



The SIGSPATIAL Special

**Newsletter of the Association for Computing Machinery
Special Interest Group on Spatial Information**

Volume 8 Number 2 July 2016

The SIGSPATIAL Special

The SIGSPATIAL Special is the newsletter of the Association for Computing Machinery (ACM) Special Interest Group on Spatial Information (SIGSPATIAL).

ACM SIGSPATIAL addresses issues related to the acquisition, management, and processing of spatially-related information with a focus on algorithmic, geometric, and visual considerations. The scope includes, but is not limited to, geographic information systems.

Current Elected ACM SIGSPATIAL officers are:

- Chair, Mohamed Mokbel, University of Minnesota
- Past Chair, Walid G. Aref, Purdue University
- Vice-Chair, Shawn Newsam, University of California at Merced
- Secretary, Roger Zimmermann, National University of Singapore
- Treasurer, Egemen Tanin, University of Melbourne

Current Appointed ACM SIGSPATIAL officers are:

- Newsletter Editor, Chi-Yin Chow (Ted), City University of Hong Kong
- Webmaster, Ibrahim Sabek, University of Minnesota

For more details and membership information for ACM SIGSPATIAL as well as for accessing the newsletters please visit <http://www.sigspatial.org>.

The SIGSPATIAL Special serves the community by publishing short contributions such as SIGSPATIAL conferences' highlights, calls and announcements for conferences and journals that are of interest to the community, as well as short technical notes on current topics. The newsletter has three issues every year, i.e., March, July, and November. For more detailed information regarding the newsletter or suggestions please contact the editor via email at chiychow@cityu.edu.hk.

Notice to contributing authors to The SIGSPATIAL Special: By submitting your article for distribution in this publication, you hereby grant to ACM the following non-exclusive, perpetual, worldwide rights:

- to publish in print on condition of acceptance by the editor,
- to digitize and post your article in the electronic version of this publication,
- to include the article in the ACM Digital Library, and
- to allow users to copy and distribute the article for noncommercial, educational or research purposes.

However, as a contributing author, you retain copyright to your article and ACM will make every effort to refer requests for commercial use directly to you.

Notice to the readers: Opinions expressed in articles and letters are those of the author(s) and do not necessarily express the opinions of the ACM, SIGSPATIAL or the newsletter.

The SIGSPATIAL Special (ISSN 1946-7729) Volume 8, Number 2, July 2016.

Table of Contents

	Page
Message from the Editor	1
<i>Chi-Yin Chow</i>	
 <u>Section 1: Special Issue on Spatio-Temporal Uncertainty</u>	
Introduction to this Special Issue: Spatio-Temporal Uncertainty	2
<i>Goce Trajcevski</i>	
Uncertainty in Geosocial Data: Friend or Foe?	3
<i>Yaron Kanza</i>	
Managing Uncertainty of Large Spatial Databases	11
<i>Reynold Cheng</i>	
Bayesian Network Movement Model	18
<i>Andreas Züfle</i>	
Processing Uncertain Spatial Data Resulting from Differentially-Private Sanitization	26
<i>Mihai Maruseac and Gabriel Ghinita</i>	
Addressing the Uncertainties in Autonomous Driving	35
<i>Jane Macfarlane and Matei Stroila</i>	
 <u>Section 2: Event Reports</u>	
The Second ACM SIGSPATIAL PhD Workshop Report	41
<i>Peter Scheuermann and Mohamed Sarwat</i>	