

BigSpatial 2015

Proceedings of the 4th ACM SIGSPATIAL International Workshop on
Analytics for Big Geospatial Data
(BigSpatial-2015)
Nov 3rd, 2015, Seattle, WA, USA

Editor(s):

Varun Chandola, State University of New York at Buffalo, NY, USA

Ranga Raju Vatsavai, North Carolina State University, NC, USA

**The Association for Computing Machinery, Inc.
2 Penn Plaza, Suite 701
New York, NY 10121-0701**

Copyright © 2015 by the Association for Computing Machinery, Inc. Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, to republish, to post on servers, or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from Publications Dept., ACM, Inc., Fax +1 (212) 869-0481, or permissions@acm.org.

For other copying of articles that carry a code at the bottom of the first or last page, copying is permitted provided that the per-copy fee indicated in the code is paid through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

Notice to Past Authors of ACM-Published Article

ACM intends to create a complete electronic archive of all articles and/or other material previously published by ACM. If you have written a work that was previously published by ACM in any journal or conference proceedings prior to 1978, or any SIG Newsletter at any time, and you do NOT want this work to appear in the ACM Digital Library, please inform permissions@acm.org, stating the title of the work, the author(s), and where and when published.

ISBN: 978-1-4503-3974-2

FOREWORD

Big data is emerging as an important area of research for data researchers and scientists. This area has also seen significant interest from the industry and federal agencies alike, as evidenced by the recent White House initiative on "Big data research and development". Within the realm of big data, spatial and spatio-temporal data is one of the fastest growing types of data. With advances in remote sensors, sensor networks, and the proliferation of location sensing devices in daily life activities and common business practices, the generation of disparate, dynamic, and geographically distributed spatiotemporal data has exploded in recent years. In addition, significant progress in ground, air- and space-borne sensor technologies has led to an unprecedented access to earth science data for scientists from different disciplines, interested in studying the complementary nature of different parameters. Today, analyzing this data poses a massive challenge to researchers.

The first three editions of the workshop on **Analytics for Big Geospatial Data** (BIGSPATIAL 2012, BIGSPATIAL 2013, and BIGSPATIAL 2015) were highly successful in bringing together researchers working in this area for a program consisting of several invited and technical talks. The 4th workshop on **Analytics for Big Geospatial Data** (BIGSPATIAL 2015) builds on the success of the previous editions to bring together researchers from academia, government and industrial research labs that are working in the area of spatial analytics with an eye towards massive data sizes. The main motivation for this workshop stems from the increasing need for a forum to exchange ideas and recent research results, and to facilitate collaboration and dialog between academia, government, and industrial stakeholders. We hope that this workshop provides a platform for researchers and practitioners engaged in addressing the big data aspect of spatial and spatio-temporal data analytics to present and discuss their ideas.

This year we received 13 technical submissions out of which 6 were selected for full presentations. The technical program also consists of two invited talks from well-known experts from academia and government. BIGSPATIAL workshop will continue to provide a leading international forum for researchers, developers, and practitioners in the field of data analytics for big geospatial data to identify current and future areas of research.

Varun Chandola, State University of New York at Buffalo, NY, USA

Ranga Raju Vatsavai, North Carolina State University, NC, USA

ACKNOWLEDGEMENTS

We would like to thank the authors of all submitted papers. Their innovation and creativity has resulted in a strong technical program. We are highly indebted to the program committee members, whose reviewing efforts ensured in selecting a competitive and strong technical program. We would like to express our sincere gratitude to the invited speakers.

ORGANIZERS

GENERAL CHAIRS:

Varun Chandola, State University of New York at Buffalo, NY, USA.

Ranga Raju Vatsavai, North Carolina State University, NC, USA.

PUBLICATIONS COORDINATOR:

Suchismit Mahapatra, State University of New York at Buffalo, NY, USA.

PROGRAM COMMITTEE:

- *Fusheng Wang*, Stony Brook University
- *Sreenivas Sukumar*, Oak Ridge National Lab
- *Giuseppe Manco*, ICAR-CNR
- *Auroop Ganguly*, Northeastern University
- *Annalisa Appice*, University Aldo Moro of Bari
- *Alessandra Raffaet*, Universita Ca'Foscari Venezia
- *Maurizio Atzori*, University of Cagliari
- *Alfredo Cuzzocrea*, ICAR-CNR and University of Calabria
- *Surya Durbha*, Indian Institute of Technology
- *Xun Zhou*, UIOWA
- *Yang Mu*, University of Massachusetts Boston
- *Pradeep Mohan*, SAS Institute Inc.
- *Jianting Zhang*, City College of the City University of New York
- *Nicolas Meger*, Universita de Savoie - LISTIC laboratory
- *Olufemi Omitaomu*, Oak Ridge National Laboratory
- *Yan Huang*, University of North Texas
- *Vania Bogorny*, UFSC
- *Mohamed Mokbel*, University of Minnesota

SPONSORS

GOLD SPONSORS



BRONZE SPONSORS

