

Robert Sanderson, Ph.D.

azaroth42@gmail.com ♦ @azaroth42 ♦ <http://linked.art/rob.sanderson/>

Profile

Internationally renowned Linked Data, Cultural Heritage and Information Science scholar and practitioner, with proven excellence in research, data and system architectures, and discipline-wide leadership

Skills Summary

- | | | |
|----------------------|-----------------------|--|
| ♦ Linked Open Data | ♦ Innovation | ♦ Standards development through community engagement |
| ♦ Machine Learning | ♦ Cultural Heritage | ♦ Management and Leadership |
| ♦ Data Architectures | ♦ Systems Integration | |

Key Contributions and Relevant Experience

J. PAUL GETTY TRUST – Los Angeles, CA, USA

Snr Enterprise Architect, 2016/05-present

- ♦ Enterprise-wide responsibility for data and information management, systems architecture
- ♦ Publications: 4 Keynotes, 10 Conference Papers, 9 Workshop Presentation, 7 Invited Seminars, 2 Professional Forum
- ♦ Direction and Strategy for information systems overhaul, focusing on effective and sustainable integration across departments
- ♦ Co-Chair and Co-Editor for W3C Annotation Working Group, JSON-LD WG, Museum Community Group; successfully brought Annotation Model and Protocol to full recommendation
- ♦ Executive Committee for IIF Consortium, Lead editor and architect for IIF technical specifications
- ♦ PI for Kress Foundation funded Linked Art project, Co-PI for two UK AHRC funded Linked Data grants.
- ♦ Data Architect for Pharos Consortium, American Art Collaborative
- ♦ Advisory boards for multiple projects in Museums, Libraries and Archives

STANFORD UNIVERSITY – S.U. Libraries, Stanford, CA, USA

Information Professional 5, 2014/04-2016/05

- ♦ Information Standards Architect and Advocate, with a focus on linked data in the cultural heritage sector.
- ♦ Publications: 18 Conference Papers, 9 Workshop Presentations, 5 Invited Seminars, 4 Professional Forum presentations
- ♦ Co-Chair of W3C Annotation Working Group, Co-Editor of technical recommendations.
- ♦ Technical Editor and Community Facilitator for IIF Consortium, resulting in rapid expansion throughout the Cultural Heritage sector, multiple technical standards, and both national and commercial adoption. Incl. event organization.
- ♦ Named Investigator for Linked Data for Libraries project (2014-); Ongoing work to promote the use and best practices for Linked Data within the library and cultural heritage domain. Incl. event organization and community engagement.
- ♦ Technical, Program and Personnel Manager of Linked Data team.

LOS ALAMOS NATIONAL LABORATORY – Research Library, Los Alamos, NM, USA

Scientist II, 2009/08-2014/03

- ♦ Information Scientist, with a focus on scholarly communication.
- ♦ Publications: 8 Journal Articles, 4 magazine articles, 20 Conference Papers (including Best Paper and Best Poster at JCDL), 4 Standards, 21 Workshop Presentations, 4 Invited Seminars, 11 Professional Forum presentations, 10 Tutorials
- ♦ Co-PI on Open Annotation project (2009-, Mellon funded) resulting in W3C Community Specification (Co-Chair, Editor), IDPF adoption for EBooks, and many implementations in academic and commercial environments. The Open Annotation Community Group is the 5th largest of more than 180 such groups. Best paper nomination: JCDL 2010.
- ♦ Named Investigator on Memento project (2009-) resulting in IETF RFC and adoption throughout the Web Archiving community. Winner of the 2010 Digital Preservation Coalition International Award. Best poster: JCDL 2012.
- ♦ Named Investigator on IIF/Shared Canvas project (2010-, Mellon funded) based at Stanford University, resulting in 2 Linked Open Data specifications adopted by the world's largest repositories of medieval manuscripts, including 10 National Libraries. Best paper: JCDL2011.

- ◆ Named Investigator on ResourceSync project (2011-2013, Sloan funded), resulting in ANSI/NISO standard Z39.99, an update to OAI-PMH.
- ◆ Co-PI on Hiberlink project (2013-2014, Mellon funded) based at the University of Edinburgh, resulting in PLOS ONE article and many conference/workshop presentations.
- ◆ Responsible for mentoring and directing post-doctoral researchers and technical staff members.

UNIVERSITY OF LIVERPOOL – Dept. of Computer Science, Liverpool, UK

Lecturer, 2005/09 - 2009/08

- ◆ Lecturer in Computer Science, with a focus on machine learning, text and graph mining, and databases.
- ◆ Publications: 5 Journal Articles, 17 Conference Papers, 2 Specifications, 1 Patent, 6 Workshop Presentations, 5 Invited Seminars, 8 Professional Forum Presentations, 2 Tutorials
- ◆ Co-PI on FORESITE project (JISC funded) to contribute to OAI-ORE (editor) and implement it for the JSTOR collection.
- ◆ Investigator on EU 7th Framework SHAMAN project on grid based digital preservation, and Invited Expert on EU eContentPlus Bernstein project on historical watermark analysis via digital images and information standards.
- ◆ Senior Architect and Developer of Cheshire3 Information System projects (JISC funded)
- ◆ Research included novel applications of machine learning to text, including corpus linguistics and historical text analysis.
- ◆ Undergraduate and Masters lecturing and course creation. PhD advisor for 3 students, MSc supervisor for 4 students, 2 of which were awarded Distinctions, Final Year supervisor for 7 students, 5 of which were awarded first class honors and 3 of which received prizes for excellence.

UNIVERSITY OF LIVERPOOL – Sydney Jones Library, Liverpool, UK

Senior Assistant Librarian, 2000/06 - 2005/09

- ◆ Information Architect and Developer, with a focus on information retrieval and XML.
- ◆ Publications: 1 Magazine Article, 4 Conference Articles, 1 Thesis, 3 Specifications, 1 Workshop presentation, 1 Invited Seminar, 5 Professional Forum presentations, 4 Tutorials
- ◆ Responsible for the Cheshire3 Information System design and implementation, including services such as the Archives Hub aggregator of archival descriptions. Led team of up to 5 software engineers.
- ◆ Editor for SRU replacement for Z39.50 library interoperability protocol

Academic Qualifications

UNIVERSITY OF LIVERPOOL, UK (1997-2003) – Ph.D., French and History

- ◆ Aim: To produce a cutting edge electronic edition of Book 1 of Froissart's Chronicles using information retrieval techniques with TEI SGML, demonstrating the potential of the web for historical textual research
- ◆ Transcribed and edited 258 folios of 14th C Middle French into TEI SGML. Researched, designed, implemented and tested novel electronic edition display techniques, now the basis of the Shared Canvas data model.
- ◆ Efficient organization and a high degree of self motivation were essential qualities for success

UNIVERSITY OF CANTERBURY, NZ (1995-1997) – B.A. (Hons), French

- ◆ Subjects studied included Modern and Medieval French, Middle English, Latin, Classics, Medieval History, Philosophy.
- ◆ 3 of 4 Honors projects received A+. Overall Average of A grade.

Esteem Factors

- ◆ Honorary Research Fellow at the Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign, 2009-2011
- ◆ Recipient of the Digital Preservation Coalition International Award, 2010
- ◆ Program Co-Chair for JCDL2013; Poster Co-Chair for JCDL2011
- ◆ Co-Chair of W3C Annotation Working Group; JSON-LD Working Group; Linked JSON, Museum and Culture, Open Annotation, and Research Objects for Scholarly Communication Community Groups
- ◆ W3C Advisory Committee Representative for J. Paul Getty Trust ; IIIF Executive Committee
- ◆ Advisory Board for: Kerameikos.org, Philadelphia Museum of Art's Art Information Commons, Philobiblon, Web of Samples, Georgia O'Keeffe Museum's Advancing Digital Humanities Research through a User-Centered Design Approach, Hypothes.is, Canterbury Tales Project, Columbia Web Archiving Collaboration, DiscoveryCORE, Pelagios3, American Art Collaborative, Indigenous Digital Archive, Annotating All Knowledge, Indigenous Digital Archive, Linked Open Data for Special Collections
- ◆ Program Committee for JCDL, TPD, ICADL, WOSP, DPRMA, LDCX, Open Repositories, iConf, Digital Humanities, I Annotate, IIIF Conference.
- ◆ Journal Reviewer for JASIST, IBM Journal of Research and Development, Literary and Linguistic Computing, Computing and Cultural Heritage, Archival Science
- ◆ Reviewer for National Research Foundation (South Africa), Netherlands Organisation for Scientific Research's Cultural Heritage Programme, Sloan Foundation, National Endowment for the Humanities, Thompson Scientific
- ◆ Ph.D. Committee for Martin Klein (Old Dominion University, USA), Petr Knuth (Open University, UK), John Thompson (University of Waikato, NZ)
- ◆ Masters Committee for Kyle Williams (University of Cape Town, South Africa)
- ◆ Google Scholar Reported Statistics: H-index: 20 ; I10-index: 35 ; 100+ publications, with 1000+ Citations
- ◆ Published game designer

Selected Publications and Presentations (28 / 150+, complete bibliography available on request)

- **Sanderson R.** "Shout it out: LOUD". Keynote at Europeana Tech 2018, Rotterdam, Netherlands.
- **Sanderson, R.** Ciccicarese, P. Young, B. "Web Annotation Data Model". W3C Technical Recommendation, 2017, <http://w3.org/TR/annotation-model/>
- **Sanderson, R.** "Community Challenges for Practical Linked Open Data". Keynote at Linked Pasts 2016, Madrid, Spain
- Klein, M. Van de Sompel, H, **Sanderson, R.** et al. "Scholarly Context Not Found: One in Five Articles Suffers from Reference Rot", PLOS ONE, Dec 26, 2014, DOI: 10.1371/journal.pone.0115253
- Albritton, B. Bradshaw, S. et al. "A Comparative Kalendar: Building a Research Tool for Medieval Books of Hours from Distributed Resources", *Digital Humanities 2013*, Lincoln NE, July 2013
- **Sanderson, R.** Ciccicarese, P. Van de Sompel, H. "Designing the W3C Open Annotation Data Model", *Procs of ACM Conference on Web Science 2013*, Paris France, May 2013
- **Sanderson, R.** Ciccicarese, P. "Advances in Open Annotation", *iAnnotate Conference 2013*, San Francisco, April 2013
- **Sanderson, R.** "Global Web Archive Integration with Memento", *Procs of the 12th ACM/IEEE Joint Conference on Digital Libraries*, Washington DC, USA, June 2012, **Winner of Award for Best Poster**
- Albritton, B. **Sanderson, R.** "The Ideal Page: Between Digital Facsimile and Medieval Manuscript", *Medieval Academy of America Annual Meeting 2012*, St Louis, MO, March 2012
- **Sanderson, R.** Albritton, B. et al. "Shared Canvas: A Collaborative Model for Medieval Manuscript Layout", *International Journal of Digital Libraries 13 (1)*, Springer, DOI: 10.1007/s00799-012-0098-8, September 2012
- Haslhofer, B. **Sanderson, R.** Simon, R. Van de Sompel, H. "Open Annotation on Multimedia Web Resources", *Multimedia Tools and Applications*, Springer, DOI: 10.1007/s11042-012-1098-9, May 2012
- Van de Sompel, H. **Sanderson, R.** Klein, M. et al. "A Perspective on Resource Synchronization", *DLib Magazine* 19 (9/10), DOI: 10.1045/september2012-vandesompel, September 2012
- **Sanderson, R.** Brugman, H. Albritton, B. Van de Sompel, H. "Evaluating the SharedCanvas Manuscript Data Model in CATCHPlus", *Supporting Digital Humanities 2011*, Copenhagen, Denmark, November 2011
- **Sanderson, R.** Albritton, B. "SharedCanvas: Collaborative Facsimiles", *Books in Browsers 2011*, San Francisco CA
- **Sanderson, R.** Albritton, B. et al. "SharedCanvas: A Collaborative Model for Medieval Manuscript Layout Dissemination", *Procs of the 11th ACM/IEEE Joint Conference on Digital Libraries*, Ottawa, Canada, June 2011, **Winner of ACM Vannevar Bush Award for Best Paper**
- **Sanderson, R.** Phillips, M. Van de Sompel, H. "Analyzing the Persistence of Referenced Web Resources with Memento", *Procs of Open Repositories 2011*, Austin TX, June 2011
- **Sanderson, R.** Shankar, H. et al. "Implementing Time Travel for the Web", *Code4Lib Journal*, Issue 13, April 2011
- **Sanderson, R.** Van de Sompel, H. "Cool URIs and Dynamic Data", *IEEE Internet Computing*, 2012, ISSN 1089-7801
- Jiang, C. Coenen, F. **Sanderson, R.** Zito, M. "Text Classification using Graph Mining-based Feature Extraction", *Knowledge Based Systems*, 23 (4), 2010, pp. 302-308
- Wang, J. Li, F. Coenen, C. **Sanderson, R.** Xin, Q. "Hybrid DIAAF/RS: Statistical Textual Feature Selection for Language-independent Text Classification", *Advances in Data Mining. Applications and Theoretical Aspects LNCS* 2010, Vol 6171 DOI: 10.1007/978-3-642-14400-4_18
- Hunter, J. Cole, T. **Sanderson, R.** Van de Sompel, H. "The Open Annotation Collaboration: A Data Model to Support Sharing and Interoperability of Scholarly Annotations" *Procs. of Digital Humanities*, London, July 2010
- Van de Sompel, H. **Sanderson, R.** et al. "An HTTP-based Versioning Mechanism for Linked Data", *Procs. of Linked Data on the Web Workshop*, Raleigh, USA, April 2010
- **Sanderson, R.** Van de Sompel, H. "Making Web Annotations Persistent over Time", *Procs. of the 10th ACM/IEEE Joint Conference on Digital Libraries*, Surfer's Paradise, Australia, June 2010 (Nominated for best paper)
- **Sanderson, R.**, Smith, C., Brook O'Donnell, M. "Using Data Mining to Trace Changing Association Patterns over Time" *Procs of. Corpus Linguistics*, July 2009
- **Sanderson, R.** and Watry, P., "Integrating Data and Text Mining Processes for Digital Library Applications", *Procs. of the 7th ACM/IEEE Joint Conference on Digital Libraries*, pp 73-80. (Nominated for best paper)
- **Sanderson, R.** "Historical Text Mining" (Opening Keynote), Historical Text Mining Conference, University of Lancaster, July 2006
- **Sanderson, R.** and Larson R, "Indexing and Searching Tera-Scale Grid-Based Digital Libraries", *Procs of First International Conference on Scalable Information Systems*, (ACM), ISBN: 1-59593-428-6
- **Sanderson, R.** and Larson, R., "Grid-Based Digital Libraries: Cheshire3 and Distributed Retrieval", *Procs of the 5th ACM/IEEE Joint Conference on Digital Libraries*, pp 112-114, June 2005