

Bartley D. Richardson
Ph.D. Student
Department of Electrical & Computer Engineering and Computer Science
University of Cincinnati
Cincinnati, OH 45221-0030

voice: 513-312-5990
fax: 513-556-7326
email: richarb@ececs.uc.edu

2. Education

Current	Ph.D.	Computer Science and Engineering	University of Cincinnati, Cincinnati, OH
06/2003	B.S.	Computer Engineering	University of Cincinnati, Cincinnati, OH

3. Employment

07/03 - current	<i>NSF Graduate Fellow</i> , University of Cincinnati; responsible for creating authentic, inquiry-based lessons for GK-12 classrooms as part of Project STEP (Science and Technology Enhancement Program); experience teaching in urban schools (Cincinnati Public) at 9 th , 10 th , 11 th , and 12 th grade levels; teaching focus in physical science, biology, advanced physics, mathematics, and forensics.
07/02 - 07/03	<i>Graduate Assistant</i> , Department of Civil & Environmental Engineering, University of Cincinnati; responsible for all technology support for Fellows and faculty working on Project STEP (Science and Technology Enhancement Program) including website design and development, creating custom software required by the grant, providing technical recommendations to Fellows and faculty, and purchasing and maintaining equipment needed to support the grant.
04/02 - 09/02	<i>IMLP Co-op</i> , GE Aircraft Engines, Cincinnati, OH; responsible for designing and creating Java code to enhance/fix the eDistrib application, documenting testing requirements for updated functionality, and maintaining database changes necessary for new code to function properly; gained insight into corporate business practices; involved in technology and community service committees.
08/00 - 12/01	<i>Software Engineer</i> , Rockwell Automation Entek, Milford, OH; responsible for designing and composing testing plans for primary software products, implementing test plans on multiple products, and presenting ideas to groups of engineers.
03/00 - 05/00	<i>Software Engineer</i> , VarisCorp, Mason, OH; responsible for designing high-speed variable print software for Océ and Xeikon engines, rewriting PIC micro-controller code for use with FLASH memory, documenting parameters and functions of new code, and testing new code on HPO and HPO3 controllers.

4. Primary Teaching Interests

Introductory computing, computer science, artificial intelligence, database systems, analysis of algorithms, data structures, algebra, calculus, physics.

5. Research Interests

XML query processing and optimization, schema evolution, the Semantic Web, data scrubbing, loosely-structured data.

6. Publications

Refereed Conference Proceedings

1. Richardson, B. and Mazlack, L., "Approximate Ontology Merging for the Semantic Web," *Proceedings of the 23rd International Conference of the North American Fuzzy Information Processing Society (NAFIPS)*, Banff, Canada, June 2004, pp. 641-646.
2. Daniel, M., Richardson, B., and Davis, K., "Introducing Engineering into Match and Science Secondary Education Classes." *2005 Frontiers in Education Conference*, Indianapolis, IN, October 2005, work in progress.
3. Richardson, B. and Mazlack, L., "Approximate Autonomous Semantic Web Ontology Merging," *Proceedings of the 2005 FUZZ-IEEE Conference*, Reno, Nevada, May 22-25 2005, to appear.

7. Teaching-related Activities

Secondary Education

My involvement as a NSF Graduate Fellow with Project STEP has offered me the chance to be actively involved in curriculum development and instruction at the high school level. I have completed standard coursework in instructional planning and curriculum development along with a field practicum. Below is a summary of courses taught at Hughes High School (part of Cincinnati Public Schools) in conjunction with my work on Project STEP.

<i>Year</i>	<i>School</i>	<i>Grade</i>	<i>Course</i>	<i>Students</i>
2003-04	UC	Fresh	Computer Science I	60
2003-04	UC	Fresh	Intro to ECECS	60
2004-05	Hughes (CPS)	9 th	Physical Science	30
2004-05	Hughes (CPS)	10 th	Geometry	25
2004-05	Hughes (CPS)	11 th	Mechanical Physics	23
2004-05	Hughes (CPS)	11 th	Particle Physics	23
2004-05	Hughes (CPS)	11 th	Biophysics	30
2004-05	Hughes (CPS)	11 th	Forensics	30
2004-05	Hughes (CPS)	12 th	Mechanical Physics	13
2004-05	Hughes (CPS)	12 th	Particle Physics	13
2004-05	Hughes (CPS)	12 th	Biophysics	25

2004-05	Hughes (CPS)	12 th	Forensics	25
2005-06	West High (CPS)	9 th	Algebra I	125

8. Activities

1. Member, Institute of Electrical and Electronics Engineers (IEEE)
2. Member, Association for Computing Machinery (ACM)
3. Member, University Honors Association
4. Member, Golden Key National Honor Society

9. Related Skills

1. Languages: C++, C, C#, Java, VisualBasic, FRIL, and assembly
2. Scripting: HTML, XML, PHP, and CGI
3. Databases: Oracle, SQL Server, and database management
4. Operating Systems: Microsoft Windows, Macintosh OS, UNIX, and Linux
5. Applications: Microsoft Office, Adobe Suite, Mathematica, and Matlab

10. Graduate Level Coursework

1. Advanced Algorithms
2. Advanced Data Models and Query Optimization
3. Advanced Database Systems
4. Artificial Intelligence I
5. Computer Arithmetic
6. Data Mining
7. Database Theory
8. Machine Learning
9. High Performance Parallel and Distributed Computing

11. References

References are available upon request.