Heather Piwowar

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Research Passions

Improving biomedical research progress by leveraging the full value of data resources.
Current focus: evaluating data sharing and reuse policies and behaviours
Related interests: natural language processing, machine learning, data mining, bibliometrics, simulation, genomics, personalized cancer therapy, open science.

Education

University of Pittsburgh **Pittsburgh, PA**
Doctoral candidate anticipating graduation in 2010
Masters of Science in 2006
Department of Biomedical Informatics, concentration in Bioinformatics, GPA 3.9/4.0

Massachusetts Institute of Technology **Cambridge, MA**
Bachelors of Science in 1995, Masters of Engineering in 1996
Majored in Electrical Engineering and Computer Science, GPA 4.9/5.0
Concentration in Digital Signal Processing (DSP)
Humanities and mathematics each comprised 20% of curriculum

Research History & Accomplishments

Journal articles

Piwowar, Becich, Bilofsky, Crowley (2008) Towards a data sharing culture: Incentives for Leadership from Academic Health Centers PLoS Med 5(9): e183. doi:10.1371/journal.pmed.0050183

Piwowar, Day, Fridsma (2007) Sharing Detailed Research Data Is Associated with Increased Citation Rate PLoS ONE 2: 3. e308 doi:10.1371/journal.pone.0000308

Conference papers

Piwowar, Chapman (2009) Public sharing of research datasets: a pilot study of associations. In: Symposium on Informetrics and Scientometrics ASIS&T and ISSI Pre-conference.

Piwowar, Chapman (2008) Linking database submissions to primary citations with PubMed Central In: BioLINK 2008.

Piwowar, Chapman (2008) Identifying Data Sharing in Biomedical Literature In: AMIA 2008 Annual Symposium.

Piwowar (2008) Prevalence and Patterns of Biomedical Research Data Reuse In: JCDL 2008 Doctoral Consortium.

Piwowar, Chapman (2008) A review of journal policies for sharing research data In: ELPUB 2008.

Harkema, Piwowar, Amizadeh, Dowling, Ferraro, Haug, Chapman. (2008) A Baseline System for the i2b2 Obesity Challenge, In: i2b2 2008 Workshop.

Posters

Piwowar, Chapman (2008) Envisioning a Biomedical Data Reuse Registry AMIA 2008

Piwowar, Chapman (2008) Prevalence and Patterns of Microarray Data Sharing PSB 2008

Piwowar, Fridsma (2007) Examining the uses of shared data ISMB 2007

Invited Presentations

(2009) Award winning student papers. ASIS&T, Vancouver
(2009) Data sharing: Pilot study of associations. DBMI Colloquium, University of Pittsburgh
(2009) Measuring the Adoption of Open Science. PSB Open Science Workshop, Hawaii
(2009) Intro to Test Driven Development. DBMI Computer Users Group, U of Pittsburgh
(2008) Why study Data Sharing? (+ why share your data) DBMI Colloquium, University of Pittsburgh
(2007) Sharing Detailed Research Data is Associated with Increased Citation Rate NLM Trainee Conference, Stanford University

Recent Awards & Grants

(2009) Thomson Reuters Doctoral Dissertation Proposal Scholarship
(2009) Best Trainee Poster Award, Department of Biomedical Informatics, University of Pittsburgh
(2009) Doctoral proposal accepted
(2008) Best Trainee Poster Award, Department of Biomedical Informatics, University of Pittsburgh
(2008) DBMI ELPUB travel grant
(2008) ASIS&T SIGUSE doctoral student travel award
(2007) Doctoral Comprehensive Exam passed with High Honors
(2007) NSF ISMB travel grant
(2007) Best Trainee Paper Award, Department of Biomedical Informatics, University of Pittsburgh
(2005-2009) NLM Biomedical Informatics training fellowship

Teaching Experience	(2008) DBMI Intro to Research: Discussion on Open Science (2006, 2007,2008) DBMI Intro to Biomedical Informatics course lecture: Informatics in Industry (2007) Series of informal Brown Bag Skill Seminars on various topics (RSS, Entrez tools, Excel tricks) (2007) Teaching assistant: Intro to Biomedical Informatics
Service	(2006-2008) DBMI Student Representative to Admissions and Training Program Core Committees
Online Presence	Self-archived research papers, data and blog: http://www.researchremix.org

Industrial Experience & Accomplishments

2001 – 2005

Precision Therapeutics, Inc. **Pittsburgh, PA**

35 (now >60) people, provides personalized cancer therapy information to oncologists

Consultant, 2004-2005

- Contributed to a new, strategically critical bioinformatics algorithm

Director of Clinical Informatics, 2003-2004

- Co-led the design and implementation of all clinical trials analysis

Senior Systems Developer, 2001-2003

- Designed, implemented, and supported HIPAA-compliant intranet web applications for corporate data viewing and editing, using Java/J2EE and Oracle
- Contributed ideas, analyses, and tools for use throughout the organization

1998 – 2001

Vocollect, Inc. **Pittsburgh, PA**

30 (now >350) people, develops portable voice interface computers

Senior Software Developer, 1998–2001

- Ported an embedded system to Windows CE and continued to develop and maintain C and assembly code, as a member of a small team
- Improved the speech recognition accuracy of our product, as a member of a small team
- Co-led a skunk works project which envisioned and prototyped our real-time enterprise management product as a web application
- Contributed to department learning lunches and company vision statement

Manager of Customer Service, 1999

- Managed a 12-person Customer Service team for 6 months

1996 – 1998

Ascend Communications, Inc. (now Lucent) **Alameda, CA**

200 people, develops internet remote access concentrators

Software Engineer, 1996–1998

- Responsible for implementation of Japanese mobile phone data service software, working directly with NTT
- Worked to develop, as a member of a small team, a competitor to Rockwell's 56K embedded concentrator modem chips

1995 (6 months)
1994 (3 months)
1993 (3 months)

Schlumberger Austin Research Center **Austin, TX**

300 people, refined tools used for oil exploration and extraction

Student Intern, 1 year

- Developed an adjustable mathematical model of the Schlumberger Digital Telemetry system (Master's thesis)

Computational Experience

Programming languages, statistical packages, and tools:

- Active: Python, R, Weka, SQLite, Subversion
- Previous: Java, Lisp, C, Analog Devices DSP assembly code, StrongARM assembly code, Matlab, Perl, PHP, Visual BASIC, SQL, CVS, …

Operating systems: Mostly Windows. A little Unix, OS/X, VMS, embedded realtime OSs.

Professional Development & Memberships

American Society for Information Science and Technology (SIGUSE, SIGMETRICS, SIG/STI), 2008 – present
International Society for Computational Biology, 2004 – present
American Medical Informatics Association, 2004 – present
Attended multiple seminars on grant writing, public speaking, publishing, and teaching.
Actively learning and adopting test-driven software development practices.

Personal Interests

Spending time with my husband and young daughter, traveling, long-distance cycling, walking, reading, brainstorming solutions, learning new things.
Canadian citizen, American citizen.