Proposal for special Issue of the International Journal of Geographical Information Science

# Spatial Computing for the Digital Humanities

Special Issue Guest Editors

Patricia Murrieta-Flores, Digital Humanities Research Centre, University of Chester. UK.
p.murrietaflores@chester.ac.uk

Bruno Emmanuel Martins, INESC-ID, University of Lisbon. Portugal.
bruno.g.martins@tecnico.ulisboa.pt

Detailed biographical information about the guest editors can be found at:
http://www.chester.ac.uk/departments/history-archaeology/staff/dr-p-murrieta-flores
http://web.ist.utl.pt/bruno.g.martins/

**Proposal**

Scholars in the humanities have a long tradition in the investigation of spatial theory and methods, as well as on the analysis of space and place within its multiple disciplines. Although technologies such as Geographic Information Systems have been used in humanities fields such as archaeology for over three decades, it has been only in recent years that the development of new technologies and methods have led to the emergence of the field now commonly known as the Spatial Humanities. The integration of standard spatial analysis methodologies (e.g., GIS based least-cost path analysis, computation of viewsheds and zones of influence, mass-preserving areal weighting and dasymetric mapping, terrain classification according to land coverage or land use, different types of thematic cartography techniques, etc.) with the innovative approaches currently being actively researched (e.g., geographical text analysis or spatial simulation, taking advantage of machine learning, parallel and/or distributed computation, semantic technologies, etc.), are bringing new forms of investigation to humanities fields such as History, Literature, Modern Languages, Theology and Religious Studies, among others.

Evolving still as a new field, the Geospatial Humanities is an exciting arena where strong interdisciplinary collaboration is taking place, and questions that were impossible to pose before are being addressed. Currently on-going projects are investigating the geographies depicted in large literary and historical corpora, the creation of historical gazetteers, or analytical and visualisation techniques for vague and imaginary places and spaces in literature, among many others.

The "Spatial Computing for the Digital Humanities" special issue within the *International Journal of Geographic Information Science* will draw together in its collection the state-of-the-art in the field, and will constitute a landmark publication in spatial humanities research. The special issue will use an open call, but it will tap from the submissions to the ACM SIGSPATIAL Workshop on Geospatial Humanities that will take place in Redondo Beach, California USA in November 2017. Members of the Programme Committee for the workshop will act as technical reviewers for the submissions to the special issue, and authors of the best papers at the workshop will be invited to submit **significantly expanded versions** of their workshop papers. Information about the workshop is available at the following URL :  https://bgmartins.github.io/sigspatial-geohumanities/

**Possible topics**

The special issue will look to explore and demonstrate the contributions that modern spatial analysis technologies can enable for the study of space and place within and beyond the digital humanities, placing a strong emphasis on new novel concepts or methods in spatial computing to humanities. Example topics include, but are not limited to:

- Spatial and spatio-temporal analysis with GIS for humanities research
- Geographical text analysis
- Spatial ontologies for humanities research
- Agent based modelling and spatial simulation for humanities research
- Development of historical and literary gazetteers
- Geographic information retrieval approaches for humanities datasets
- Visualization and cartographic representations for humanities datasets
- Linguistic approaches for GeoHumanities
- Spatio-temporal network analysis for humanities

**Submission**

Submissions to the IJGIS special issue will be open to all scholars. Authors of suitable contributions participating at the 2017 ACM SIGSPATIAL Workshop on Geospatial Humanities will be invited to submit full papers to this special issue, which will be considered provided the work contains substantial novel contributions over the version submitted to the workshop and published at the ACM Digital Library. Note that the invitation does not guarantee publication in this collection and all submissions are subject to the standard IJGIS double-blind peer review process.

Scholars interested in participating on the special issue should send the guest editors an email with their intention to submit, including the title and short abstract (250 words) to p.murrietaflores@chester.ac.uk and/or bruno.g.martins@tecnico.ulisboa.pt by December 15th 2017. Submission of full papers will be made through the IJGIS Manuscript Centre, ScholarOne.

**Important Dates**

- **Abstracts (no more than 250 words) Due: December 1st 2017**

- **Decisions on abstracts for full-paper invitations: January 15th 2018**

- **Full Papers Due: April 30th 2018**

- **First round of peer reviews: May 14th to July 2nd 2018**

- **Second round of peer reviews for revisions:  Sept 14th to Oct 12th 2018**

- **Final revised manuscripts due: November 16th 2018**

- **Third round of reviews if necessary: December 14th to January 14th 2019**

- **Final editorial decisions on SI manuscripts: February 1st 2019**