

Mat Kelly

Engineering and Computational Sciences Building
Old Dominion University
4700 Elkhorn Avenue Suite 3102
Norfolk, Virginia 23529
mkelly@cs.odu.edu
www.cs.odu.edu/~mkelly

RESEARCH INTERESTS

- Digital Preservation, Personal Web Archiving, Information Visualization.

Education

- 2012–present **Doctor of Philosophy in Computer Science**
Old Dominion University, Norfolk, VA.
- 2010–2012 **Master of Science in Computer Science**
Old Dominion University, Norfolk, VA.
Thesis: An Extensible Framework for Creating Personal Archives of Web Resources Requiring Authentication
- 2001–2006 **Bachelor of Science in Computer Science**
University of Florida, Gainesville, FL.

Professional Experience

- 2015 OLD DOMINION UNIVERSITY
Instructor, CS418 - Web Programming
Norfolk, VA.
- 2011–present OLD DOMINION UNIVERSITY DEPARTMENT OF COMPUTER SCIENCE
Graduate Research Assistant
Norfolk, VA.
- 2011–present NASA LANGLEY RESEARCH CENTER
Mobile Applications Developer
Hampton, VA.
- 2009 BMW GROUP INFORMATION TECHNOLOGY RESEARCH CENTER
Research Intern
Greenville, SC.
- 2006–present BLADE SOFTWARE / BLADE AGENCY
Web Programmer
Gainesville, FL.
- 2006–2007 SUMTOTAL SYSTEMS, INC. / MINDSOLVE TECHNOLOGIES, INC.
Web Programmer
Gainesville, FL.
- 2005–2006 CENTER FOR INSTRUCTIONAL TECHNOLOGY AND TRAINING AT UNIVERSITY OF FLORIDA
Web Designer
Gainesville, FL.
- 2003–2006 THE INDEPENDENT FLORIDA ALLIGATOR
Managing Editor, New Media
Gainesville, FL.

Publications

JOURNAL PUBLICATIONS

- [1] Justin F. Brunelle, Mat Kelly, Michele C. Weigle, and Michael L. Nelson, “The Impact of JavaScript on Archivability,” *International Journal of Digital Libraries (IJDL)*, 17(2), pp. 95-117, 2015.
- [2] Justin F. Brunelle, Mat Kelly, Hany SalahEldeen, Michele C. Weigle and Michael L. Nelson, “Not All Mementos Are Created Equal: Measuring the Impact of Missing Resources,” *International Journal of Digital Libraries (IJDL)*, 16(3), pp. 283-301, 2015.

CONFERENCE PUBLICATIONS (PEER-REVIEWED)

- [1] Mat Kelly, Lulwah M. Alkawai, Sawood Alam, Michael L. Nelson, Michele C. Weigle, and Herbert Van de Sompel, “Impact of URI Canonicalization on Memento Count,” In *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL)*, pp. 303-304, 2017.
- [2] Sawood Alam, Mat Kelly, Michele C. Weigle, and Michael L. Nelson, “Client-side Reconstruction of Composite Mementos Using ServiceWorker,” In *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL)*, pp. 237-240, 2017.
- [3] John A. Berlin, Mat Kelly, Michele C. Weigle, and Michael L. Nelson, “WAIL: Collection-Based Personal Web Archiving,” In *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL)*, pp. 340-341, 2017.
- [4] Mat Kelly, Sawood Alam, Michael L. Nelson, and Michele C. Weigle, “InterPlanetary Wayback: Peer-To-Peer Permanence of Web Archives,” In *Proceedings of the International Conference on Theory and Practice of Digital Libraries (TPDL)*, pp. 411-416, 2016.
- [5] Sawood Alam, Mat Kelly, and Michael L. Nelson, “InterPlanetary Wayback: The Permanent Web Archive,” In *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL)*, pp. 273-274, 2016.
- [6] Wesley Jordan, Mat Kelly, Justin. F. Brunelle, Laura Vobrak, Michele C. Weigle, and Michael L. Nelson, “Mobile Mink: Merging Mobile and Desktop Archived Webs,” In *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL)*, pp. 243-244, 2015.
- [7] Michael Ruffing, Yangyang He, Mat Kelly, Jason O. Hallstrom, Stephan Olariu, and Michele C. Weigle. “A Retasking Framework For Wireless Sensor Networks,” In *Proceedings of the IEEE Military Communications Conference (MILCOM)*, pp. 1066-1071, 2014.
- [8] Justin F. Brunelle, Mat Kelly, Hany SalahEldeen, Michele C. Weigle, and Michael L. Nelson, “Not All Mementos Are Created Equal: Measuring The Impact Of Missing Resources,” In *Proceedings of the IEEE/ACM Joint Conference on Digital Libraries (JCDL)*, pp. 321-330, 2014.
- [9] Mat Kelly, Michael L. Nelson, and Michele C. Weigle, “The Archival Acid Test: Evaluating Archive Performance on Advanced HTML and JavaScript,” In *Proceedings of the IEEE/ACM Joint Conference on Digital Libraries (JCDL)*, pp. 25-28, 2014.
- [10] Mat Kelly, Michael L. Nelson, and Michele C. Weigle, “Mink: Integrating the Live and Archived Web Viewing Experience Using Web Browsers and Memento,” In *Proceedings of the IEEE/ACM Joint Conference on Digital Libraries (JCDL)*, pp. 469-470, 2014.
- [11] Mat Kelly, Michael L. Nelson, and Michele C. Weigle. “Graph-Based Navigation of a Box Office Prediction System,” In *Proceedings of the IEEE VIS 2013*, 2013.
- [12] Mat Kelly, Justin F. Brunelle, Michele C. Weigle, and Michael L. Nelson. “On the Change in Archivability of Websites Over Time,” In *Proceedings of the International Conference on Theory and Practice of Digital Libraries (TPDL)*, pp. 35-47, 2013.

- [13] Mat Kelly and Michele C. Weigle, "WARCreate - Create Wayback-Consumable WARC Files from Any Webpage," In Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL), pp. 437-438, 2012.
- [14] Thad Chee, Matthew Kelly, Louis Nguyen, Patrick Minnis, Rabindra Palikonda, Douglas A. Spangenberg, J. Kirk Ayers. Access to Real-time and Historic Satellite Products from a Mobile Application. Poster Presented at: American Geophysical Union Fall Meeting, 2011.

CONFERENCE PRESENTATIONS

- [1] Mat Kelly, Lulwah M. Alkwai, Sawood Alam, Michael L. Nelson, Michele C. Weigle, and Herbert Van de Sompel, "Impact of URI Canonicalization on Memento Count," Presented at the Web Archiving and Digital Libraries Workshop (WADL), 2017.
- [2] Sawood Alam, Mat Kelly, Michele C. Weigle, and Michael L. Nelson, "Avoiding Zombies in Archival Replay Using ServiceWorker," Presented at the Web Archiving and Digital Libraries Workshop (WADL), 2017.
- [3] Michele C. Weigle, Michael L. Nelson, Mat Kelly, and John Berlin, "Archive What I See Now - Personal Web Archiving with WARCS," Presented at the International Internet Preservation Consortium (IIPC) Web Archiving Conference (WAC), 2017.
- [4] Mat Kelly and David Dias, "A Collaborative, Secure, and Private InterPlanetary Wayback Web Archiving System using IPFS," Presented at the International Internet Preservation Consortium (IIPC) Web Archiving Conference (WAC), 2017.
- [5] Mat Kelly, "Tools for the Personal Web Archivist: WARCreate, WAIL, Mink, InterPlanetary Waybacks," Presented at Archives Unleashed 4.0: Web Archive Datathon, 2017.
- [6] Mat Kelly, "Exploring Aggregation of Personal, Private, and Institutional Web Archives," Presented at Archives Unleashed 2.0: Web Archive Datathon, 2016.
- [7] Mat Kelly, "InterPlanetary Wayback: The Permanent Web Archive," Presented at the Web Archiving and Digital Libraries Workshop (WADL), 2016.
- [8] Mat Kelly, "A Framework for Aggregating Private and Public Web Archives," at the ACM/IEEE Joint Conference on Digital Libraries (JCDL), Doctoral Consortium, 2015.
- [9] Mat Kelly, Michael L. Nelson, and Michele C. Weigle, "Visualizing Digital Collections of Web Archives," Web Archiving Collaboration: New Tools and Models Workshop, 2015.
- [10] Mat Kelly, "Facilitation of the A Posteriori Replication of Web Published Satellite Imagery", Virginia Space Grant Consortium 2015 Student Research Conference, 2015.
- [11] Mat Kelly, Michael L. Nelson, and Michele C. Weigle. "Efficient Thumbnail Summarization for Web Archives," Digital Preservation 2014, 2014.
- [12] Mat Kelly. "Archive What I See Now," Archive-It Partner Meeting, 2013.
- [13] Michael L. Nelson, Scott G. Ainsworth, Justin F. Brunelle, Mat Kelly, Hany SalahEldeen and Michele C. Weigle. "Who Will Archive the Archives? Thoughts About the Future of Web Archiving," Wolfram Data Summit 2013, 2013.
- [14] Mat Kelly, Michael L. Nelson and Michele C. Weigle. "WARCreate and WAIL: WARC, Wayback and Heritrix Made Easy," Digital Preservation 2013, Workshops and Sessions: Web Archiving, 2013.
- [15] Mat Kelly, Michele C. Weigle and Michael L. Nelson. "Making Enterprise-Level Archive Tools Accessible for Personal Web Archiving," Personal Digital Archiving 2013, Poster Session, 2013.
- [16] Mat Kelly, Michele C. Weigle and Michael L. Nelson. "WARCreate - Create Wayback-Consumable WARC Files from Any Webpage," Digital Preservation 2012, Tools Demo Session: Web Archiving, 2012.

- [17] Mat Kelly, Syed R. Rizvi, Liang Chen, Chinmay Lokesh, Stephan Olariu and Michele C. Weigle. ALERT: A Next-generation Emergency Response System for First Responders using Retasking of Wireless Sensor Networks, 13th Annual Tidewater Student Research Poster Session, 2011.
- [18] Mat Kelly, Michele C. Weigle and Michael L. Nelson. Archiving Your Facebook Pages Using Archive Facebook. NDIIPP/NDSA Partners Meeting Special Interest Session: Web Archiving, 2011.

ARTICLES

- [1] Sawood Alam, Mat Kelly, Michele C. Weigle, and Michael L. Nelson, “InterPlanetary Wayback: The Permanent Web Archive,” Bulletin of the IEEE Technical Committee on Digital Libraries (TCDL), 13(1), 2017.
- [2] Mat Kelly, Lulwah M. Alkwai, Michael L. Nelson, Michele C. Weigle, and Herbert Van de Sompel, “Impact of URI Canonicalization on Memento Count,” Technical Report arXiv:1703.03302, 2017.
- [3] Mat Kelly, “A Framework for Aggregating Private and Public Web Archives,” Bulletin of the IEEE Technical Committee on Digital Libraries (TCDL), 11(3), 2015.
- [4] Mat Kelly, Justin F. Brunelle, Michele C. Weigle and Michael L. Nelson. “A Method for Identifying Personalized Representations in the Archives,” D-Lib Magazine, 19(11/12), 2013.
- [5] David Helman, Matthew Kelly, Martin Guttman, Bill Carter, Enrique Castro-Leon, Thomas Kellerer, Dror Shenkar. “Preserving Performance While Saving Power Using Intel Intelligent Power Node Manager and Intel Data Center Manger”, 2009.

Awards and Recognition

- [1] Best Poster Award, ACM/IEEE JCDL 2017.
- [2] Donald W. Reynolds Journalism Institute Scholar, 2016.
- [3] Best Poster Award, ACM/IEEE JCDL 2015.
- [4] Best Student Paper Award, ACM/IEEE JCDL 2014.
- [5] NASA Virginia Space Grant Consortium Graduate Fellow, 2014.
- [6] Acknowledged Contributor, RFC7089: HTTP Framework for Time-Based Access to Resource States – Memento, 2013.
- [7] Future Steward Innovation Award Recipient, National Digital Stewardship Alliance (NDSA) / Library of Congress, 2012.
- [8] Featured Graduate Student, Old Dominion University Department of Computer Science, 2012.

Service

- [1] Organizing Committee, Publicity Chair, Joint Conference on Digital Libraries, 2018.
- [2] Reviewer, Joint Conference on Digital Libraries, 2018.
- [3] Reviewer, Access 2017 Conference, 2017.