C. Seth Parker

University of Kentucky
Department of Computer Science
Davis Marksbury Building
Lexington, KY 40506

Phone: (859) 218-2044
Email: c.seth.parker@uky.edu
Homepage: https://www.cs.uky.edu/dri
GitHub: csparker247

Education

B.A. Media and Communications, Asbury University, May 2010.

Ph.D. Computer Science, University of Kentucky, Expected December 2022.

Employment

2014–present	Researcher and Project Manager, Department of Computer Science, University of Kentucky, Lexington, KY.
2011–2018	Video Production Coordinator, Center for Visualization and Virtual Environments, University of Kentucky, Lexington, KY.

Projects and Software

Parker, C. Seth. *OpenABF. A single-header C++ library of angle-based flattening algorithms*. Comp. software. Jan. 2021. DOI: 10.5281/zenodo.4483858.

Parker, C. Seth, Kristina Gessel, and Stephen Parsons. *Volume Cartographer. A cross-platform C++ library and toolkit for the recovery and restoration of damaged cultural artifacts*. Comp. software. Mar. 2021. DOI: 10.5281/zenodo.4604881.

Parker, C. Seth. *Structured Metadata Engine and Graph Objects Library*. Comp. software. Oct. 2020. DOI: 10.5281/zenodo.4134987.

Publications

Journal Articles

Chapman, Christy Y., **C. Seth Parker**, Ali Bertelsman, Kristina Gessel, Hannah Hatch, Kyra Seevers, James H. Brusuelas, Stephen Parsons, and W. Brent Seales. "The Digital Compilation and Restoration of Herculaneum Fragment P.Herc.118". In: *Manuscript Studies: A Journal of the Schoenberg Institute for Manuscript Studies* 6.1 (2021), pp. 1–32. DOI: 10.1353/mns.2021.0000.

Parker, Clifford Seth, Stephen Parsons, Jack Bandy, Christy Chapman, Frederik Coppens, and William Brent Seales. "From invisibility to readability: Recovering the ink of Herculaneum". In: *PLOS ONE* 14.5 (May 2019), pp. 1–17. DOI: 10.1371/journal.pone.0215775.

Parsons, Stephen, **C. Seth Parker**, and W. Brent Seales. "The St. Chad Gospels: Diachronic Manuscript Registration and Visualization". In: *Manuscript Studies: A Journal of the Schoenberg Institute for Manuscript Studies* 2.2 (2017), pp. 483–498. DOI: 10.1353/mns.2017.0022.

Seales, William Brent, **Clifford Seth Parker**, Michael Segal, Emanuel Tov, Pnina Shor, and Yosef Porath. "From damage to discovery via virtual unwrapping: Reading the scroll from En-Gedi". In: *Science Advances* 2.9 (2016). DOI: 10.1126/sciadv.1601247.

Segal, Michael, Emanuel Tov, William Brent Seales, **Clifford Seth Parker**, Pnina Shor, and Yosef Porath. "An Early Leviticus Scroll from En-Gedi: Preliminary Publication". In: *Textus* 26 (2016).

Conference Proceedings

Chapman, Christy, **Seth Parker**, Stephen Parsons, and W. Brent Seales. "Using METS to Express Digital Provenance for Complex Digital Objects". In: *Metadata and Semantic Research*. Ed. by Emmanouel Garoufallou and María-Antonia Ovalle-Perandones. Cham: Springer International Publishing, Mar. 2021, pp. 143–154. ISBN: 978-3-030-71903-6. DOI: 10.1007/978-3-030-71903-6_15.

Parsons, Stephen, Jacob Chappell, **C. Seth Parker**, and W. Brent Seales. "Machine Learning Infrastructure on the Frontier of Virtual Unwrapping". In: *Proceedings of International Symposium on Grids & Clouds 2021 (ISCG2021)*. Academia Sinica Computing Centre (ASGC), Taipei, Taiwan (Online): Proceedings of Science, Mar. 2021, p. 15. DOI: 10.22323/1.378.0015.

Gessel, Kristina, Stephen Parsons, **Clifford Parker**, and William Seales. "Towards Automating Volumetric Segmentation for Virtual Unwrapping". In: *Proceedings of the 25th International Conference on Cultural Heritage and New Technologies 2020.* Nov. 2020.

Parsons, Stephen, Kristina Gessel, **Clifford Parker**, and William Seales. "Deep Learning for More Expressive Virtual Unwrapping". In: *Proceedings of the 25th International Conference on Cultural Heritage and New Technologies 2020.* Nov. 2020.

Ganio, Monica, Stephen Parsons, **Seth Parker**, Marie Svoboda, Brent Seales, and Catherine Schmidt Patterson. "Unbending light: new computational methods for the correction of 3D effects in scanning XRF". In: *Optics for Arts, Architecture, and Archaeology VII*. Conference Proceedings of SPIE Volume 11058. 2019. DOI: 10.1117/12.2525038.

Parsons, Stephen, **C. Seth Parker**, Frederik Coppens, and W. Brent Seales. "Revealing "Invisible" Signals in CT with Machine Learning". In: *Bruker Micro-CT User Meeting*. Abstract Book. Mechelen, Belgium, June 2019, pp. 20–22.

Parker, C. Seth and W. Brent Seales. "Enhanced CT Analysis Using Volume Flattening". In: *Bruker Micro-CT User Meeting*. Abstract Book. Brussels, Belgium, June 2017, pp. 15–16.

Parker, C. Seth, W. Brent Seales, and Gregory Heyworth. "Reading the Invisible Library". In: *Bruker Micro-CT User Meeting*. Abstract Book. Mondorf-les-Bains, Luxembourg, May 2016, pp. 58–59.

Parker, Clifford Seth, William Brent Seales, and Pnina Shor. "Quantitative Distortion Analysis of Flattening Applied to the Scroll from En-Gedi". In: *Art & Archaeology, 2nd International Conference*. 2016.

Books and Anthologies

Seales, W. Brent, **C. Seth Parker**, and Christy Chapman. "4.1.1.7 Virtual Unwrapping: A Computational Approach for Reading Damaged Manuscripts". In: *Textual History of the Bible*. Ed. by Armin Lange. Vol. 4. 2017. Chap. 1.1.7. DOI: 10.1163/2452-4107_thb_COM_225869.

Lectures and Presentations

Parker, C. Seth. "Metadata-enabled computational graphs". Presented at the University of Kentucky Dept. of Computer Science Keeping Current Seminar. Oct. 7, 2020.

Parker, C. Seth. "Reading the Invisible Library: Noninvasive Recovery of Text From Damaged Manuscripts". Presented at R-CHIVE Conference 2017. June 2017.

Honors and Awards

Outstanding Student Paper Award, "From invisibility to readability: Recovering the ink of Herculaneum", University of Kentucky, Department of Computer Science, April 2021

Last updated: November 8, 2021