

CURRICULUM VITAE
Jewel Hope Ward

School of Information and Library Science
University of North Carolina at Chapel Hill
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EDUCATION

The University of North Carolina at Chapel Hill, Chapel Hill, NC

PhD. in Information and Library Science

Expected 2011

Interests: Data+metadata transfer preservation systems and infrastructures, including: networked information, preservation data grids, the OAI-PMH, digital preservation, mark-up languages, information+web design, system and information processes, and digital libraries.

Dissertation Topic: "Gap analysis" of digital libraries and preservation data grids (e.g., "iRODS").

The University of North Carolina at Chapel Hill, Chapel Hill, NC

M.S. in Information Science

2002

Master's Paper: "A Quantitative Analysis of Dublin Core Metadata Element Set (DCMES) Usage in Data Providers Registered with the Open Archives Initiative (OAI)"

Area of Concentration: Information Systems

The University of North Carolina at Chapel Hill, Chapel Hill, NC

A.B. in International Studies and History

1990

Area of Concentration: American Foreign Policy in Communist East Asia

WORK EXPERIENCE

The University of North Carolina at Chapel Hill, Chapel Hill, NC

Research Assistant

2006 – present

Data Intensive Cyber Environments (DICE) Group & Odum Institute (2009 – present): Write iRODS rules and workflows for IRODS that conform to ISO MOIMS standards for the DCAPE project; write social science preservation policies, and write as rules to be implemented within iRODS.

Odum Institute, Metadata and Digital Object Bulk Extraction, Ingest and Validation (2008-2009): Coordinated and researched project to extract and ingest metadata and digital objects from the Odum Data Archive into iRODS and the iRODS iCAT. Created XSLTs to transfer metadata from the data archive into the iRODS iCAT. Created XSDs to validate metadata ingest into and out of the iCAT. Researched, analyzed and reported on methods to retain Terms and Conditions and rights restrictions on social science data and metadata after ingest into iRODS. Documented microservices in Doxygen for the iRODS 2.x code release.

Odum Institute, Metadata Extraction Project (2007-2008): NARA Transcontinental Persistent Archive Prototype, an NSF funded project. Coordinated project to integrate DDI metadata into the iRODS iCAT and advised on the OAI-PMH. Analyzed DCMES and DDI metadata quality and content for the Odum Institute. Tested implementation of OAI-PMH DP and SP. Analyzed and reported results. Developed and applied knowledge of SRB and iRODS.

SILS, Digital Curation and Trusted Repositories Project (2006-2007): Researched and wrote requirements for an ingest survey for a pilot

institutional repository. Interviewed and engaged librarians and faculty. Analyzed results and developed requirements and processes for the ingest of each collection into the institutional repository. Wrote up and presented results of research and application of survey instrument.

The University of Southern California, Los Angeles, CA

Digital Resources Librarian (Program Manager, USC Digital Archive)

2004 – 2006

Coordinated the Program Management, Operational/Technical Management, and Research and Development needs of the USC Digital Archive in collaboration with teaching faculty, division personnel, and external partners in order to facilitate system development. The cross-departmental coordination included: digital imaging, outreach and marketing, research and development, systems development and maintenance, web services and programming, collection development, metadata, and related projects. Other duties involved system enhancements; data analysis/data mining/management reporting; research and development; creating and documenting processes, policies, and procedures; providing training; creating proposals and budgets; and, coordinating the activities and agenda of USC's Digital Library Round Table (DLRT), including inviting speakers. Advised on and facilitated the implementation of an OAI-PMH Data Provider and Service Provider.

Chair, DLRT; Member, CIS Production Group (OAI-PMH Advisor); and, Member, Digital Archive Implementation Team.

Los Alamos National Laboratory, Los Alamos, NM

Post-master's Graduate Research Assistant

2003 – 2004

One year internship in the Research Library. Liaison for internal and external projects to implement two institutional repositories. Provided systems administration of institutional repository software as well as training of and technical support for the repository's users. Coded and tested information retrieval software for a focused crawler prototype development project.

The University of North Carolina at Chapel Hill, Chapel Hill, NC

Research Assistant

2001 – 2002

SILS, 3D Rare Book Digital Library System (2002): designed, coded, developed content, created graphics, and updated the project web site. Conducted the literature review; responsible for the creation and maintenance of project documentation.

SILS, TeraScale Project (2001): duties included managing CVS, Linux systems administration, troubleshooting, installing programs, administering the server, technical writing, and providing technical support to the project's programmers (i.e., "junior-level" sys adm). Developed and updated the project web site; responsible for content creation and maintenance.

Interpath Communications, Inc., Research Triangle Park, NC

Senior Analyst

1998 – 2001

Engineering, Senior Analyst (2001): analyzed and defined division's load testing needs. Met with and compared load testing tools offered by vendors; analyzed reports, documented the tools and workflow. Performed customer audit. Analyzed both Engineering and the Network Operations Center's information needs and developed recommendations for both short- and long-term solutions.

Network Operations, Senior Analyst System Control (2000 - 2001): technical supervisor; managed crises/events and change management; ensured high priority tickets were worked; and supervised technicians in the network operations center. Successfully managed a project to merge the Engineering

division's varying intranet content into a one-point-of-entry digital library.

Service Delivery & Management, Business Analyst (1999 - 2000): lead position; point-of-contact between the Product Managers/other internal organizations and Operations Support for product implementation into the Arbor Order Management/Billing Process system. Managed, tracked and resolved any issues that arose. Documented workflow/business process documentation for both systems.

Service Delivery & Management, Reports Analyst (1998 - 1999): lead position; provided technical writing and business process flow documentation; created and analyzed various internal and external reports; and posted documents and reports in HTML to the corporate intranet.

Kelly Technical Services, Research Triangle Park, NC

Technical Writer

1997 – 1998

Contractor at networkMCI. Wrote online user guides and HTML help screens for intranet software applications developed in-house and used by network engineers to provision the hyperstream frame relay network. Designed, coded, and maintained the department's (digital library) intranet web site, as well as developed the content and created the graphics. Supervised co-op's work on web site. Some web site systems administration. Trained the support team and trainers on the department's software applications.

Sun Forest Systems, Inc., Research Triangle Park, NC

Content Developer

1995 – 1996

Content Developer (1995 - 1996): maintained and updated two company web sites. Wrote articles and interviewed customers for profiles. Coded HTML. Involved in the development and design of new sites. Spearheaded negotiations with a Japanese consortium interested in the BuildNet project.

Administrative Assistant (1995): managed sales lead database; managed and authored content material for company web sites; proofread and edited company manuals, tutorials, and marketing material. Supported twelve sales representatives and one manager.

Decision Support Systems, Ltd., Auckland, New Zealand

Receptionist/Secretary

1993

Duties included administrative and graphics support for sales presentations, word processing, invoicing, front line reception, and other duties related to office management.

Grosvenor Holdings, Ltd., Auckland, New Zealand

Personal Assistant

1992

Assisted in the day-to-day running of a small trading company, advertising, and marketing agency. Helped mainstream the computer system. Responsible for assisting in sales and marketing projects. Additional duties involved word processing, invoicing, bill collection, and front line reception.

The University of North Carolina at Chapel Hill, Chapel Hill, NC

Administrative Assistant

1991

Department of Human Resources, Employee Services: assisted in implementing and publicizing programs available to employees. Duties involved budget management, graphics presentations, word processing, and some general secretarial duties.

PUBLICATIONS AND POSTERS

- Ward, J., de Torcy, A., Chua, M., and Crabtree, J. (2009). Extracting and Ingesting DDI Metadata

and Digital Objects from a Data Archive into the iRODS extension of the NARA TPAP using the OAI-PMH. Paper accepted at the 5th IEEE International Conference on e-Science, Oxford, UK, December 9-11, 2009.

- Ward, J., de Torcy, A., Mantooth, J., Chua, M., and Crabtree, J. (2009). Integrating Metadata into the NARA Transcontinental Persistent Archive Prototype via the OAI-PMH. In Proceedings of DigCCurr 2009: Digital Curation Practice, Promise and Prospects, Chapel Hill, NC, April 1-3, 2009.
- Ward, J., de Torcy, A., Mantooth, J., Chua, M., and Crabtree, J. (2008). Integrating Metadata into the NARA Transcontinental Persistent Archive Prototype via the OAI-PMH. Poster session presented at the Doctoral Student Association Doctoral Research Symposium, Chapel Hill, NC, October 10, 2008.
- Ward, J., de Torcy, A., Mantooth, J., Chua, M., and Crabtree, J. (2008). Integrating Metadata into the NARA Transcontinental Persistent Archive Prototype via the OAI-PMH. Poster session presented at the Eighth ACM/IEEE-CS Joint Conference on Digital Libraries, Pittsburgh, PA, June 16-20, 2008.
- Ward, J., and Crabtree, J. (2008). Integrating Metadata into the NARA Transcontinental Persistent Archive Prototype via the OAI-PMH. Proceedings of the Eighth ACM/IEEE-CS Joint Conference on Digital Libraries, Pittsburgh, PA, June 2008, 473.
- Ward, J. & Crabtree, J. (2008). Integrating DDI Metadata into the NARA Transcontinental Persistent Archive Prototype via the OAI-PMH. Poster at the 4th Annual University Research Day, 4 March 2008, Chapel Hill, NC.
- Ward, J. (2008). Results of a Case Study of the DRAMBORA Risk Assessment Tool. Poster at the 4th Annual University Research Day, 4 March 2008, Chapel Hill, NC.
- Ward, J. (2007). Results of a Case Study of the DRAMBORA Risk Assessment Tool. Poster at the 3rd International Digital Curation Conference, 11-13 December 2007, Washington, DC.
- "Crafting a Pilot Ingest Survey", poster at the 2007 Annual Research Forum of the Librarian's Association @UNC-CH (LAUNC-CH), Chapel Hill, NC, 22 May 2007.
- Ward, J., Bollen, J., Pearson, J., Chan, S., Chi, H., Chi, M., Guevara, K., Huang, H., Kim, G., Krivokon, M., Lee, B. H., Li. P., Muliawan, F., Nguyen, V., Boehm, B. W., Brown, A. W., Colbert, E., Lam, A., and Patel, M. (2005). Supporting Collection Development Decisions by Mining and Analyzing Digital Archive Usage Data. IEEE Technical Committee on Digital Libraries (TCDL) Bulletin, Volume 2, Issue 1.
- Ward, J., Bollen, J., Pearson, J., Chan, S., Chi, H., Chi, M., Guevara, K., Huang, H., Kim, G., Krivokon, M., Lee, B. H., Li. P., Muliawan, F., Nguyen, V., Boehm, B. W., Brown, A. W., Colbert, E., Lam, A., and Patel, M. (2005). Mining and Analyzing Digital Archive Usage Data to Support Collection Development Decisions. Poster and demo presented at the Fifth ACM/IEEE-CS Joint Conference on Digital Libraries, Denver, CO, June 7-11 2005.
- Ward, J., Bollen, J., Pearson, J., Chan, S., Chi, H., Chi, M., Guevara, K., Huang, H., Kim, G., Krivokon, M., Lee, B. H., Li. P., Muliawan, F., Nguyen, V., Boehm, B. W., Brown, A. W., Colbert, E., Lam, A., and Patel, M. (2005). Mining and Analyzing Digital Archive Usage Data to Support Collection Development Decisions. Proceedings of the Fifth ACM/IEEE-CS Joint Conference on Digital Libraries, Denver, CO, June 7-11 2005, 417.
- Ward, J. (2004). Unqualified Dublin Core Usage in OAI-PMH Data Providers. OCLC Systems and Services, 20(1), 40-47.
- Ward, J. (2003). A Quantitative Analysis of Unqualified Dublin Core Metadata Element Set Usage within Data Providers Registered with the Open Archives Initiative. Proceedings of the Third ACM/IEEE-CS Joint Conference on Digital Libraries, 315-317.

BRIEFING PAPERS, REPORTS, ETC.

- Wan, M., Marciano, R., Moore, R., Rajasekar, A., Schroeder, W., de Torcy, A., Chen, S., Brieger, L., Chua, M., Crabtree, J., and Ward, J. (2008). NARA Transcontinental Persistent Archive Prototype UCSD Collaboration Project. Request to NARA to extend the grant "National Archives and Records Administration NSF cooperative agreement 0523307 supplement to SCI 0438741, 'Cyberinfrastructure; From Vision to Reality'" for FY2008-2009, June 2008.

- Moore, R., Marciano, R., Rajasekar, A., Schroeder, W., Wan, M., Chen, S., de Torcy, A., Hou, C., Nadeau, D., JaJa, J., Smorul, M., McGann, J., Brieger, L., Bidwell, M., Ward, J., and Chua, M. (2008). NARA Transcontinental Persistent Archive Prototype SDSC, U Md, UNC Collaboration Project. Extended Status Report, January-March 2008, April 2008.
- Ward, J. (2007). Project Briefing. NARA Research Prototype Persistent Archive Extension Status Report July-September 2007. UNC-CH, October 2007.
- Ward, J. (2007). Briefing Paper – Ingest Survey for the UNC-CH Pilot IR. Digital Curation/Institutional Repository Committee. UNC-CH, September 2007.
- Ward, J. (2005). Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) Data Provider (DP) Requirements. Document submitted to the DLF OAI Best Practices Committee to form the basis of OAI-PMH DP training materials to be published by the DLF and IMLS, 19 May 2005.

PRESENTATIONS, DEMOS, ETC.

- "Extracting and Ingesting DDI Metadata and Digital Objects from a Data Archive into the iRODS extension of the NARA TPAP using the OAI-PMH", invited speaker at IEEE Computer Society meeting, Eastern NC Section, Raleigh, NC, 17 November 2009.
- "Extracting and Ingesting DDI Metadata and Digital Objects from a Data Archive into the iRODS extension of the NARA TPAP using the OAI-PMH", demo given at the Society of American Archivists Summer Camp 2009, Chapel Hill, NC, 29 July 2009.
- "Enabling Collection Interoperability and Preservation Using iRODS and the OAI-PMH", presentation given at the DLF Forum Spring 2009, Raleigh, NC, 6 May 2009.
- "Central Repository for a DL How-to", initiated and lead a Birds of a Feather (BOF) session with Barrie Howard (DLF) at the DLF Forum Spring 2006, Austin TX, 11 April 2006.
- "USC's Digital Archive", one speaker as part of, "The ISD Team: Disseminating Information Throughout ISD..." presentation to faculty and staff who work in the Information Services Division (ISD) at the University of Southern California, Los Angeles, CA, 4 May 2005.
- "USC Digital Archive OAI-PMH Implementation", invited speaker at The Getty Research Institute, Los Angeles, CA, 6 April 2005.
- "University of Southern California Digital Archive Past Present Future" one speaker as part of a larger University of Southern California library faculty and staff presentation at the Pacific Rim Digital Library Alliance, Taipei, Taiwan, 19 October 2004.
- "A Quantitative Analysis of Unqualified Dublin Core Metadata Element Set Usage within Data Providers Registered with the Open Archives Initiative", speaker at the Digital Library Round Table lecture series at the University of Southern California, Los Angeles, CA, 22 September 2004.
- "Global Access to Archival Materials Related to Los Angeles and the Pacific Rim: the USC Digital Archive", one speaker as part of a larger library faculty presentation on seamless access to a Thai delegation visiting the University of Southern California, Los Angeles, CA, 25 August 2004.
- "Status Report of the Institutional Repository Project", overview and status report on nine institutional repository projects, invited speaker via VTC at the Alliance for Innovation in Science and Technology Information (AISTI) ePrint Project Workshop, Santa Fe, NM, 27 April 2004.
- "'Metadata Research', or, 'Murphy's Law in Action: How to Bumble Your Way Through a Master's Paper, Graduate, and Get Published'", invited speaker via VTC to Dr. Jane Greenberg's metadata class at the School of Information and Library Science at the University of North Carolina at Chapel Hill, Chapel Hill, NC, 6 April 2004.
- "Tracking Service Prototype", invited speaker at the Research Library, Los Alamos National Laboratory, Los Alamos, NM, 6 October 2003 and 6 January 2004.
- "'Something About Digital Libraries and Metadata': Two Weeks in Japan", invited speaker at the Research Library, Los Alamos National Laboratory, Los Alamos, NM, 28 & 30 July 2003.
- "The Research Library at Los Alamos National Laboratory (LANL): an Overview" and "The Open Archives Initiative Protocol for Metadata Harvesting: Overview", invited speaker to the School of Library and Information Science and library faculty and staff at Keio University, Tokyo, Japan, on

17 June 2003.

- "The Research Library at Los Alamos National Laboratory (LANL): an Overview", "Metadata in Digital Libraries and an Overview of the OAI-PMH", and " A Quantitative Analysis of Unqualified Dublin Core Metadata Element Set Usage within Data Providers Registered with the Open Archives Initiative", invited speaker to researchers, doctoral students and staff at the National Institute of Informatics (NII), Tokyo, Japan, on 16 June 2003.
- "The Research Library at Los Alamos National Laboratory (LANL): an Overview", "Metadata In Digital Libraries", and " A Quantitative Analysis of Unqualified Dublin Core Metadata Element Set Usage within Data Providers Registered with the Open Archives Initiative", invited speaker at the School of Library and Information Science at Aichi Shukutoku University, Nagoya, Japan, 13 June 2003.
- "The Research Library at Los Alamos National Laboratory (LANL): an Overview", "Metadata In Digital Libraries", and " A Quantitative Analysis of Unqualified Dublin Core Metadata Element Set Usage within Data Providers Registered with the Open Archives Initiative", invited speaker for a colloquium held at the Research Center for Knowledge Communities at the University of Tsukuba, Tsukuba, Japan, 11 June 2003.

TEACHING

University of Southern California, Los Angeles, CA

Client/Mentor – CS577a

2005

Worked with USC Computer Science master's students to design and develop an improved 3D UI for an analysis tool that uses digital library usage data during Fall 2005.

University of Southern California, Los Angeles, CA

Directed Research – Independent Study

2005

As part of a summer research project, directed a USC Computer Science master's student on a refinement of the user interface and backend of a prototype data mining tool developed during the primary academic year.

University of Southern California, Los Angeles, CA

Client/Mentor – CS577a and CS577b

2004 - 2005

Worked with USC Computer Science master's students to design, develop and implement an analysis tool for the USC Digital Archive usage data during the 2004-2005 academic year.

Keio University, Tokyo, Japan

Visiting Scholar – School of Information and Library Science

2003

Explored the current status of institutional repositories and the implementation of the Open Archives Initiative-Protocol for Metadata Harvesting (OAI-PMH) in Japan. Gave lectures on metadata and digital libraries, the OAI-PMH, and the results of my master's paper research at four universities. Discussed digital library, metadata, and OAI-PMH issues with related professionals.

Durham Technical Community College, Durham, NC

Adult Education Instructor

1995 – 1996

Taught advanced English as a Second Language conversation and grammar to adults. Also taught survival skills – i.e., "How to live in the United States."

Mind Games Eigo Gakuin, Mishima, Japan

English Language Instructor

1993 – 1994

Taught intermediate to advanced English as a Second Language conversation and grammar to adults and teenagers.

American School, Hamamatsu, Japan

English Language Instructor

1992

Taught intermediate English as a Second Language conversation and grammar to children and teenagers.

ELECTRONIC RESOURCES

- Designed, installed, created content for and administered the wiki for attendees of the DigCCurr 2007 conference. **2007**
 - Administrator of a DL How-to wiki <http://dlhowto.pbwiki.com/>. **2006**
 - Created a central resource for operations related documentation and information for the Digital Archive at the University of Southern California, located at: <<https://w3.usc.edu/display/DAOPS/>>. **2005**
 - Sourceforge accepted the Data Mining Tool as an Open Source project; the web site is located at: <<https://sourceforge.net/projects/coldevtool/>>. **2005**
 - Built a web site for the 3D Rare Book Digital Library System project at the School of Information and Library Science at the University of North Carolina at Chapel Hill, located at: < <http://ils.unc.edu/3D/>>. **2002**
 - Built a web site for the TeraScale Information Retrieval Project at the School of Information and Library Science at the University of North Carolina at Chapel Hill, located at: < <http://ils.unc.edu/tera/>>. **2001**
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LIBRARY/UNIVERSITY SERVICE

- SILS Diversity Committee **2009 – present**
 - Curation and Archives Research **2007 – present**
 - Communities and Digital Assets Management (CDAM) **2006 – 2007**
 - UNC Scholarly Communication Committee (SCC) **2006 – 2007**
 - UNC Digital Curation and Institutional Repository Committee (DC/IRC) **2006 – 2007**
 - USC Ambassador **2004 – 2006**
 - USC Information Services Division (ISD) Team **2004 – 2005**
 - Chair, USC Digital Library Round Table (DLRT) **2004 – 2006**
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CONSULTING

- Agaliha, Chapel Hill, NC*
Research Assistant, Analysis of U.S. Slavery Data **2009 – present**
Providing statistical assistance in the analysis of U.S. slave data from the Colonial period to 1865 under the direction of a professor of history.
- Agaliha, Chapel Hill, NC*
Editor and Reviewer, English language and content **2008 – present**
Edit and revise research papers and abstracts for an LIS professor and her research group in Japan, as needed.
- Agaliha, Chapel Hill, NC*
Information Design Consultant **2007 – present**
Sole proprietor of Agahila.com, an information design consulting company. Services offered include documentation, web and technical.
- FOAR Enterprises, Inc., Los Angeles, CA*
Editor, English language and HTML **2005 – 2006**
Corrected and revised 18 pages of content and HTML for the English version of the Shinanomachi Media Center's (SMC's) web site. SMC is part of the Kitasato Memorial Medical Library at Keio University, Japan.
- FOAR Enterprises, Inc., Santa Fe, NM*
Institutional Repository Consultant **2004**
Advised members of the Alliance for Innovation in Science and Technology Innovation (AISTI) on the development of each organization's portion of the AISTI institutional repository, including content, metadata, processes and
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systems. Analyzed the current status of the AISTI IR project within each institution, advised on best practices and future steps, and documented it.

PROFESSIONAL AFFILIATIONS & SERVICE

- Vice President of Legacy, Saint Anthony Association of North Carolina **2009 – Present**
- IEEE Eastern NC Section, Executive Committee **2009 – Present**
- iConference 2009, Reviewer **2008**
- International Journal of Digital Libraries, Reviewer **2008**
- IMLS Native American Library Services, Enhancement Grant Panelist **2008**
- American Society for Information Science & Technology (ASIS&T): Leadership Development Committee **2008 & 2001 – 2006**
- IMLS Native American Library Services, Enhancement Grant Field Reviewer **2007**
- Digital Library Federation/UNC-CH SILS: DL How-to Working Group Chair **2006**
- Digital Library Federation (DLF): Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) and Shareable Metadata Best Practices Working Group **2004 – 2006**
- Digital Library Federation (DLF): Program Committee **2004 – 2005**
- Los Angeles Chapter of the American Society for Information Science (LACASIS) **2004 – 2006**
- Alliance for Innovation in Science & Technology (AISTI): mailing list moderator and administrator **2003 – 2006**
- American Society for Information Science & Technology (ASIS&T) **2001 – Present**
- American Computing Machinery (ACM) **2001 – Present**

HONORS AND AWARDS

- SILS Carnegie Grant: \$200 Research Grant **2009**
- IEEE Eastern NC Section: \$500 Travel Grant **2009**
- Digital Library Federation (DLF): Forum Fellowship **2004**
- Interpath Communications, Inc.: Key Performer Award **1999**