

IWGS 2017 Workshop Report

The 8th ACM SIGSPATIAL International Workshop on GeoStreaming

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The ACM SIGSPATIAL International Workshop on Geostreaming (IWGS) was held for the eighth time in conjunction with the 25th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACMGIS 2017). The workshop has been a successful event that attracted participants from both academia and industry. The workshop addressed topics that are at the intersection of data streaming and geospatial systems. The workshop fostered an environment where geospatial researchers can benefit from the advances in geosensing technologies and data streaming systems.

We are entering the era of "big data" thanks to the exponential growth and availability of structured and unstructured data, among which a large amount are real-time streaming data emitted from sensors, imagery and mobile devices. In addition to the temporal nature of stream data, various sources provide stream data that has geographical locations and/or spatial extents, such as geotagging twitter streams, mobile GPS location streams, spatial temporal image streams, and so on. On one hand, this amount of streamed data has been a major propeller to advance the state of the art in geographic information systems. On the other hand, the ability to process, mine, and analyze that massive amount of data in a timely manner prevented researchers from making full use of the incoming stream data. The geostreaming term refers to the ongoing effort in academia and industry to process, mine and analyze stream data with geographic and spatial information.

This workshop addresses the research communities in both stream processing and geographic information systems. It brings together experts in the field from academia, industry and research labs to discuss the lessons they have learned over the years, to demonstrate what they have achieved so far, and to plan for the future of geostreaming.

The workshop featured a keynote. The keynote was delivered by Conrad Albrecht from IBM T. J. Watson Research Center, who presented IBM's work in the field of big geo-spatial data analytics in order to generate business relevant insight. He introduced the design of the geo-spatial analytics platform PAIRS and illustrate its application by a series of demonstrations from areas such as weather forecasting, agriculture monitoring, renewable energy utilization as well as land use recognition.

The call for paper resulted in 11 submissions of high quality research papers from industry and academia. A program committee of 6 members reviewed the submissions and as a result 9 papers were accepted given the time constraints of the workshop. 8 conference attendees registered to attend IWGS, and on average 12 attendees were present at every session of the workshop, although in certain sessions the attendance exceeded 20. The topics presented in the workshop include the following: Geostreaming Theory, Trajectory Analysis, Mining Geostreams, Moving Object Data Stream Processing.