

## Final Call for Papers - GIScience 2018 Workshop on Spatial big data and machine learning in GIScience

August 28<sup>th</sup>, 2018 (full day) in Melbourne, Australia in conjunction with the 10<sup>th</sup> International Conference on Geographic Information Science

**Organizers:** Martin Raubal (ETH Zurich), Shaowen Wang (University of Illinois at Urbana-Champaign), Mengyu Guo (University of Illinois at Urbana-Champaign), David Jonietz (ETH Zurich), Peter Kiefer (ETH Zurich)

**KEYNOTE SPEAKER:** Prof. Harvey Miller, Reusche Chair in GIScience, The Ohio State University

**Workshop website:** [spatialbigdata.ethz.ch](http://spatialbigdata.ethz.ch)

**Email:** [spatialbigdata@ethz.ch](mailto:spatialbigdata@ethz.ch)

**Program Committee:** <http://spatialbigdata.ethz.ch/index.php/committee/>

The recent rapid progress of computing, communication, and information technologies enables unprecedented acquisition of spatial data (e.g., in the form of massive movement trajectory datasets or fine-resolution environmental data), novel spatio-temporal analyses, and cyberGIS advances. In order to pursue knowledge discovery from these complex and massive spatial data, machine learning approaches are being applied in diverse 'spatial disciplines', such as geography, transportation science, environmental science, or behavioral science. The importance of spatial big data and machine learning in GIScience is both manifested through recent scholarly work as well as in industry. This workshop will bring together researchers who already analyze spatial big data with machine learning approaches or want to do so in the future. It aims to explore the various opportunities and particular challenges of applying cutting-edge machine learning approaches to spatial big data.

Topics of interest include, but are not limited to

- Mining of spatial big data
- Novel spatial applications of machine learning
- CyberGIS analytics
- Deep learning frontiers
- Predicting human spatial behavior
- Spatio-temporal analyses of spatial big data
- Spatio-temporal modeling in machine learning applications
- Spatio-temporal context in machine learning applications
- Spatio-temporal outlier and anomaly detection
- Uncertainty in spatially explicit machine learning

**Submission Guidelines:** Prospective authors should submit work-in-progress, position papers or vision statements with a length of 2-4 pages as pdf file in the GIScience 2018 format (instructions at <http://www.giscience.org/>) to [spatialbigdata@ethz.ch](mailto:spatialbigdata@ethz.ch). Manuscripts will be reviewed by at least two members of the program committee. Furthermore, we encourage submissions of demo cases of spatial big data and machine learning applications that have to be accompanied by a short abstract (1 page) clearly describing the novelty and distinguishing ideas of your project.

The workshop will combine short presentations, discussions, and group work. All accepted short papers will be included in the online proceedings on the workshop's webpage. Depending on the interest of participants we are planning a special issue in IJGIS or JOSIS.

**Important Dates:**

June 7th, 2018 (EXTENDED)

June 29<sup>th</sup>, 2018

July 13<sup>th</sup>, 2018

August 28<sup>th</sup>, 2018

Paper submission

Notification of acceptance

Camera-ready due

Workshop