

Proposal for a Special Feature on **Geospatial Privacy and Security** In the Journal of Spatial Information Science

1. Topic, Aim, and Scope:

Location privacy has been a consistent theme in spatial information science for quite some time. While early work on this topic was primarily focused on theoretical concerns over the exploitation of personal location information, recent advances in mobile technology have spurred renewed interest in this domain. As the ubiquity of these sensor-rich devices, smart homes and cities, and content contributed to geo-social media applications increases, the privacy and security of our personal data has come to the forefront of our social dialog. Citizens today are demonstrating appropriate concerns about data sharing, how their data are being used, and implications of having so much data in the hands of a select few.

Researchers in the spatial sciences offer a unique perspective on the discussion of data privacy and security. As all data is generated with some level of location information, a better understanding of the privacy implications of working with, and securing these data are paramount. Additionally, spatial data supports its own unique set of quantitative and qualitative analysis techniques, many of which may impact the privacy of the data contributor or expose details on how the data was created. Researchers in the geospatial sciences are well situated to explore these numerous aspects (as well as the social, economic, political, etc. lenses) through which location privacy and data security can be framed.

Topics of interest for this special feature include, but are not limited to:

- Context-aware mobile applications
- Obfuscation techniques
- Educational approaches to location privacy
- Policy implications of personal location information
- Role of location in personal relationship development
- Geosocial media implications
- Credibility, trust, and expertise related to location information
- Tools and systems for preserving or securing private information
- Techniques for sharing private location information
- Methods for securing location information
- Place-based data privacy
- Individual vs. group privacy preservation
- Gamification techniques
- Next-generation location-based services
- Geofencing
- Marketplaces for location data
- Legal aspects of geoprivacy
- Connections between location data and other kinds of personally identifiable information

2. Previous efforts on this topic

The proposed guest editors are chairing the Location Privacy and Security workshop held in conjunction with the GIScience '18 conference in Melbourne Australia in August. There is expected to be a high number of work-in-progress submissions for this workshop and a special feature on this topic in JoSIS would allow researchers an outlet to publish high quality completed research. The workshop will also serve as an outlet through which to promote the special feature. The guest editors have also chaired two successful workshops on this topic at ACM SIGSPATIAL 2014 and 2015 and have contributed peer-reviewed academic publications on the proposed, and related, topics.

3. Expected Numbers

Given our previous work on similar topics at workshops and conferences, it is expected that there will be 10-15 high quality submissions for this special issue. We anticipate accepting 4-5 papers for publication (provided the JoSIS EIC agree).

4. Provisional Timetable

- Paper submission deadline: **January 30, 2019**
 - The Location Privacy and Security Workshop will take place on August 28, 2018 providing approximately 5 months from this key 'advertising' opportunity for authors to prepare full manuscripts for submission.
 - This also allows for a one month extension to the end of February if necessary.
- Acceptance Notification (first round): **May 1, 2019**
 - This provides for a three month review period which should be sufficient for reviewers and editors.

5. Guest Editors

- Grant McKenzie, University of Maryland, College Park, USA
- Carsten Keßler, Aalborg University, Copenhagen, Denmark
- Clio Andris, Penn State University, State College, USA