**SAMUEL STEHLE**

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# PROFESSIONAL EXPERIENCE

2017 – present **Postdoctoral Researcher**

National Centre for Geocomputation, Maynooth University

Building City Dashboards project

2015 – 2017 **Instructor and Teaching Assistant**

Department of Geography, Pennsylvania State University

2014 – 2015 **Visiting Researcher and Higher Education Research Experience Intern**

Oak Ridge National Laboratory

WorldSTAMP project

2013 – 2015 **Graduate Fellow**

National Science Foundation Interdisciplinary Graduate Education and Research Traineeship (IGERT) Big Data Social Science, Pennsylvania State University

2013 – 2014 **Research Assistant**

Department of Computer Science, Pennsylvania State University

Social media for disaster management project

2011 – 2013 **Research Assistant**

Department of Geography, Pennsylvania State University

STempo project

2009 – 2011 **GIS Analyst**

Digitally Integrated Geographic Information Technologies Lab, The University of Utah

# EDUCATION

2013 – 2017 **Doctor of Philosophy**, Geography, Pennsylvania State University

*Mapping Semantic and Spatial Mediascapes in the Catalonian Independence Movement: Geopolitics, Sports, and Black Boxes*

2011 – 2013 **Master of Science**,Geography, Pennsylvania State University

*Pattern Matching via Sequence Alignment: Analyzing Spatio-Temporal Patterns and their Distances*

2007 – 2010 **Bachelor of Science,** Geography, University of Utah

Minor in Computer Science, Certificates in Geographic Information Systems & Remote Sensing

# PEER REVIEWED PUBLICATIONS

**Stehle, S.**, R. Kitchin. (2019) Real-time and archival visualization techniques in city dashboards. *Intl. Journal of GIS*. Online only: https://doi.org/10.1080/13658816.2019.1594823

**Stehle, S.** (2018) Using geodata and geolocation in the social sciences: mapping our changing world, by David Abernathy. *Intl. Journal of GIS.* 32(8): 1697-1698

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 UNDER REVIEW

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

Kitchin, R., **Stehle, S.** Can smart city data be used to create new official statistics? Submitted to the *Journal of Official Statistics*.

# 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. Beieler, 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. 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.** 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

\*Peuquet, 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

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

EBF 297: 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**, Maynooth U. Social Sciences Institute, “(Meta)Data for Decision,” €3000

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

**IGERT Fellowship,** NSF, PSU, Big Data and Social Science, tuition and stipend, est. $54,000 for 2 years

**Graduate Research and Teaching Assistance,** PSU Geography, tuition and stipend, est. $40,000 for 4 years

**Graduate Enrichment Award,** PSU Geography, attendance at Geocomputation, Wuhan China, 2013, $500

**NSF Application Incentive Award,** College of Earth and Mineral Sciences, PSU, 2012, $1000

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

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

# SERVICE

**Reviewer**, PLoS One, Intl. Journal of Disaster Risk Management, Intl. Journal of GIS

**Treasurer**, Supporting Women in Geography, 2016/2016

**Coffee Hour Committee**, PSU, 2014/2015

**Treasurer**, Graduate Students in the Department of Geography, PSU, 2013/2014

**President**, Geography Undergraduate Student Advisory Committee, Utah, 2010

**President**, Gamma Theta Upsilon honor society, Utah, 2010

# PROFESSIONAL MEMBERSHIP

Geographical Society of Ireland

Society for American Baseball Research

American Association of Geographers

# SKILLS

Programming Languages: Java • Python • R

Software Proficiency: Eclipse IDE for developers • Git • ArcGIS • QGIS • R Studio

Techniques: machine learning – supervised and unsupervised classification methods

visual analytics – design and development of visual tools for multidimensional data

time series analysis – longitudinal time-based data investigation

spatial analysis – understanding and describing spatial patterns