

## Brian S. Borowski

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- Objective:** To obtain a challenging position in the technology sector that enables me to apply my diverse skill set while working in a team of engineers dedicated to the success of the project.
- Education:**
- Stevens Institute of Technology**, Hoboken, NJ  
Doctor of Philosophy in Computer Science, June 2010 GPA 4.0/4.0  
Dissertation: *Application of Channel Estimation to Underwater Acoustic Communication*  
Advisor: Dan Duchamp  
Graduate Certificate in Distributed Systems, January 2008  
Graduate Certificate in Computer Systems, May 2007
- Stevens Institute of Technology**, Hoboken, NJ  
Master of Science in Computer Science, May 2004 GPA 4.0/4.0  
Graduate Certificate in Database Systems, May 2004
- Seton Hall University**, South Orange, NJ  
Bachelor of Science in Computer Science, May 2001 GPA 4.0/4.0  
Minor: Mathematics
- Publications:**
- Brian Borowski and Dan Duchamp, *Short Paper: The Software Modem – A Software Modem for Underwater Acoustic Communication*, in Proceedings of the ACM International Workshop on Underwater Networks (WUWNet'09), November 2009, Berkeley, California.
- Brian Borowski, *Characterization of a Very Shallow Water Acoustic Communication Channel*, in Proceedings of MTS/IEEE OCEANS 2009, October 2009, Biloxi, Mississippi.
- Brian Borowski, Alexander Sutin, Heui-Seol Roh, and Barry Bunin, *Passive Acoustic Threat Detection in Estuarine Environments*, in Proceedings of SPIE Vol. 6945, March 2008, Orlando, Florida.
- Brian Borowski, Heui-Seol Roh, Barry Bunin, and Alexander Sutin, *Estimation of Passive Acoustic Threat Detection Distances in Estuarine Environments*, in Proceedings of the 153<sup>rd</sup> Meeting of the Acoustical Society of America, June 2007, Salt Lake City, Utah.  
(Placed second in the *Best Student Paper* competition of the Engineering Acoustics section)
- Presentations:**
- The Software Modem – A Software Modem for Underwater Acoustic Communication*, ACM International Workshop on Underwater Networks (WUWNet'09), November 3, 2009, Berkeley, California.
- Characterization of a Very Shallow Water Acoustic Communication Channel*, MTS/IEEE OCEANS 2009, October 29, 2009, Biloxi, Mississippi.
- Characterization of a Very Shallow Water Acoustic Communication Channel*, Maritime Security Laboratory at Stevens Institute of Technology, October 5, 2009, Hoboken, NJ. (End-of-year review presentation given to ONR sponsor)
- Elements of Channel Characterization*, Maritime Security Laboratory at Stevens Institute of Technology, January 6, 2009, Hoboken, NJ.
- A Software-Based Approach to Communication in Underwater Acoustic Sensor Networks*, Stevens Institute of Technology, November 24, 2008, Hoboken, NJ. (Presentation used at thesis proposal defense)
- Passive Acoustic Threat Detection in Estuarine Environments*, Stevens Institute of Technology, March 28, 2008, Hoboken, NJ. (Presentation used at oral qualifying examination)
- Estimation of Passive Acoustic Threat Detection Distances in Estuarine Environments*, 153<sup>rd</sup> Meeting of the Acoustical Society of America, June 5, 2007, Salt Lake City, Utah.
- Honors:**
- Stanley Fellowship, September 2009 – May 2010 (tuition, fees, and stipend)  
Competitively awarded across all fields at Stevens Institute of Technology; total of 8 awards granted
- Stanley Fellowship, September 2008 – May 2009 (tuition, fees, and stipend)  
Competitively awarded across all fields at Stevens Institute of Technology; total of 10 awards granted
- Upsilon Pi Epsilon – the Honor Society in Computing and Information Disciplines, December 2006
- Technogenesis Fellowship, September 2005
- Outstanding Computer Science Teaching Assistant, May 2004

First in Class, Summa Cum Laude, and Computer Science Departmental Honors Citation, May 2001  
Pi Mu Epsilon – the Honorary National Mathematics Society, May 2000  
Seton Hall Provost Scholarship (4-year, full tuition), September 1997

**Certification:** Sun Certified Programmer for the Java 2 Platform, May 2002

**Skills:** **Programming Languages:** Java, C++, C, Visual Basic, MATLAB, PHP, Perl, Scheme, Bash, and SQL  
**Operating Systems:** Microsoft Windows 3.1 – Vista, and Ubuntu Linux  
**Databases:** MySQL, SQL Server, and Access  
**Web Technologies:** HTML/XHTML, CSS, JavaScript, JSP, ASP, XML, XSLT, and XSL-FO  
**Design Technologies:** UML, Rational Rose, and ER diagrams  
**Version Control:** Rational ClearCase/ClearQuest and MKS Source Integrity  
**Software:** IIS, Microsoft Office, Dreamweaver, Corel Paint Shop Pro, WinRunner, Apache Tomcat, and Apache FOP  
**Hardware:** Proficient at building, upgrading, and troubleshooting Intel and AMD-based PCs

**Experience:** **Thomson Reuters**, New York, NY 07/10 – Present  
Technical Specialist

- Research and implement algorithms for natural language processing

**Stevens Institute of Technology**, Hoboken, NJ

Research Assistant 08/05 – 06/10

- Extended OMNeT++ with an underwater channel model implemented in MATLAB and exported as a shared library
- Designed and implemented a configurable acoustic software modem in Java/C that integrates with the sockets interface for easy deployment of network applications
- Characterized the Hudson River estuary as a communications channel by generating the scattering function and all derived views
- Built PC104-based computers for use in an underwater sensor network
- Researched diver detection using passive sonar

Teaching Assistant

01/03 – 05/04; 08/07 – 12/07

- Created syllabus, chose required textbook and supplementary materials, and devised and graded assignments for a new course in concurrent programming in conjunction with my adviser (Fall 2007)
- Taught object-oriented software design and programming techniques (Spring 2003), introduction to computer science (Fall 2003), and data structures and algorithms (Spring 2004) under the guidance of the professor
- Led recitation sessions, held office hours, and devised and graded assignments

**Cargo Manager Systems**, Union, NJ

Web Developer Consultant

10/07 – 10/08

- Enhanced n-tier web applications (JSP/XHTML – Java beans – JDBC) that manage imports, exports, transportation, and warehousing for the supply chain industry
- Modified functionality of a web application that performs government filing of import shipments

**Syncsort Incorporated**, Woodcliff Lake, NJ

Associate Software Engineer

06/04 – 08/05

- Enhanced DMExpress, an application for sorting, aggregating, copying, joining, and merging extremely large quantities of data
- Utilized MFC to add new front-end features
- Developed back-end infrastructure in standard C++ to run DMExpress tasks in parallel
- Wrote and executed WinRunner scripts to ensure program stability
- Created Perl and Bash scripts to facilitate source code management procedures

**KPMG LLP**, Montvale, NJ

Programmer Analyst

10/02 – 12/02

- Debugged, maintained, and enhanced KPMG/Link Enterprise, an application that manages expatriate employees and related tax issues
- Performed and tested software builds

**Prudential Financial**, Iselin, NJ

Web/Application Developer

07/01 – 07/02

- Worked in a team to develop an award-winning application for content management and desktop publishing using ASP 3.0
- Developed a Visual Basic tool that tests the business logic of asset allocation software written in XML
- Designed and coded an ASP 3.0 user interface for Asset Allocation Online, a web application that enables a client to perform his or her own asset allocation by answering questions over the Internet
- Redesigned a series of web pages that contains the monthly performance review and daily unit values of variable life insurance products

**ADP**, Roseland, NJ  
Web Developer Co-op

06/00 – 08/00

- Created an intranet site for the PCPI - Internet Payroll for the PC - department to keep all team members aware of their project's status
- Devised a JSP application that dynamically creates links to files within specific directories so that information can easily be added to the site without maintenance

**Seton Hall University**, South Orange, NJ  
Software Developer

05/00 – 07/00; 05/99 – 07/99

- Provided new software for professors seeking teaching tools
- Proposed, designed, and developed a sorting algorithms demo in Java for use in the CDI - Curriculum Development Initiative - project
- Designed and developed a truth table constructor in Java for use in the CDI project

**Other Experience:** **Saint Bonaventure Church**, Paterson, NJ  
Organist/Pianist/Cantor/Director of Music

11/91 – Present

**Seton Hall University**, South Orange, NJ  
Assistant Organist/Cantor

09/97 – 05/01

**Memberships:** ACM, IEEE, ASA

**Interests:** Music, high fidelity stereo components, auto detailing

U.S. Citizen