

Peter T. Darch

Assistant Professor
Graduate School of Library and Information Science
University of Illinois at Urbana-Champaign
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Education

DPhil Computer Science, University of Oxford (2007-2012)

Submitted January 2012, viva (pass with minor corrections) May 2012, awarded August 2012

Thesis: When Scientists Meet the Public: An Investigation into Citizen Cyberscience Projects

Supervisors: Professor Annamaria Carusi and Professor Marina Jirotko

Examiners: Professor David De Roure (University of Oxford) and Professor Robin Williams (University of Edinburgh)

MA History and Philosophy of Science and Medicine, Durham University (2006-2007)

Awarded September 2007

Thesis: “We Have Discovered the Secret of Life”: How Did James Watson and Francis Crick Secure Priority in the Immediate Aftermath of the Publication of their Model of DNA on 25 April 1953?

Supervisor: Dr Matthew Eddy

MMath Mathematics, University of Oxford (2000-2004)

First Class Honours degree awarded June 2004

Thesis: Bayesian Approaches to the Design of Clinical Trials

Supervisor: Professor John Gittings

Employment

Assistant Professor, Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign (August 2015-Present)

Postdoctoral Researcher, University of California, Los Angeles (August 2012-August 2015)

Project: The Transformation of Knowledge, Culture, and Practice in Data-Driven Science: A Knowledge Infrastructures Perspective (Alfred P. Sloan Foundation Award #20113194)

Supervisors: Professor Christine Borgman and Professor Sharon Traweek

Summary: My research involves conducting ethnographic case studies of the data and knowledge management practices of scientists involved in two multidisciplinary, distributed collaborative projects, one in astronomy and the other in microbiology and oceanography. These studies involve extended periods embedded as an observer in multiple laboratories, interviews with stakeholders, and attendance at scientific meetings. In the case of C-DEBI, the study has also involved substantive participation in the development of C-DEBI data management infrastructure.

Research Assistant, University of Oxford (2009-2010)

Project: Embedding e-Science: Designing and Managing for Usability (Engineering and Physical Sciences Research Council Grant #EP/D049733/1).

Supervisor: Professor Marina Jirotko

Publications

Peer-Reviewed Journal Articles

Borgman, C. L., **Darch, P. T.**, Sands, A. E., Wallis, J. C., & Traweek, S. (2015). Knowledge Infrastructures in Science: Data, Diversity and Digital Libraries. Invited submission to: *International Journals on Digital Libraries*, 16(3-4), pp. 207-227.

Darch, P. T., Borgman, C. L., Traweek, S., Cummings, R. L., Wallis, J. C., & Sands, A. E. (2015). What Lies Beneath?: Knowledge Infrastructures in the Deep Subseafloor and Beyond. *International Journal on Digital Libraries*, special issue on Digital Scholarship. doi:10.1007/s00799-015-0137-3 (print version forthcoming).

Darch, P. T. (2014). Managing the Public to Manage Data: Citizen Science and Astronomy. *International Journal of Digital Curation*, 9(1), pp. 25-40 (available online at: <http://www.ijdc.net/index.php/ijdc/article/viewFile/9.1.25/339>).

Darch, P. T., & Carusi, A. (2010). Retaining Volunteers in Volunteer Computing Projects. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 368(1926), pp. 4177-4192. doi:10.1098/rsta.2010.0163.

Journal Articles in Review

Darch, P. T., & Borgman, C. L. (In review). Ship Space and Database: Sociotechnical Drivers of Infrastructures for Scientific Collaboration. Submitted to: *Science and Technology Studies*, special issue on Knowledge Infrastructures.

Peer-Reviewed Conference Papers

Darch, P. T. & Sands, A. E. (2015). Beyond Big or Little Science: Understanding Data Lifecycles in Astronomy and the Deep Subseafloor Biosphere. *iConference 2015*, Newport Beach, California, 24-27 March 2014 (available online at: <http://hdl.handle.net/2142/73655>).

Darch, P. T., & Borgman, C. L. (2014). Ship Space to Database: Scientific and Social Motivations for a Database to Support Deep Subseafloor Biosphere Research. *Proceedings of the American Society for Information Science and Technology Annual Meeting*, Seattle, Washington, 31 October – 4 November 2014 (available online at: http://works.bepress.com/peter_darch/4).

Borgman, C. L., **Darch, P. T.**, Sands, A. E., Wallis, J. C., & Traweek, S. (2014). The Ups and Downs of Knowledge Infrastructures in Science: Implications for Data Management. *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries 2014 and International Conference on Theory and Practice in Digital Libraries 2014*, London: IEEE Computer Society (available online at: <http://works.bepress.com/borgman/321>).

Conference Presentations Based on Peer-Reviewed Abstracts

Darch, P. T., Sands, A. E., & Traweek, S. (Forthcoming). Designing Data Infrastructures with Multiple, Disparate Networks, *Society for the Social Studies of Science (4S) Annual Meeting*, Denver, CO, 11-14 November 2015.

Darch, P. T. (2014). Opening up a Dark Habitat and Opening up Data: The Co-Emergence of Scientific Collaboration, Infrastructure for Data-Sharing, and Data-Sharing Practices, *British Sociological Association Annual Conference*, Leeds, UK, 23-25 April 2014.

Darch, P. T. & Cummings R. L. (2013). Buried Deep: How Data About Subseafloor Life Becomes Dark and Why, *American Geophysical Union Fall Meeting*, San Francisco, California, 9-13 December 2013.

Darch, P. T. (2013). Becoming “Hyperdisciplinary”: Implications of Increasingly Hybrid Collaborations, *Society for the Social Studies of Science (4S) Annual Meeting*, San Diego, California, 9-12 October 2013.

Darch, P. T., Turilli, M. & Jirotko, M. (2010). Collaboration and Communication in e-Science Projects, *UK e-Science All-Hands Meeting*, Cardiff, UK, 13-16 September 2010.

Darch, P. T., & Jirotko, M. (2009). Shared Understandings of End-Users’ Requirements in e-Science Projects, *5th IEEE International Conference on e-Science*, Oxford, UK, 9-11 December 2009.

Darch, P. T. (2009). Retaining Volunteers in Volunteer Computing Projects, *UK e-Science All-Hands Meeting*, Oxford, UK, 7-9 December 2009.

Darch, P. T. (2009). Scientists' Understanding of the Public: Changing Perceptions in a Volunteer Computing Project, *Postgraduate Science and Technology Studies Conference*, Nottingham, UK, 28 & 29 July 2009.

Darch, P. T., Carusi, A., & Jirotko, M. (2008). A Climate of Trust: Perceptions of Legitimate Authority in a Volunteer Computing Project, *Oxford e-Research Conference*, Oxford, 11-13 September 2008.

Conference Poster

Cummings, R. L., & **Darch, P. T.** (2013). Between Land and Sea: Divergent Data Stewardship Practices in Deep-Sea Biosphere Research, *American Geophysical Union Fall Meeting*, San Francisco, CA, 9-13 December 2013.

Technical Reports

Darch, P. T., Carusi, A., Lloyd, S., Jirotko, M., de la Flor, G., Schroeder, R., & Meyer, E. (2010). Shared Understandings in e-Science Projects. *Technical Report*, Oxford e-Research Centre, Oxford University (available online at: <http://www.oerc.ox.ac.uk/research/embedding-e-science/publications-papers>).

Darch, P. T., Turilli, M., Lloyd, S., Jirotko, M., & de la Flor, G. (2010). Communication and Collaboration in e-Science Projects. *Technical Report*, Oxford e-Research Centre, Oxford University (available online at: <http://www.oerc.ox.ac.uk/research/embedding-e-science/publications-papers>).

Other Professional Information

Reviewer

Journal of Computer Supported Co-Operative Work

Conference committee memberships

4th ACM Web Science Conference, Evanston, IL, 22-24 June 2012

3rd ACM Web Science Conference, Koblenz, Germany, 14-17 June 2011

Professional memberships

American Geophysical Union (AGU)

Association for Information Science and Technology (ASIS&T)

Society for the Social Studies of Science (4S)