

Samuel Stehle

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EDUCATION

Doctor of Philosophy (Ph.D) Geography

Pennsylvania State University

2017

University Park, PA

Master of Science (M.S.) Geography

Pennsylvania State University

2013

University Park, PA

Bachelor of Science (B.S.) Geography

University of Utah

Minor, Computer Science

2010

Salt Lake City, UT

PROFESSIONAL EXPERIENCE

Postdoctoral Researcher

National Centre for Geocomputation, Maynooth University

Sep 2017 - Present

Maynooth, Ireland

Instructor and Teaching Assistant

Department of Geography, Pennsylvania State University

Aug 2015 - May 2017

University Park, PA

Visiting Researcher and Higher Education Research Experience Intern

Oak Ridge National Laboratory

Jun 2014 - Jul 2015

Oak Ridge, TN

Graduate Fellow

National Science Foundation Interdisciplinary Graduate Education and Research Traineeship (IGERT) Big Data Social Science

Pennsylvania State University

Aug 2013 - Jul 2015

University Park, PA

Research Assistant

Department of Computer Science, Pennsylvania State University

Aug 2013 - Jun 2014

University Park, PA

Research Assistant

Department of Geography, Pennsylvania State University

Aug 2011 - Jul 2013

University Park, PA

GIS Analyst

Digitally Integrated Geographic Information Technologies Lab
The University of Utah

Feb 2009 - Jul 2011

Salt Lake City, UT

PEER REVIEWED PUBLICATIONS

Stehle, S. (accepted) Mapping the Mediascapes of Catalonia's 2015 Independence Movement. *The Professional Geographer*

Young, G., **Stehle, S.**, Yazgi-Walsh B., and Tiri, E. (accepted) Exploring Virtual Reality in the Higher Education Classroom: Using VR to build knowledge and understanding. *J. of Universal Computer Science*

Stehle, S., R. Kitchin. (2019) Real-time and archival visualization techniques in city dashboards. *Intl. Journal of GIS*. 34 (2) 344-366

Neppalli, V.K., C. Caragea, A. Squicciarini, A. Tapia, **S. Stehle**. (2017) Sentiment analysis during Hurricane Sandy in emergency response. *Intl. Journal of Disaster Risk Reduction*. 21: 213-222

Peuquet, D.J., A.C. Robinson, **S. Stehle**, F.A. Hardisty, W. Luo. (2015) A Method of Discovery and Analysis of Temporal Patterns in Complex Event Data. *Intl. Journal of GIS*. 29(9): 1588-1611

Stehle, S., D.J. Peuquet. (2015) Analyzing Spatio-Temporal Patterns and their Evolution via Sequence Alignment. *Spatial Cognition and Computation*. 15(2):68-85

Caragea, C., A. Squicciarini, **S. Stehle**, K. Neppalli, and A. Tapia. (2014). Mapping Moods: Geo-Mapped Sentiment Analysis During Hurricane Sandy. *Proceedings of the 11th ISCRAM Conference*. University Park, PA. 05.2014. S.R. Hiltz, M.S. Pfaff, L. Plotnick, A.C. Robinson eds.

MANUSCRIPTS WITH DECISIONS

Kitchin, R., **Stehle, S.** Can smart city data be used to create new official statistics? Revise and resubmit to *J. of Official Statistics*

Stehle, S. The Series With Elastic Extents Problem (SWEEP) and “Gerrymandering” Urban Time Series. Revise and resubmit to *Geoinformatica*

PEER REVIEWED CONFERENCE PAPERS

Stehle, S. 2019. The Series With Elastic Extents Problem (SWEEP) and Gerrymandering Urban Time Series. GISRUK, Newcastle, UK. Apr 23-26

Stehle, S., R. Kitchin 2018. Visual Indicators of Real-Timeness in City Dashboards. GISRUK, Leicester, UK. Apr 17-20

Stehle, S. 2016. Who Evaluates the Evaluator? Reconsidering Validation of Classification Processes Under Big Data. NSF workshop on Geospatial Data Science in the Era of Big Data. Champaign-Urbana, IL. Jul 24-28

Stehle, S. 2015. Re-Reading Geopolitics in the News: Computation beyond Event-Based Representation. Regional Science Association International Meeting, Portland, OR. Nov 12-15

Stehle, S. 2015. News and Events, Politics and Sport: Reading Geopolitical Conveyance in Digital News Media. Conference on Spatial Information Theory (COSIT) Doctoral Colloquium. Santa Fe, NM. Oct 12-16

Stehle, S. 2013. Pattern Matching via Sequence Alignment: Analysing Spatio-Temporal Distances. GeoComputation 2013, Wuhan, China. May 23-25

Arva, B., J. Beielser, B. Fisher, G. Lara, P. A. Schrodt, W. Song, M. Sowell, and **S. Stehle.** (2013). Improving Forecasts of International Events of Interest. European Political Science Association Annual General Conference, Paper 78, Barcelona, Spain, Jun 20-22

OTHER CONFERENCE PAPERS

Stehle, S., R. Kitchin. 2019 Real-Time Smart City Data and the Future of Official Statistics. Conf. of Irish Geographers/EUGEO, Galway IE, 15-18 May

Stehle, S. 2019 The Series With Elastic Extents Problem (SWEEP) and “Gerrymandering” Urban Time Series. GIS Research UK, Newcastle UK, 23-26 April

Stehle, S., R. Kitchin 2019. Visual Indicators of Real-Timeness in Smart City Dashboards. Workshop on Trusted Smart Statistics in the Age of IoT, Eurostat, Weisbaden, DE. Jan 30-31

*Naji, J., ***S. Stehle**, G. Young. (* co-presenters). 2018. Place in Virtual Space: an analysis of geospatial data narratives presented in cross-reality visualisations. Conference of Irish Geographers, Maynooth, IE. May 10-12

Stehle, S., R. Kitchin 2018. Visual Indicators of Real-Timeness in City Dashboards. GIS Research UK, Leicester UK, April 17-20

Stehle, S. 2017. Geographic Data Science, Theory, and Black Boxes: Ensuring Evaluations do not ‘Speak for Themselves.’ American Association of Geographers. Boston, MA. Apr 5-9

Stehle, S. 2016. Mapping News Media’s Semantic Spaces of Catalonia’s Geopolitics of Sport. American Association of Geographers. San Francisco, CA. Mar 29-Apr 4

Stehle, S. 2015. Event Data, Spatio-Temporal Analysis, and Digital News Media: A Critical Examination. American Association of Geographers. Chicago, IL. Apr 21-25

Stehle, S. 2014. Scalar Analysis and Event Data Analytics: Assessing the Potential Contribution of Big Data for Feminist Geopolitics. American Association of Geographers. Tampa, FL. Apr 8-12

*Pauquet, D. and ***S. Stehle** * (co-presenters). 2013. STempo: An Integrated Statistical and Visualization Environment for Discovery and Analysis of Patterns in Complex Space-Time Event Data. National

Geospatial Intelligence Agency (NGA) Academic Research Program (NARP) Symposium. Washington D.C. Sept 10-12

Stehle, S. 2013. A Modified Alignment Method for Matching Patterns of Spatio-Temporal Events. American Association of Geographers, Los Angeles, CA. Apr 8-14

CONFERENCE PLANNING

The Open Data and Research Landscape in Ireland and Beyond. With B. Yazgi-Walsh, O. Dawkins, and E. O'Mahony. Paper session at EUGEO Congress on the Geography of Europe. 2019. Galway, IE

Open Source Software in Geography: Theories, Developments, and Pathways Toward Openness. With M. Haffner and J. Piburn. Paper session at American Association of Geographers, 2017. Boston, MA.

TEACHING

Pennsylvania State University

EBF 497: Information Systems for Energy Land Managers – special topic in Energy, Business & Finance

GEOG 360: Introduction to Geographic Information Systems – GIS lectures and laboratory instruction

GEOG 120: Urban Geography – urban development and sense of place; guest lectures, student evaluation

AWARDS

2nd place, E. Willard Miller research proposal award, PSU Geography **2015**

Best Presentation, NGA NARP Symposium (co-presented with D. Peuquet) **2013**

Undergraduate Student of the Year, Utah Geography **2010**

GRANTS AND SUPPORT

Early Career Researcher Award “(Meta)Data for Decision” **2019**
Maynooth U. Social Sciences Institute €3000

Travel support, attendance at Workshop on Geospatial Data Science **2016**
in the Era of Big Data and Cyber GIS, U. of Illinois Urbana Champaign \$1000
National Science Foundation

IGERT Traineeship, “Big Data and Social Science” Penn State **2014-2015**
National Science Foundation \$54,000/yr

Graduate Research and Teaching Assistantship **2011-2013, 2016-2017**
Penn State Geography \$40,000/yr

Graduate Enrichment Award, to attend Geocomputation in Wuhan China **2013**
Penn State Geography \$500

NSF Application Incentive Award **2012**
Penn State College of Earth and Mineral Science \$1000

Honor Roll Scholarship **2010**
Utah College of Social and Behavioral Science \$3000

Merrill K. Ridd Undergraduate Scholarship **2010**
Utah Geography \$1000

SERVICE

Journal Referee **2017-present**
PLoS One, Intl. Journal of Disaster Risk Management, Intl. Journal of GIS

Pennsylvania State University **2013-2017**
Supporting Women in Geography, Treasurer
Coffee Hour Committee
Graduate Students in the Department of Geography, Treasurer

University of Utah

Gamma Theta Upsilon, President
Geography Undergraduate Student Advisory Committee, President
Geography Club, President

2010

PROFESSIONAL MEMBERSHIP

Geographical Society of Ireland
Society for American Baseball Research
American Association of Geographers

TECHNICAL SKILLS

Programming Languages

Java • Python • R • Javascript

Software

Eclipse IDE for developers • Git • ArcGIS •
QGIS • R Studio (tidyverse) • Visual Studio

Techniques

machine learning - supervised and unsupervised classification methods (LDA, PCA, clustering)
text analysis: data mining unstructured text (LDA, GIR, Beautiful Soup)
visual analytics - design and develop tools for multidimensional data (JS, Swing, ggplot, plotly)
time series analysis - longitudinal and streaming analysis (ARiMA, DTW, REST API)
spatial analysis - understanding and describing spatial patterns (raster and vector, cartography)