contract Developer                      Arbor Networks                      Toronto, ON                      June 7 – July 13, 2006**

- Completed a short-term contract, implementing a Django-based solution on time and on budget. (Due to a NDA, specific details about the project can not be released)
- Company was extremely satisfied with the final product

**JavaScript Integration**                      **Alan Majer (Grak.com)**                      **Toronto, ON**                      **March 30 – May 18, 2006**

- A short-term contract that integrated multiple JavaScript code bases into a single system. Repaired resulting bugs
- Extended system with new features for a start-up company

**Web Programmer**                      **St. Joseph Media**                      **Toronto, ON**                      **Feb. 6 – March 17, 2006**

- A 6-week contract that implemented the backend of a Django-based Content Management System (CMS) for <http://www.fashion18.com>
- Independently learned and implemented site using Django and Python
- Helped other employees solve Django and Python problems they were experiencing

**ESL Teacher**                      **Various Schools**                      **Taipei, Taiwan**                      **2004**

- Taught English as a second language to students in Taiwan
- Students ranged in age from grade 2 to high school

**Software Developer**                      **DesignMind**                      **San Francisco, CA**                      **2000-2001**

- Developed Java development skills and customer interaction skills
- Designed reports using Crystal Reports and Oracle
- Expanded their proprietary framework using J2EE, JSP, Java Beans, JDBC, and servlets

**Software Developer**                      **Moonlight Systems**                      **San Francisco, CA**                      **2000**

- Programming, design, and software analysis
- Developed Linux applications in Perl and MySQL
- Enhanced server management and mail transfer agent (MTA) projects

**Software Programming Intern**                      **Nortel Networks**                      **Ottawa, ON**                      **1999**

- Designed and implemented new barcode inventory updating system
- Supported software testing and technical support departments

#### **TECHNICAL EXPERTISE:**

**Languages**                      Java, Perl, HTML, JavaScript, CSS, Python, C/C++, PHP, Haskell, Scheme, Turing, Pascal, Basic

**Frameworks**                      Django, EZ Publish, J2EE, Java Media

**API's**                      Swing, Layout Management, Java Web Start, JSP, Java Networking

**Concepts**                      SQL, OOA/OOD (UML, Design Patterns, Refactoring), Obfuscation, Cross Platform development and deployment, Multithreading, Client/Server Architecture, Socket-based networking, HTTP Tunneling, regular expressions, AJAX, XML, Agile Software Development, Extreme Programming

**Operating Systems**                      Linux (Ubuntu, Debian, Fedora, Mandrake), Windows (95/98/2000/XP), Unix (Solaris, Mac OS X, AIX)

**Software**                      vi, CVS, SVN, Apache

**Databases**                      MySQL, PostgreSQL, DB2, Oracle