



The SIGSPATIAL Special

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

Volume 8 Number 1 March 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,
- 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 1, March 2016.

Table of Contents

	Page
Message from the Editor	1
<i>Chi-Yin Chow</i>	
 <u>Section 1: Special Issue on GIS in Public Health Research</u>	
Introduction to this Special Issue: GIS in Public Health Research	2
<i>Chi-Yin Chow and Zhuojie Huang</i>	
From Farm to Fork: How Spatial-Temporal Data can Accelerate Foodborne Illness Investigation in a Global Food Supply Chain	3
<i>Kun Hu, Stefan Edlund, Matthew Davis, and James Kaufman</i>	
Multiscale Modeling Approach for Hierarchical Aligned Aggregated Small Area Health Data	12
<i>Mehreteab Aregay, Andrew B. Lawson, Christel Faes, Russell S. Kirby, Rachel Carroll, and Kevin Watjou</i>	
Integrating Geographic Activity Space and Social Network Space to Promote Healthy Lifestyles	20
<i>Xinyue Ye and Jay Lee</i>	
A Fully GIS-Integrated Simulation Approach for Analyzing the Spread of Epidemics in Urban Areas	34
<i>Hedi Haddad, Bernard Moulin, and Marius Thériault</i>	
Gamifying Hand Physical Therapy with Intelligent 3D Navigation	42
<i>Imad Afyouni, Faizan Ur Rehman, Sohaib Ghani, Ahmad Qamar, and Saleh Basalamah</i>	
 <u>Section 2: Event Reports</u>	
ACM SIGSPATIAL 2015 Conference Report	50
<i>Michael Gertz, Matthias Renz, and Jagan Sankaranarayanan</i>	
ACM SIGSPATIAL 2015 Industrial Workshop Report	53
<i>Egemen Tanin and Goce Trajcevski</i>	
ACM SIGSPATIAL IWCTS 2015 Workshop Report	55
<i>Yan Huang and Xin Chen</i>	
ACM SIGSPATIAL MobiGIS 2015 Workshop Report	56
<i>Chi-Yin Chow, Maria Luisa Damiani, and Shashi Shekhar</i>	