

## PROPOSAL: 2<sup>nd</sup> ACM SIGSPATIAL Workshop on Geospatial Humanities

### Topic and Format:

Scholars in the humanities have long paid attention to spatial theory and cartographic outputs. Moreover, in recent years, new technologies and methods have lead to the emergence of a field that is now commonly known as the *Spatial Humanities*. Methods from the standard toolset of geographic information systems (e.g., computation of viewsheds and zones of influence, least-cost path analysis, mass-preserving areal weighting and dasymetric mapping, terrain classification according to land coverage or land use, different types of thematic cartography techniques, etc.) have been successfully employed to analyze the geographies of human cultures, both past and present, and to address research questions posed by humanities-based fields. However, many challenges persist in the application of more recent technical developments in the geographical information sciences, which have been showcased in venues such as ACM SIGSPATIAL (e.g., high performance computing methods for analyzing increasingly larger datasets, intelligent techniques based on machine learning for developing and tuning models making use of multiple sources of auxiliary data, the use of volunteered geographical information to complement traditional data sources, or methods from the geo-spatial semantic web to ease interoperability across datasets and services).

This workshop is thus concerned with the use of geographic information systems and other spatial technologies in humanities research, placing a strong emphasis on new methodologies that leverage the aforementioned technical developments (e.g., the standard tools from geographic information systems, as well as more advanced methods such as text-based geographical analysis or spatial simulation, can all benefit from innovative approaches leveraging machine learning, parallel and/or distributed computation, semantic technologies, etc.). The workshop aims to bring together researchers and practitioners from different sub-fields of computer science and the geographical information sciences, interested in the application of spatial methods and technology to the humanities, to discuss progress in the field. Participants will explore and demonstrate the contributions to knowledge that modern GIS technologies can enable within and beyond the digital humanities.

In particular, and similarly to the previous edition, we aim for a full day workshop organized into 4 different sessions, each featuring presentations of innovative technical and scientific contributions, submitted for peer-review in the form of regular papers (approx. 8 pages) according to the ACM formatting guidelines. The call for papers will feature the following suggested topics:

- Gazetteer development (e.g., models, data conflation, semantic technologies, etc.)
- Historical geographical information systems
- Spatio-temporal network analysis in the humanities
- Text geo-parsing and other NLP techniques for geographical text analysis
- Spatial simulation in the humanities (e.g., cellular automata and agent-based models)
- Spatial and spatio-temporal analysis of humanities data
- Visualization and cartographic representations
- Handling vague and imprecise historical spatio-temporal data
- Applications of the aforementioned techniques

One author per accepted contribution will be required to register for the workshop and the conference, as well as attend the workshop to present the work. Otherwise, the accepted submission will not appear in the ACM Digital Library version of the workshop proceedings.

### Match with ACM SIGSPATIAL:

Several exploratory studies have demonstrated the benefits of bringing Geographic Information Systems (GIS) technology to humanities scholarship. Dedicated workshops have also attracted much interest from humanities researchers and GIS practitioners, and they have affirmed the power and flexibility of spatial analysis in support of fields such as history, archeology, or literary studies. However, as of yet, research in the *spatial humanities* is only just beginning to deliver the applied contributions to knowledge that will prove its significance. We argue that progress in the field depends on the close collaboration between humanities scholars and researchers from computer science and the geographical information sciences. This is particularly true if we envision going beyond the application of GIS methods that are readily available in currently existing tools, instead leveraging some of the state-of-the-art GIS methods that are still being actively researched (e.g., methods for text-based geographical analysis). ACM SIGSPATIAL (i.e., the premier annual event of the ACM Special Interest Group on Spatial Information) is currently the main scientific venue in relation to novel systems based on geo-spatial data and knowledge, fostering interdisciplinary discussions and research in all aspects of geographic information systems. We therefore believe that the spatial humanities workshop has a strong match with the conference.

### Workshop Organizers:

- Bruno Martins, University of Lisbon
- Patricia Murrieta-Flores, University of Chester

**Program committee:**

The following people will be invited in the next few days to serve the program committee for the workshop. Most of them also served in the program committee for the 1<sup>st</sup> edition of the workshop, which took place together with the 25th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2017).

- Ian Gregory, Lancaster University
- Claire Grover, Edinburgh University
- Ross Purves, University of Zurich
- Chris Jones, Cardiff University
- Andrea Ballatore, University of London
- Leif Isaksen, Lancaster University
- Karl Grossner, World Heritage Web
- Andreas Henrich, University of Bamberg
- Benjamin Adams, University of Auckland
- Eero Hyvönen, University of Helsinki and Aalto University
- Ludovic Moncla, French Naval Academy Research Institute
- Charles Travis, Trinity College Dublin
- David J. Bodenhamer, Indiana University and Purdue University
- Gary Priestnall, University of Nottingham
- Stephan Winter, University of Melbourne
- Angharad Saunders, University of South-Wales
- Matthew Wilkens, University of Notre Dame
- Daniel Alves, New University of Lisbon
- Humphrey Southall, University of Portsmouth
- Joanna Taylor, Lancaster University
- Rainer Simon, Austrian Institute of Technology
- Asanobu Kitamoto, National Institute of Informatics at Tokyo
- Elton Barker, The Open University
- Chris Donaldson, Lancaster University
- Curdin Derungs, University of Zurich
- Adam Rabinowitz, University of Texas at Austin
- James Loxley, University of Edinburgh

We again aim for a balanced program committee, with researchers at different stages of their careers, and that draws from multiple disciplines, including the computer science and engineering, GIScience, archaeological computing, history, literature, digital humanities, and others.

**Suggested important dates:**

With basis on the calendar of the ACM SIGSPATIAL conference, we suggest the following dates:

- Deadline for submission: 7<sup>th</sup> September, 2018
- Decisions to authors: 28<sup>rd</sup> September, 2018
- Camera ready versions ready: 7<sup>th</sup> October, 2018
- Workshop: 6<sup>th</sup> November, 2018

**Expected number of participants:**

The previous edition of the workshop took place together with ACM SIGSPATIAL 2017, and it attracted 13 paper submissions, of which 8 were accepted for presentation. The workshop had a total of 15 registered participants and, on average, 15 attendees were also present at each session. For this second edition, we expect a slight increase in the number of submissions and participants.

We also have information on the historical numbers of participants for related events. In June 2015, Prof. Lincoln Mullen organized a Spatial Humanities workshop at George Mason University, which had approximately 12 participants. In July 2016, in Warsaw, a workshop on Spatial Humanities with the title "*A Place for Places: Current Trends and Challenges in the Development and Use of Geo-Historical Gazetteers*" was organized together with the 2016 Digital Humanities conference. This workshop had approximately 20 participants. In September 2016, Prof. Ian Gregory organized a Spatial Humanities meeting at Lancaster University, which had approximately 70 participants. In October 2016, the "*Creating Spatial Historical Knowledge*" conference took place at the German Historical Institute in Washington DC, attracting around 60 scholars.