ACM SIGSPATIAL 2016 Conference Report
The 24th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems
(ACM SIGSPATIAL 2016)
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(Program Committee Co-Chairs)

This is the conference report on the 24th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2016), held in the San Francisco Bay Area, California, USA, October 31 through November 3, 2016. The conference started as a series of symposia and workshops back in 1993 with the aim of promoting interdisciplinary discussions among researchers, developers, users, and practitioners and fostering research in all aspects of geographic information systems, especially in relation to novel systems based on geospatial data and knowledge. It provides a forum for original research contributions covering all conceptual, design, and implementation aspects of geospatial data ranging from applications, user interfaces and visualization, to data storage, query processing, indexing and data mining. The conference is the premier annual event of the ACM Special Interest Group on Spatial Information (ACM SIGSPATIAL).

To create the conference's technical program, each submitted paper was first reviewed by at least three members of a carefully chosen program committee (PC) consisting of experts in the relevant fields. Our PC had a total of 106 volunteers from academia and industry, plus an additional 21 members who were designated as the Senior PC. The assignment of papers to reviewers followed a bidding stage, during which PC members were allowed to express ranked preferences regarding their willingness to review a particular submission. In addition to the three different members of the PC, each paper was also assigned a designated Senior PC member who studied the reviews, discussed the merits of each submission with the reviewers, and gave an accept/reject recommendation to the PC Chairs who, in turn, made the final decisions. The goal of this process was to not only rate the submissions, but also give authors suggestions how to improve their papers. Certain papers that were not accepted for the conference, with the permission of the authors, were forwarded to the conference's Workshop Chairs to be considered for inclusion in relevant satellite workshops. Our reviewers put in a tremendous amount of effort in reviewing the papers and our hope is that the reviews were beneficial even to those authors whose papers were not chosen for presentation.

Papers were submitted and accepted in different categories. We received a total of 195 regular research submissions and 21 industrial experience and systems papers. Of these 216 papers, we accepted 40 as full 10-page papers for oral presentation resulting in an acceptance rate of 18.5%. We accepted an additional 42 of these 216

as poster presentations (19%), which appear as 4 page papers in the proceedings. We also received 24 demonstration submissions, of which we accepted 16 for live demonstrations at the conference, with a description corresponding to a 4 page paper in the proceedings (acceptance rate of 69%). Continuing the event from last year, this year we once again had a track where authors were invited to submit vision papers describing visionary ideas that are open-ended, possibly outrageous or wacky, and present new problems, new application domains, or new methodologies that are likely to stimulate significant new research. Of the 13 vision paper submissions, 5 were accepted for presentation at the conference (acceptance rate of 38%). The top three papers out of the 5 accepted vision papers received a an award from the Computing Research Association's Computing Community Consortium (CCC) under their CCC Blue Sky initiative in from of travel reimbursement awards.

ACM SIGSPATIAL 2016 also had the SIGSPATIAL Cup programming contest which focused on applying spatial statistics to spatio-temporal big data in order to identify statistically significant hot spots using a distributed computing framework and functional programming languages. The competition at this year's event was significant - there were sixteen teams (48 members) that submitted formal entries. Five entries were selected for winners - a first place; a second place; and a three-way tie for third place.

For the first time, ACM SIGSPATIAL 2016 had a Student Research Competition (SRC). SRC aims at providing a forum for undergraduate and graduate students to share their research results and exchange ideas with other students, judges, and conference attendees. This year, 4 papers (co)authored by graduate students and 1 paper authored by undergraduate students were selected to enter the final round of the competition.

This year's conference had two distinguished speakers: Balaji Prabhakar (Stanford University and Chief Scientist at Urban Engines) and Yin Wang (Tech Lead of Maps at Facebook).

The conference was expertly chaired by Mohamed Ali (University of Washington, Tacoma, USA) and Shawn Newsam (University of California, Merced, USA). In addition to the papers in these proceedings, the conference included 11 workshops including one PhD workshop. The Workshop Co-Chairs were Egemen Tanin (University of Melbourne, Australia) and Mohamed Sarwat (Arizona State University, USA).

It takes many people working together to recreate this vibrant conference from year to year. As PC Co-Chairs, we are especially grateful for our PC, Senior PC and external reviewers, who generously and carefully reviewed the submissions and produced valuable feedback for both us and the authors. To produce this volume, we had the pleasure to work closely with two individuals who took a lot of the burden – and did a great job – Proceedings Co-Chairs Jie Bao (Microsoft Research Asia, China) and Yao-Yi Chiang (University of Southern California, USA). We thank Ruby Tahboub (Purdue University) and Ibrahim Sabek (University of Minnesota, USA) who were extremely responsive as our Webmasters and we are also very thankful to the Publicity Co-Chairs Farnoush Banaei-Kashani (University of Colorado, Denver, USA) and Ahmed Aly (Google, USA). Furthermore we thank Ahmed Lbath (University of Grenoble 1 - Joseph Fourier, France) and Maria Luisa Damiani (University of Milan, Italy) who served as Poster Co-Chairs and extend our special thanks to Erik Hoel (ESRI, US), Raju Vatsavai (North Carolina State University, USA) and Martin Werner (Ludwig-Maximilian University Munich, Germany) who organized the SIGSPATIAL Cup programming contest this year. There are many other individuals responsible who did a tremendous job for the technical organization of the event. We thank Jing (David) Dai (Google, USA) and Wei-Shinn Ku (Auburn University, USA) who served as Treasurer Co-Chairs, and our special thanks to Moustaffa Yousef who was in charge of organizing the SRC, and we thank Sarana Nutanong (City University of Hong Kong, China) and Chengyang Zhang (Amazon, USA) who served as Registrations Co-Chairs. We are also thankful to SIGSPATIAL executive committee for their expert, sustaining guidance of the conference from year to year: Mohamed Mokbel (Chair, University of Minnesota), Shawn Newsam (Vice-Chair, University of California at Merced), Roger Zimmermann (Secretary, National University of Singapore), and Egemen Tanin (Treasurer, University of Melbourne).

A distinguished token of gratitude is due to Hanan Samet, Cyrus Shahabi, and Kentaro Toyama for bringing this conference to the forefront in 2007 and starting ACM SIGSPATIAL.

We give our very special thanks to our generous corporate sponsors – *Silver*: Amazon, ESRI, Facebook, and *Bronze*: Google, Oracle – most of whom have supported this conference for multiple years and we very

Every year, this conference highlights the most important advances in GIS and it provides a forum for lively exchange of ideas between the leading researchers and practitioners in the field. We surely hope that you find a similar value in this record of the conference for which numerous individuals have helped us by dedicating their time, efforts and expertise – and we thank them all one more time.