PROPOSAL: 4ᵗʰ 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 led to the emergence of a field that is now commonly known as the *Spatial Humanities*. This field is constantly evolving and is looking to address questions related to space and place and is posing very interesting challenges including the identification and analysis of real, vague, and imaginary space in textual corpora. Within the field, different theoretical and methodological approaches are being now explored and used, including GIS, Deep Mapping, and Qualitative Spatial Representation among others. In the past, 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, looking to solve 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 an 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 and other technologies can enable within and beyond the digital humanities.

In particular, and similarly to the first 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 or regular papers (approx. 8 pages) according to the ACM formatting guidelines or alternatively in the form of short papers (up to 4 pages). The call for papers will feature the following suggested topics:

- Gazetteer development (e.g., models, data conflation, semantic technologies, etc.)
- Ontologies and linked data for modeling geohistorical data
- Historical and literary geographical information systems
- Spatio-temporal network analysis in the humanities
- Text geo-parsing and other NLP techniques for geographical text analysis
- Novel approaches for the analysis of vague and imaginary place
- 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
- Geoprocessing of digital archives and cultural heritage image collection
- 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:

- Patricia Murrieta-Flores, Lancaster University
- Ludovic Moncla, INSA Lyon
- Carmen Brando, EHESS Paris

Program committee:

The following people were invited to serve the Program Committee (PC) for the workshop. Most also served in the PC for the 1st, 2nd, and 3rd editions, and individuals shown in italics correspond to members that have already confirmed their willingness to serve on the PC for a 4th edition.

- *Bruno Martins, University of Lisbon* **(previous co-organizer and still helping on organization details)**
- *Andrea Ballatore, University of London*
- Asanobu Kitamoto, National Institute of Informatics at Tokyo
- *Beatrice Alex, University of Edinburgh*
- *Chris Donaldson, Lancaster University*
- Chris Jones, Cardiff University
- Claire Grover, Edinburgh University
- *Daniel Alves, New University of Lisbon*
- *Eero Hyvönen, University of Helsinki and Aalto University*
- *Elton Barker, The Open University*
- *Gabriel Viehhauser-Mery, University of Stuttgart*
- Humphrey Southall, University of Portsmouth
- Ian Gregory, Lancaster University
- *Joanna Taylor, Lancaster University*
- Katherine Hart, Library of Congress
- *Katherine McDonough, The Alan Turing Institute*
- *Leif Isaken, University of Exeter*
- Mauro Gaio, University of Pau
- Philip Verhagen, Vrije Universiteit Amsterdam
- *Rainer Simon, Austrian Institute of Technology*
- *Raquel Liceras, Lancaster University*
- Ross Purves, University of Zurich
- *Stephan Winter, University of Melbourne*
- *Simon Scheider, Universiteit Utrecht*
- *Thomas C. van Dijk, University of Wuerzburg*
- Xavier Rubio-Campillo, Edinburgh University
- *Yingjie Hu, University at Buffalo, The State University of New York*

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, digital humanities, and others.

Suggested important dates:

With basis on the calendar of the ACM SIGSPATIAL conference, we suggest the following dates (we may consider moving the deadlines according to the COVID-19 situation):

- Deadline for submission: 4th September, 2020
- Decisions to authors: 25th September, 2020
- Camera ready versions ready: 5th October, 2020
- Workshop: 3rd November, 2020

Expected number of participants:

The 1st edition of the workshop took place with ACM SIGSPATIAL 2017, attracting 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. The second edition, in 2018, attracted 5 submissions, of which 4 were accepted for presentation (i.e., we had a half-day workshop). The third edition, in 2019, attracted 8 submissions, of which 6 were accepted for presentation. For the fourth edition, we expect a slight increase in the number of submissions and participants, over the numbers from the previous year.

We also have numbers of participants for related events. In June 2019 the Time in Space Conference organized by the Universtià di Pisa, Universidade de Brasilia, Universidade NOVA de Lisboa and the University of Lancaster received more than 70 submissions. In September 2018, Lancaster University hosted the Spatial Humanities Conference, also with more than 70 paper submissions and with a similar number of attendees. Several other events with related topics are organized such as the Spatial Humanities Conference 2020 in Lisbon or the Mapping Space Mapping Time Mapping Texts conference in London hosted by the AHRC Funded Chronotopic Cartographies project.