

**ASHLEY E. SANDS, PHD**  
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## EDUCATION

- University of California, Los Angeles** June 2017  
 PhD, Information Studies  
 Dissertation: *Managing Astronomy Research Data: Data Practices in the Sloan Digital Sky Survey and Large Synoptic Survey Telescope Projects*
- Advisor: Christine L. Borgman Distinguished Professor and Presidential Chair in Information Studies
- Committee: Jonathan Furner Chair and Associate Professor, Information Studies  
Beverly Lynch Professor, Information Studies  
Sharon Traweek Associate Professor, Gender Studies and History
- University of California, Los Angeles** June 2011  
 MLIS, Master of Library and Information Science  
 Advisor: Jonathan Furner
- University of Southern California** May 2007  
 BA, Bachelor of Arts, *Magna Cum Laude*  
 Double Major: Religion and Classics

## EXPERIENCE

- Senior Library Program Officer, Institute of Museum and Library Services** Fall 2016-  
 Envisioning and cultivating a portfolio of national digital platform (NDP) library grants  
 Supervising ongoing NDP program evaluation and 9-month virtual intern  
 Managing and serving as primary author on multiple team writing projects  
 Collaborating on the execution of two national convenings and accompanying follow-up reports  
 Composing and representing the agency in more than a dozen presentations annually  
 Co-coordinating 2017 agency-wide Combined Federal Campaign (CFC)  
 Monitoring over \$14 million in aggregated federal funds  
 Representing agency to the Board on Research Data and Information (BRDI)  
 Agency-wide expert on research data management and scholarly communications
- Graduate Student Researcher, UCLA** Fall 2011-Fall 2016  
 Researched the data, society, and infrastructures surrounding modern astronomy sky surveys  
 Employed ethnographic field methods, semi-structured interviews, and document analysis  
 Oversaw and evaluated two-quarter Digital Humanities undergraduate intern  
 Developed and enhanced multi-university team organization as original project manager  
 Funded by the National Science Foundation and the Alfred P. Sloan Foundation
- Research Associate, West Semitic Research Project & Inscriptifact** Fall 2007-2011  
 Trained, supervised, and monitored 10 undergraduate student researchers  
 Executed and processed innovative multi-view digital capture methods of artifact photography

**Research Assistant, USC Archaeology Research Center** Fall 2003-2011  
 Coached and built the research and analysis talents of 20 undergraduates  
 Conducted archaeometric analysis of archaeological artifacts from Turkey  
 Lead- and co-authored multiple research papers for international archaeological conferences

**Registrar, Alalakh Excavations** Summer 2010  
 Supervised and administered the workflow of all excavated material at 15-person field site  
 Identified, assessed, and instituted improved schemas for site-wide database management system  
 Analyzed and created publishable records for hundreds of archaeological finds

**Archaeologist, Alalakh Excavations** Summer 2008-Summer 2009  
 Specialized in pottery analysis and organization  
 Documented thousands of pottery sherds through drawing and photography

**Archaeologist, Kenan Tepe Excavations** Summer 2006/Summer 2008  
 Performed archaeological research on ceramic and metal slag  
 Recommended and oversaw implementation of improved site-wide artifact organizational system

## ACADEMIC AND PROFESSIONAL CONTRIBUTIONS

**Peer Reviewer** Confidential  
 International Digital Curation Conference  
 National Science Foundation, Division of Advanced Cyberinfrastructure  
 iConference and iConference Doctoral Colloquium  
 UCLA *InterActions*

**Collaborator, Software Citation Policy Working Groups** 2015-2016  
 CodeMeta Team Member: Developing a crosswalk table for software metadata  
 Force11 Software Citation Working Group: Generating a consolidated set of citation principles  
 AAS/GitHub workshop participant: Indexing Astronomical Software

**Collaborator, Police Officer Involved Homicide (POI) Database Project** 2014-2015  
 Founding member of social justice-based team research project  
 Investigating the status of POI homicide data collection and access in LA County  
 More information at <http://www.poihomicides.org/about.html>

**Student Representative, Doctoral Planning Committee** 2013-2014  
 Represent all UCLA Information Studies doctoral students to the PhD planning committee  
 Serve on the panel determining doctoral admissions for 2014 cohort

**National Chair, Social Media and Promotion for WAC-7** 2012  
 Created and ran online promotion campaign for major international archaeology conference  
 Organized committee of a dozen international archaeology students

**Chair, World Archaeological Congress' Global Libraries Program** 2009-2016  
 Organize the donation of archaeological research resources donated to 35 international libraries  
 Chair a committee of nine international scholars

**Co-Chair, Next Generation Project**

2009-2011

Mobilizing students and young archaeology professionals through social networking  
Engaging student participants in international conferences

**AWARDS AND FELLOWSHIPS**

|  |                     |
|--|---------------------|
| Co-author to successful \$1.4M Alfred P. Sloan Foundation grant                      | 2015                |
| UCLA Information Studies Hal Borko Fellowship / Dean's Scholar                       | 2015                |
| Doctoral Colloquium Invited Participant, iConference                                 | 2015                |
| Regents Stipend  | 2015                |
| 10 <sup>th</sup> IEEE International Conference on e-Science Student Sponsorship      | 2014                |
| Fully-funded Graduate Student Researcher position                                    | Fall 2011-Fall 2016 |
| Unrestricted Fellowship awarded by UCLA Graduate Division                            | Fall 2012-Fall 2016 |
| Special Libraries Association, Southern California: Karen Sternheim Scholarship      | 2010                |
| American Business Women's Association (ABWA) Scholarship                             | 2009-2010           |
| Phi Beta Kappa Undergraduate Recognition Award                                       | 2007                |
| USC Provost Undergraduate Research Symposium Awards                                  | 2007                |
| Interdisciplinary Award (equivalent to 1 <sup>st</sup> prize) in the Social Sciences |                     |
| "Rewriting the History of Technology: unique proof of tin bronze manufacture"        |                     |
| First Place in the Humanities category (group entry)                                 |                     |
| "Re-examining the Past: a Multi-University Collaborative Research and                |                     |
| Mentoring Project on Ancient Near Eastern Cylinder Seals"                            |                     |

**MEMBERSHIPS**

American Library Association (ALA)  
Association of College & Research Libraries (ACRL)  
Association for Information Science and Technology (ASIS&T)  
Future of Research Communications and e-Scholarship (Force11)  
Research Data Alliance (RDA)  
World Archaeological Congress (WAC)

**REFEREED JOURNAL ARTICLES**

Borgman, C. L., Golshan, M. S., Sands, A. E., Wallis, J. C., Cummings, R. L., Darch, P. T., & Randles, B. M. (2016). Data Management in the Long Tail: Science, Software, and Service. *International Journal of Digital Curation*, 11(1), 128–149.  
<https://doi.org/10.2218/ijdc.v11i1.428>

Borgman, C. L., Darch, P. T., Sands, A. E., Pasquetto, I. V., Golshan, M. S., Wallis, J. C., & Traweek, S. (2015). Knowledge infrastructures in science: data, diversity, and digital libraries. *International Journal on Digital Libraries*, 16(3-4), 207–227.  
<http://doi.org/10.1007/s00799-015-0157-z>

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 seafloor biosphere and beyond. *International Journal on Digital Libraries*, 16(1), 1–17. <http://doi.org/10.1007/s00799-015-0137-3>

Sands, A. E., Borgman, C. L., Traweek, S., & Wynholds, L. A. (2014). We're Working On It: Transferring the Sloan Digital Sky Survey from Laboratory to Library. *International Journal of Digital Curation*, 9(2), 98–110. <http://doi.org/10.2218/ijdc.v9i2.336>

Sands, A. E. (2012). Scholarly Publication and WAC: The Need for a Critical Response. *Archaeologies*, 8(1), 12–17. <http://doi.org/10.1007/s11759-012-9196-x>

### **REFEREED CONFERENCE PAPERS**

Darch, P. T., & Sands, A. E. (2017). Uncertainty About the Long-Term: Digital Libraries, Astronomy Data, and Open Source Software. In *2017 IEEE/ACM Joint Conference on Digital Libraries (JCDL)*. Toronto, Canada.

Borgman, C. L., Darch, P. T., Sands, A. E., & Golshan, M. S. (2016). The Durability and Fragility of Knowledge Infrastructures: Lessons Learned from Astronomy. In *Proceedings of the 79th Association for Information Science and Technology Annual Meeting* (Vol. 53). Copenhagen: ASIS&T. <https://arxiv.org/abs/1611.00055>

Pasquetto, I. V., Sands, A. E., Darch, P. T., & Borgman, C. L. (2016). Open Data in Scientific Settings: From Policy to Practice. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 1585–1596). New York, NY, USA: ACM. <http://doi.org/10.1145/2858036.2858543>

Borgman, C. L., Golshan, M. S., Sands, A. E., Wallis, J. C., Cummings, R. L., & Randles, B. M. (2016). Data Management in the Long Tail: Social and Technical Opportunities. Presented at the 11th International Digital Curation Conference, Amsterdam. *Tied Runner-Up for Best Research Paper*.

Pasquetto, I. V., Sands, A. E., & Borgman, C. L. (2015). Exploring Openness in Data and Science: What is “Open,” to Whom, When, and Why? In *Proceedings of the Association for Information Science and Technology* (Vol. 52, pp. 1–2). St. Louis, MO. <http://doi.org/10.1002/pra2.2015.1450520100141>

Darch, P. T., & Sands, A. E. (2015). Beyond Big or Little Science: Understanding Data Lifecycles in Astronomy and the Deep Seafloor Biosphere. In *Proceedings of the iConference 2015*, Newport Beach, CA. <http://hdl.handle.net/2142/73655>

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. In *2014 IEEE/ACM Joint Conference on Digital Libraries (JCDL)* (pp. 257–266). <http://doi.org/10.1109/JCDL.2014.6970177>

Wynholds, L. A., Wallis, J. C., Borgman, C. L., Sands, A. E., & Traweek, S. (2012). Data, Data Use, and Scientific Inquiry: Two Case Studies of Data Practices. In *Proceedings of the 12th ACM/IEEE-CS Joint Conference on Digital Libraries* (pp. 19–22). New York, NY, USA: Association for Computing Machinery. <http://doi.org/10.1145/2232817.2232822>

## **POLICY REPORTS**

Owens, T. J., Sands, A. E., Reynolds, E., Neal, J., Mayeaux, S., & Marx, M. (In Production). Digital Infrastructures that Embody Library Principles: The IMLS National Digital Platform as a Framework for Digital Library Tools and Services. In P. Fernandez & K. Tilton (Eds.), *Applying Library Values to Emerging Technology: Tips and Techniques for Advancing within Your Mission*. Association of College and Research Libraries.

Owens, T. J., Sands, A. E., Reynolds, E., Neal, J., & Mayeaux, S. (2017). *NDP at Three: The First Three Years of IMLS Investments to Enhance the National Digital Platform for Libraries*. Institute of Museum and Library Services. <https://www.imls.gov/publications/ndp-three-report>

Hanisch, R., Hildreth, M., McEwan, L., Stodden, V., Watts, G., Katz, D. S., Meyers, N., & Sands, A. E. (2017). Final Report: Workshops to Gauge the Impact of Requirements for Public Access to Data Produced by NSF-funded Research in Mathematics and the Physical Sciences. <https://mpsopendata.crc.nd.edu/index.php/final-report>

Owens, T. J., Sands, A. E., Reynolds, E., Neal, J., and Mayeaux, S. (2017). Guest Editorial: Libraries Advancing the National Digital Platform. *D-Lib Magazine*, May/June 2017, 23(5/6). <https://doi.org/10.1045/may2017-guest-editorial>

CodeMeta: an exchange schema for software metadata. (2016 v.1; 2017 v.2).  
[doi:10.5063/schema/codemeta-1.0](https://doi.org/10.5063/schema/codemeta-1.0) ; [doi:10.5063/schema/codemeta-2.0](https://doi.org/10.5063/schema/codemeta-2.0)

## **PRESENTATIONS**

Sands, A. E. (2017, December). *The IMLS National Digital Platform: Principles, Librarianship, and Digital Infrastructures*. Oral Presentation presented at the Coalition for Networked Information (CNI) Fall Membership Meeting, Washington, D.C.

Wurl, J., Sands, A. E., Barber, L., Hswe, P., & Williford, C. (2017, December). *Update on Funding Possibilities, Priorities, and Trends*. Oral Panel Presentation presented at the Coalition for Networked Information (CNI) Fall Membership Meeting, Washington, D.C.

Sands, A. E. (2017). *Funding Your STEAM Projects: Applying for IMLS Grants*. Webinar presented at the Library Journal's Mission Possible: Empower Your Community with Coding.

- Sands, A. E. (2017). *Agency Priorities of the Institute of Museum and Library Services*. Oral Presentation at the Fall 2017 Board on Research Data and Information (BRDI) Board Meeting, National Academy of Sciences, Washington, DC.
- Sands, A. E. (2017). *Funding Opportunities at the Institute of Museum and Library Services*. Lightning Talk presented at the Digital Library Federation (DLF) Liberal Arts Colleges/HBCUs Pre-Conference, Pittsburgh, PA.
- Sands, A. E. (2017). *The IMLS National Digital Platform: Research Data Management & Digital Scholarship Services*. Webinar presented at the Council on Library and Information Resources (CLIR) and Digital Library Forum (DLF) E-Research Network Course.
- Sands, A. E. (2017). *The IMLS National Digital Platform and Web Archiving*. Oral Presentation to the Web Archiving and Digital Libraries (WADL) workshop at the *IEEE/ACM Joint Conference on Digital Libraries (JCDL)*. Toronto, Canada.
- Sands, A. E., & Greenberg, J. (2017). *Funder Panel*. Oral Panel Presentation presented at the “Data Science in Libraries” forum, Pittsburgh, PA.
- Sands, A. E. (2017). *Research Data and Libraries: The IMLS National Digital Platform Funding Category*. Lightning Talk presented at the Research Data Access and Preservation (RDAP) Summit, Seattle, WA.
- Sands, A. E. (2017). *Understanding Grant Funding Opportunities for Digital Library Projects*. Oral panel presentation at the Association of College and Research Libraries (ACRL) conference. Baltimore, MD.
- Sands, A. E. (2017). Library Publishing and the IMLS National Digital Platform. Oral presentation at the Library Publishing Forum annual meeting. Baltimore, MD.
- Sands, A. E., & Isaksen, M. (2017, February). *Grant Opportunities from the Institute of Museum and Library Services*. Oral Presentation presented at the Grants Resource Center (GRC) Funding Competitiveness Conference, Washington, D.C.
- Sands, A. E. (2017). *Agency Priorities of the Institute of Museum and Library Services*. Oral Presentation at the Spring 2017 Board on Research Data and Information (BRDI) Board Meeting, National Academy of Sciences, Washington, DC.
- Borgman, C. L., Darch, P. T., Sands, A. E., & Golshan, M. S. (2017). *Durability and Fragility of Knowledge Infrastructures: Lessons Learned from Astronomy*. Oral presentation to the Astrophysics Journal Club, UCLA Division of Astronomy & Astrophysics.
- Borgman, C. L., Sands, A. E., & Golshan, M. S. (2017). *Users and uses of a digital data archive: A case study of DANS*. Keynote presented at the KNOWeSCAPE, Sofia, Bulgaria.

- Darch, P. T., & Sands, A. E., Borgman, C.L., Golshan, M.S., Traweek, S. (2017). From Sky to Archive: Long Term Management of Sky Survey Data. Oral Presentation at the 229th Meeting of the American Astronomical Society, Grapevine, TX.
- Sands, A. E. (2017). *The IMLS National Digital Platform Funding Category*. Oral webinar presented to the SHARE Curation Associates. Webinar.
- Borgman, C. L., Scharnhorst, A., van den Berg, H., van de Sompel, H., Sands, A. E., Golshan, M. S., & Treloar, A. (2016). *Motivations for Sharing and Reusing Data: Complexities and Contradictions in the Use of a Digital Data Archive*. Oral presentation, DANS, The Hague, The Netherlands.
- Owens, T. J. & Sands, A.E. (2016). *Agency Priorities of the Institute of Museum and Library Services*. Oral presentation at the Fall 2016 Board on Research Data and Information (BRDI) Board Meeting. National Academy of Sciences, Washington, DC.
- Borgman, C. L., Scharnhorst, A., Sands, A. E., Golshan, M. S., & Treloar, A. (2016). *Motivations for Sharing and Reusing Data: Complexities and Contradictions in the Use of a Digital Data Archive*. Oral Seminar Presentation at the Quello Center on Media, Communication, and Information Policy, Michigan State University.
- Borgman, C. L., Scharnhorst, A., Sands, A. E., Golshan, M. S., & Treloar, A. (2016). *Motivations for Sharing and Reusing Data: Complexities and Contradictions in the Use of a Digital Data Archive*. Oral presentation at the ICPSR Council Meeting, ICPSR, University of Michigan.
- Sands, A. E., & Borgman, C. L. (2016). *Open Data in Astronomy Sky Surveys*. Panel Presentation at SciDataCon: Advancing the Frontiers of Data in Research, Denver, CO.
- Pasquetto, I. V., & Sands, A. E. (2016). *Scientific Open Data: Questions of Labor and Public Benefit*. Oral presentation at the 4S/EASST 2016: Science and Technology by Other Means, Barcelona.
- Sands, A. E. (2016, August). *Data Management in the Sloan Digital Sky Survey and Large Synoptic Survey Telescope Projects*. Presented at the IPAC LSST Weekly Team Meeting, Infrared Processing and Analysis Center (IPAC).
- Sands, A. E., & Darch, P. T. (2016). *What does it mean to manage sky survey data? A model to facilitate stakeholder conversations*. Oral Presentation at the 228th Meeting of the American Astronomical Society, San Diego, CA.
- Darch, P. T., & Sands, A. E. (2016). *It's about time: How do sky surveys manage uncertainty about scientific needs many years into the future*. Oral Presentation at the 228th Meeting of the American Astronomical Society, San Diego, CA.

Sands, A. E. (2016). *Data Management in the Sloan Digital Sky Survey and Large Synoptic Survey Telescope Projects*. Poster presented at the Cultural Patterns: Multiscale Data-driven Models, Institute for Pure and Applied Mathematics, UCLA.

Randles, B. M., Sands, A. E., & Borgman, C. L. (2016). *Too big to share? Scaling up knowledge transfer workflows from little science to big science*. Poster presented at the FORCE 2016 Conference, Portland, OR. *Recognition for Best Poster*.

Sands, A. E. (2016). *Data Infrastructures in the Sloan Digital Sky Survey and Large Synoptic Survey Telescope Projects*. Poster presented at FORCE 2016 Conference, Portland, OR.

Sands, A. E., & Golshan, M. S. (2016). *Research Data Management in Astronomy*. Presented at the Trends in eHumanities, Amsterdam.

Sands, A. E., & Golshan, M. S. (2016). *What is Data Management? Interpreting stakeholder expectations for archiving and serving research data*. Presented at the DANS colloquium, The Hague.

Darch, P. T., Sands, A. E., & Traweek, S. (2015). *Designing Data Infrastructures with Multiple, Disparate Networks*. Oral presentation at the 4S 40th Annual Meeting, Denver, CO.

Currie, M., Paris, B., Pasquetto, I. V., Pierre, J., Sands, A. E., & Lievrouw, L. A. (2015). *Police Officer-Involved Homicide Database Project*. Oral presentation at the iConference 2015, Newport Beach, CA.

Sands, A. E. (2015). *Managing Astronomy Research Data: Case Studies of Big and Small Research Projects*. Oral presentation at the 225th American Astronomical Society Meeting, Seattle, WA.

Sands, A. E. (2014). *Managing Astronomy Research Data: Case Studies of Big and Small Research Projects*. Poster presented at the 10th IEEE International Conference on e-Science, Guarujá, Sao Paulo, Brazil.

Sands, A. E. (2014). *Who will manage scientific research data?* Poster presented at the Research Data Access and Preservation Summit 2014, San Diego, CA.

Sands, A. E. (2014). *Scientific Research Data: Volume, Infrastructure, and Management Expertise*. Oral presentation at Why Things Matter conference, California State Fullerton.

Sands, A. E., Borgman, C. L., Wynholds, L. A., & Traweek, S. (2014). *"We're Working on It:" Transferring the Sloan Digital Sky Survey from Laboratory to Library*. Oral presentation at the 9th International Digital Curation Conference, San Francisco, CA.

Sands, A. E., Traweek, S., & Borgman, C. L. (2013). *Co-Producing Knowledge: Scientific Research Data Practices and Workforce*. Oral presentation at the Society for Social Studies of Science (4S) annual meeting, San Diego, CA.



- Sands, A. E., Aguilar, M. A., & Pappu, S. (2013). *The WAC Global Libraries Program*. Poster presented at the Seventh World Archaeological Congress, The Dead Sea, Jordan.
- Borgman, C. L., Sands, A. E., & Wynholds, L. A. (2013). *Astronomy: On the Bleeding Edge of Scholarly Infrastructure*. Poster presented at the American Astronomical Society, Long Beach, CA.
- Sands, A. E., Borgman, C. L., Wynholds, L. A., & Traweek, S. (2012). *Follow the Data: How astronomers use and reuse data*. Poster presented at the Association for Information Science and Technology 75th Annual Meeting, Baltimore, MD.
- Sands, A. E., Borgman, C. L., Wynholds, L. A., & Traweek, S. (2012). *Surf's Up: Riding the Big Data Wave*. Poster presented at the Internet, Politics, Policy 2012: Big Data, Big Challenges, Oxford Internet Institute, University of Oxford.
- Sands, A. E., & Butler, K. (2010). The Next Generation Project: Discussing Archaeology in Conflict (Vol. 55/VI). Oral presentation at the International Conference on "Archaeology in Conflict," Vienna, Austria: Forum Archaeologiae.
- Sands, A. E., & Butler, K. (2010). The Next Generation: Mobilizing Social Networks for Heritage-based International Cooperation. *Proceedings of the 7th International Congress on the Archaeology of the Ancient Near East Volume 2* (pp. 139–149). London, U.K.
- Sands, A. E., & Butler, K. (2010). The Next Generation: Students Discuss Archaeology in the 21st Century. *Present Pasts* (Vol. 2/1, pp. 209–216). doi:10.5334/pp.34
- Butler, S., Dodd, L., Sands, A. E., & Harrington, L. (2010). Visualizing the Native American Cultural Landscape. A Significant New Research and Imaging Method. In K. Hedges (Ed.), (Vol. 36, pp. 53–58). American Rock Art Research Association.
- Harrington, L., Dodd, L., Sands, A. E., Butler, S., & Freers, S. (2009). Visualizing the Native American Cultural Landscape: A Significant New Research and Imaging Method (Vol. 23). Oral presentation at the Society for California Archaeology.
- Dodd, L., Abraham, M., & Sands, A. E. (2007). *Direct Evidence for Bronzmaking Techniques in the Upper Tigris River Region*. Oral presentation at the Annual Meeting of the American Schools of Oriental Research (ASOR), San Diego, CA.
- Sands, A. E., Dodd, L., & Abraham, M. (2007). *Middle Bronze Age Pottery Production in the Upper Tigris River Valley: a view from Kenan Tepe*. Oral presentation at the Society for American Archaeology (SAA) Annual Meeting, Austin, TX.

Dodd, L., Painter, C., Parker, B., Abraham, M., Sands, A. E., & Zhang, C. (2005). *The Upper Tigris Archaeological Research Project (UTARP): A Report on the 2004-2005 Excavation Seasons at Kenan Tepe*. Oral presentation at the Annual Meeting of the American Schools of Oriental Research (ASOR), Philadelphia, PA.

Dodd, L., Abraham, M., Sands, A. E., Zhang, C., & Parker, B. (2005). *Bronze Age furnace from the Upper Tigris River*. Poster presented at the Metallurgy - a touchstone for cross-cultural interaction, British Museum, London.