Heather Piwowar

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Research Passion ***Accelerating research progress by facilitating more effective reuse of research data***

Current Position

Postdoctoral Research Associate **Vancouver BC, Canada**
Duke University, funded by NSF through DataONE, NESCent, and Dryad
June 2010 – present. PI: Dr Todd Vision

- Conducting research studies in science data sharing and reuse, particularly in the fields of evolution and ecology

Education

University of Pittsburgh **Pittsburgh, PA**
PhD in 2010, Masters of Science in 2006, concentration in Bioinformatics
Department of Biomedical Informatics, School of Medicine.
2005-2010 (maternity leave: April-June 2006). Advisor: Dr Wendy Chapman.
Dissertation: **Foundational studies for measuring the impact, prevalence, and patterns of publicly sharing biomedical research data**

Massachusetts Institute of Technology **Cambridge, MA**
Masters of Engineering in 1996, Bachelors of Science in 1995.
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

Academic Experience & Accomplishments

Piwowar (2011) Who shares? Who doesn't? Bibliometric factors associated with open data archiving. PLoS ONE, accepted.

Garnett, Whiteley, Piwowar, Rasmussen, Illes (2011) Neuroethics and fMRI: Mapping a Fledgling Relationship. PLoS ONE 6(4): e18537.

Peer-reviewed Journal Articles

Piwowar, Chapman (2010) Recall and bias of retrieving gene expression microarray datasets through PubMed identifiers. J Biomed Discov Collab. Mar 28;5:7-20

Piwowar, Chapman (2010) Public sharing of research datasets: A pilot study of associations Journal of Informetrics 4: 2. 148-156 April (also presented at Symposium on Informetrics and Scientometrics ASIS&T and ISSI Pre-conference 2009)

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

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

Peer-reviewed Conference Papers

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.

Non peer-reviewed articles

Piwowar, Vision, Whitlock (2011) Data archiving is a good investment. Nature 473, 285 (letter to editor)

Posters and Demos

Enriquez, Judson, Weber, Allard, Cook, Piwowar, Sandusky, Vision, Wilson. Data citation in the wild. IDCC 2010.
Piwowar. Demonstration of the Dryad Data Repository. Science Online 2011.
Weber, Piwowar, Vision. Evaluating Data Citation and Sharing Policies in the Earth Sciences. ASIS&T 2010.
Piwowar. A method to track dataset reuse in biomedicine: filtered GEO accession numbers in PubMed Central. ASIS&T 2010.
Piwowar. Who shares? Who doesn't? Bibliometric factors associated with open archiving of biomedical datasets. ASIS&T 2010.
Garnett, Piwowar, Rasmussen, Illes. Expediting medical literature coding with query-building. ASIS&T 2010.
Garnett, Piwowar, Whiteley, Rasmussen, Illes. Neuroethics and fMRI: Who Cites Whom? Society for Neuroscience 2010.
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

Datasets

Piwowar, Vision, Whitlock (2011) Data from: Data archiving is a good investment. Dryad Digital Repository. doi:10.5061/dryad.j1fd7

Invited Presentations

(2011) International Digital Curation Conference (upcoming), UK.
(2011) Tracking Data Reuse: Motivations, Methods, and Obsticles. IASSIST Vancouver.
(2011) Citation Challenges. JISC, Managing Research Data, UK.
(2011) Towards Evidence-Based Data Sharing Policies. NESCent, NC
(2011) Open discussion on Research Data Sharing. Scholarly Comm at Duke University.
(2011) Measuring More, Publishing More. With J Priem and K Costello. UNC Scholarly Communications Working Group.
(2011) Data Sharing, Reuse, and Policy. UNC Digital Scholarship Group
(2010) Researching Open Research Data. Open Access Week, UBC Vancouver
(2010) Who Shares? Who Doesn't? Biodiversity Lunchtime Internal Seminar Series, UBC
(2010) Leaders and laggards in preserving raw biomedical research data, NEDCC Conference, Boston MA.
(2010) Measuring progress toward a cultural norm of shared (and reused!) biomedical research data NESCent, Durham NC
(2009) Doctoral proposal at Award winning student papers. ASIS&T, Vancouver
(2009) Data sharing: Pilot study of associations. DBMI Colloquium, U 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, U of Pittsburgh
(2007) Sharing Detailed Research Data is Associated with Increased Citation Rate NLM Trainee Conference, Stanford University CA

Recent Awards & Grants

(2011) SciFoo participant
(2010) ASIS&T SIGUSE Elfreda A. Chatman Research Proposal Award
(2009) Thomson Reuters Doctoral Dissertation Proposal Scholarship, through ASIS&T
(2009) Best Trainee Poster Award, Department of Biomedical Informatics, U of Pittsburgh
(2008) Best Trainee Poster Award, Department of Biomedical Informatics, U 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, U of Pittsburgh
(2005-2009) NLM Biomedical Informatics training fellowship

Teaching and Mentoring Experience	(2011) Primary mentor for one masters-level summer intern (DataONE online internships) (2010) Primary mentor for three masters-level summer interns (DataONE online internships) (2008) DBMI Intro to Research: guest discussion on Open Science (2006, 2007,2008) DBMI Intro to Biomedical Informatics guest 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	(2011-present) Guest editor of Open Data series at BMC Research Notes (2009-2010) ASIS&T SIG STI Treasurer (2006-2008) DBMI Student Representative to Admissions and Training Program Core Committees Reviewer for Information Retrieval, Methods of Information in Medicine, PLoS ONE, others.
Online Presence	Self-archived research papers: http://www.researchremix.org Blog http://researchremix.wordpress.org Twitter (@researchremix), friendfeed, slideshare, Nature Precedings, etc.
Computational Experience	Programming languages, statistical packages, and tools: • Active: Python, R, SQLite, git, Entrez web services, Scopus and ISI Web of Science • Previous: Java, Lisp, C, Analog Devices DSP assembly code, StrongARM assembly code, Matlab, Perl, PHP, Visual BASIC, SQL, CVS, Weka … Operating systems: Currently a Mac person. Previous Windows user plus 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 – 2009 American Medical Informatics Association, 2004 – 2009 Attended multiple seminars on grant writing, public speaking, publishing, and teaching. Actively learning and adopting test-driven software development practices.
Industrial Experience & Accomplishments 2001 – 2005	**Precision Therapeutics, Inc.** **Pittsburgh, PA** *35 (now >200) 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

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Industrial Experience & Accomplishments continued

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)

Personal Interests

Spending time with my family, traveling, long-distance bicycling, walking, reading, brainstorming solutions, learning new things.
Canadian citizen, American citizen.