BigSpatial 2018

Proceedings of the 7th ACM SIGSPATIAL International Workshop on

Analytics for Big Geospatial Data

(BigSpatial-2018)

Nov 6th, 2018, 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 © 2018 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: 978-1-4503-6041-8/18/11

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 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 7th workshop on **Analytics for Big Geospatial Data** (BIGSPATIAL 2018) builds on the success of the previous five 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 20 technical submissions out of which 9 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:

Syed Mohammed Arshad Zaidi, State University of New York at Buffalo, NY, USA.

PROGRAM COMMITTEE:

Selim Aksoy	**Bilkent University**
Maurizio Atzori	University of Cagliari
Arie Croitoru	George Mason University
Alfredo Cuzzocrea	ICAR-CNR and University of Calabria
Surya Durbha	IIT Bombay
Seokyong Hong	North Carolina State University
Vandana Janeja	UMBC, Is Department
Goo Jun	University of Texas Health Science Center at Houston
Ki-Joune Li	Pusan National University
Giuseppe Manco	ICAR-CNR
Nicolas Meger	Université de Savoie - LISTIC laboratory.
Richard Mills	Intel
Pradeep Mohan	SAS Institute Inc.
Alessandra Raffaeta'	Universita' Ca' Foscari Venezia
Ashwin Shashidharan	North Carolina State University
Alexandre Sorokine	ORNL
Michail Vlachos	IBM Research - Zurich
Monica Wachowicz	University of New Brunswick
Fusheng Wang	Stony Brook University
Chaowei Yang	GMU
Eunhye Yoo	University at Buffalo
Jianting Zhang	City University of New York

SPONSORS

CORPORATE SPONSORS

INSTITUTIONAL FUNDING