

# ACM SIGSPATIAL 2015 Conference Report

## The 23rd ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2015)

### Seattle, Washington, USA - November 3-6, 2015

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This is the conference report of the 23<sup>rd</sup> ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2015), held in Seattle, Washington, USA, November 3-6, 2015. This conference was the twenty-third edition in a series of symposia and workshops that began 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. The conference is the premier annual event of the ACM Special Interest Group on Spatial Information (ACM SIGSPATIAL) and 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.

To create the conference's technical program, each submitted paper was first reviewed by members of a carefully chosen program committee (PC) consisting of experts in the relevant fields. Our PC had a total of 112 volunteers from academia and industry, plus an additional 18 who were designated as the Senior PC. Each paper was assigned to three different members of the PC for review. A Senior PC member studied the reviews, discussed the merits of each submission with the reviewers, and gave an accept/reject recommendation to the PC Chairs who made the final decisions. The goal of this exercise was to not only rate the submissions, but to give authors suggestions to improve their papers. Furthermore, most papers that were not accepted were, with the permission of the authors, forwarded to the conferences Workshop Chairs to be considered for inclusion in a workshop. 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 papers that could not be chosen for presentation.

Papers were submitted and accepted in different categories. We received a total of 197 regular research submissions and 15 industrial experience and systems papers. Of these 212 papers, we accepted 38 as full 10-page papers for oral presentation resulting in an acceptance rate of 17.9%. We accepted an additional 42 of these 212 as poster presentations, which appear as 4 page papers in the proceedings. We also received 27 demonstration submissions, of which we accepted 16 for live demonstrations at the conference with a 4 page paper in the proceedings (demo paper acceptance rate of 59%). This year we also had a new 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 20 vision paper submissions, 9 were accepted for presentation at the conference (vision paper acceptance rate of 45%). The top three papers out of the 9 accepted vision papers received an award from the Computing Research Association's Computing Community Consortium (CCC) under their CCC Blue Sky initiative. Finally, there were 3 papers representing the winners of the SIGSPATIAL Cup programming contest on finding shortest paths under polygonal obstacles. The overall quality of the submissions was impressive this year, and we were forced to make difficult choices given the limited available presentation slots at the conference.

This year, the conference had in summary over 349 attendees which was a significant increase in the number of attendees compared to previous SIGSPATIAL events and even broke the record of 333 achieved in 2012. This also proves the still growing interest in the ACM SIGSPATIAL community. The lion's share of attendees (around 73%) came from North America, followed by Asia (21%) and Europe (20%) where the United States with 61%, Germany, China, and Japan each with around 6%, respectively, have been the nations with the most attendees. Significant was also the participation of industry this year accounting for 28% of all attendees with around 24 companies.

This year's conference was expertly chaired by Mohamed Ali (University of Washington, Tacoma, USA) and Yan Huang (University of North Texas, 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 Goce Trajcevski (Northwestern University, USA). We enjoyed two invited talks. One was from Matt Hancher (Engineering Lead, Google Earth Engine) speaking on Global-Scale Earth Science Data Analysis in the Cloud. The other was from Jeffrey Heer (Computer Science & Engineering, University of Washington) who presented a talk entitled "Visualization and Interactive Data Analysis".

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 worked closely with the proceedings chairs Jie Bao (Microsoft Research Asia, China) and Christian Sengstock (Heidelberg University, Germany), which was a pleasure. We thank Ibrahim Sabek (University of Minnesota, USA) who was extremely responsive as our Webmaster and we are also very thankful to the publicity chairs Farnoush Banaei-Kashani (University of Colorado, Denver, USA), David Hazel (University of Washington, Tacoma, USA), and Hongrae Lee (Google Research, USA). Furthermore we thank Shashi Shekhar (University of Minnesota) who helped us much with the decisions for the vision paper track and the organization of the vision paper awards, and Ahmed Lbath (University of Grenoble 1 - Joseph Fourier, France) and Alexey Pozdnukhov (University of California, Berkeley, USA) who served as poster chairs. Also special thanks to Xin Chen (HERE/Nokia, USA), Siva Ravada (Oracle Corporation, USA), and Raju Vatsavai (North Carolina State University, USA) who organized the SIGSPATIAL Cup programming contest this year. There were also many people responsible for the technical organization of the event. We thank Jing (David) Dai (Google, USA) and Wei-Shinn Ku (Auburn University, USA) as treasurer chairs, also special thanks to Justin Levandoski (Microsoft Research, USA) and Vani Mandava (Microsoft, USA) who were responsible for the local arrangements, and we thank Sarana Nutanong (City University of Hong Kong, China) and Chengyang Zhang (Teradata, USA) who were responsible for the registrations. We are also thankful to the conference's 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).

We are grateful to Hanan Samet, Cyrus Shahabi, and Kentaro Toyama for bringing this conference to the forefront in 2007 and starting ACM SIGSPATIAL. We also give our thanks to our generous corporate sponsors Microsoft, Esri, Google, Facebook, and NVIDIA, most of whom have supported this conference for multiple years and we very much appreciate the work of Mark McKenney (Southern Illinois University Edwardsville, USA) and Cyrus Shahabi (University of Southern California, USA) who helped us to get these companies as

our sponsors. With this conference, every year we try to highlight the most important advances in GIS. By convening in one place, we seek to encourage a lively exchange of ideas between the leading researchers and practitioners in the field. We hope you find a similar value in this record of the conference.