Conference Report:
The 25th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2017)
Redondo Beach, California, USA
November 7—10 , 2017

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This report describes the development and finalization of the 25th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2017), held in Redondo Beach, California, USA, November 7-10, 2017.

Historically, what is now ACM SIGSPATIAL conference started as a series of workshops and symposia in 1993. Its aim was to promote the interdisciplinary discussions among researchers, developers, users, and practitioners and fostering research in all aspects of Geographic Information Systems – hence the initial acronym ACM GIS – and the focus was on novel systems based on geospatial data and knowledge. It continued its mission of providing a forum for original research results, addressing 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 now the premier annual event of the ACM Special Interest Group on Spatial Information (ACM SIGSPATIAL).

The technical program of the conference was decided in a two-stage process:

(1) 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 107 volunteers from academia and industry, plus an additional 22 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 three reviewers from the PC, each paper was also assigned a designated Senior PC member who studied the reviews, discussed the merits of the submission with the reviewers, wrote a metareview, and formulated an accept/reject recommendation.

(2) For the first time in 2017, we implemented a rebuttal phase where the authors received preliminary versions of the reviews and metareview and were offered the opportunity to address the concerns raised therein by submitting a response. The reviews, metareviews, and accept/reject recommendations were then finalized taking into account the responses and the selection of papers to include in the conference program was unltimately made by the PC Chairs. Certain papers that were not accepted for the conference, with the permission of the authors, were forwarded to the conferences Workshop Chairs to be considered for inclusion in relevant workshops co-located with SIGSPATIAL.

Papers were submitted and accepted in different categories. We received a total of 180 research submissions and 13 industrial experience and systems submissions. We accepted 39 of those as full 10-page research papers

for oral presentation, resulting in an acceptance rate of 19.7%. We accepted an additional 43 submissions as poster presentations (22.2% acceptance rate), to be published as 4-page papers. We also received 24 demonstration submissions, of which we accepted 14 for live demonstrations, to be published as 4-page papers (acceptance rate of 58%). Finally, once again we encouraged the submission of papers describing visionary ideas. Of the 14 vision papers submitted, 6 were accepted for oral presentation (42.8% acceptance rate) and publication as 4-page papers. Our reviewers put in a significant amount of effort in reviewing the papers and our hope is that the reviews were beneficial even to those authors whose papers were not accepted.

Continuing the tradition, ACM SIGSPATIAL 2017 had a Cup programming contest, which focused on similarity search in databases of moving object trajectories under Frechet distance. The competition received 28 submissions and the teams totaled 68 members submitting formal entries. Three entries were selected as winners, and were additionally qualified for an invited paper, an oral presentation and award prizes during the banquet.

For the second time, after its debut in 2016, the conference had a Student Research Competition that aimed 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 one paper authored by undergraduate students were selected to enter the final round of the competition.

ACM SIGSPATIAL 2017 had two distinguished speakers: Markus Gross (Disney Research and ETH Zurich) with a keynote presentation *Disney Research - Technology to Create the Magic*, and Bryan Mistele (INRIX) whose keynote addressed *Building Smarter Cars & Cities from Spatial Data*.

The conference was expertly chaired by Shawn Newsam (University of California, Merced, USA) and Erik Hoel (Esri, USA). It was preceded by 11 associated workshops managed by the Workshop Co- Chairs were John Krum (Microsoft, USA) and Mohamed Sarwat (Arizona State University, USA), in addition to the respective individual workshops organizers.

Recreating and organizing such a vibrant forum from year to year takes tremendous efforts and collaboration among many dedicated individual. We are especially grateful to 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 the proceedings, 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 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: Ahmed Aly (Google, USA), Muhammad Aamir Cheema (Monash Universiry, Australia), Sangho Kim (Esri, USA) and Yanhua Li (Worcester Polytechnic Institute, USA). Furthermore we thank Ahmed Lbath (University of Grenoble 1 - Joseph Fourier, France) and and Xun Zhou (University of Iowa, USA) who served as Poster Co-Chairs and extend our special thanks to Dev Oliver (Esri, USA) and Martin Werner (Leibniz-University Hanover, Germany) who organized the SIGSPATIAL Cup programming contest this year.

Many other fine individuals were involved and did a great job for the technical organization of the event and were in charge of many related activities. We thank Jing (David) Dai (Google, USA) and Wei-Shinn Ku (Auburn University, USA) who served as Treasurer Co-Chairs, along with our special thanks to Fusheng Wang (Stony Brook University, USA) and Moustaffa Yousef (Egypt- Japan University of Science and Technology, Egypt) who were in charge of organizing the SRC (Student Research Competition). We are indebted to Sarana Nutanong (City University of Hong Kong, China) and Zhenhui Li (Penn State University, USA) who served as Registrations Co-Chairs. Local Arrangements co-Chairs Petko Bakalov (Esri, USA) and Ahmed Eldawy (University of California, Riverside, USA) are the one to whom we are all indebted for the hard work that they put in ensuring that everything ran smoothly at the venue.

We are also thankful to the two ACMSIGSPATIAL ECs (Executive Committees) the one that provided the initial support (whose term finished in June 2017) and the newly-elected EC for their expert, sustaining guidance of the conference: MohamedMokbel (Chair, University ofMinnesota), Shawn Newsam (Vice-Chair, University of California at Merced), Roger Zimmermann (Secretary, National University of Singapore), and

Egemen Tanin (Treasurer, University of Melbourne); followed by Cyrus Shahabi (Chair, University of Southern California), Goce Trajcevski (Vice-Chair, Iowa State University), John Krum (Treasurer, Microsoft) and Egemen Tanin (Secretary, 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.

Very special thanks and recognitions are in order for our generous corporate sponsors Google (Gold Sponsor), Esri, Lyft, Facebook (Silver Sponsors), Oracle, NVIDIA (Bronze Sponsors), Microsoft, IBM, UK Ordnance Survey many of whom have supported this conference for multiple years; and it is in order to recognize the appreciation of the work of Mark McKenney (Southern Illinois University Edwardsville, USA) and Farnoush Banaei-Kashani (University of Colorado, Denver, USA) who were instrumental in getting these companies as our sponsors. We are also grateful for the publishing sponsorship by both Morgan & Claypool (Silver Publisher Sponsor) and Springer Publishers (Bronze Publisher Sponsor).

A very distinct token of gratitude goes to the US National Science Foundation (NSF) for its institutional sponsorship enabling travel-grants for students, along with NVIDIA who provided a sponsorship for the SIGSPATIAL Cup and the awards for the winners, both financial ones as well as high-end NVidia cards. Last, but not the least, the top three papers out of the 6 accepted vision papers received an award from the Computing Research Associations Computing Community Consortium (CCC).

Every year, the conference highlights the most important advances in GIS and provides a forum for lively exchange of ideas among leading researchers and practitioners in the field. We are confident that you will find a similar value in this record of the conference. In conclusion, we would like to express once again our gratitude to all the authors who submitted papers, the members of the PC and senior PC, the conference officers, and all the other individuals who contributed their expertise and time to make the conference possible.