

SpatialAPI 2021

Proceedings of the 3rd ACM SIGSPATIAL International Workshop on APIs and Libraries for Geospatial Data Science (SpatialAPI 2021)

November 2nd, 2021, Beijing, China

In conjunction with the 29th International Conference on Advances in Geographic
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SpatialAPI 2021 Chairs' Welcome

It is our great pleasure to welcome you to the 3rd ACM SIGSPATIAL International Workshop on APIs and Libraries for Geospatial Data Science (SpatialAPI 2021); the workshop is held in conjunction with the ACM SIGSPATIAL conference and is held virtually this year. The SpatialAPI workshop aims to provide hands-on experience to the SIGSPATIAL community on a variety of Application Programming Interfaces (APIs) for processing and accessing spatial data through tutorials. The topics include but are not limited to: web mapping APIs, spatial data science libraries, high-performance geospatial processing libraries, and systems for spatio-temporal data.

This year was particularly challenging due to the COVID-19 pandemic which enforced social distancing and travel restrictions everywhere in the world. The SIGSPATIAL conference is held in a hybrid online/in-person mode and this workshop is completely online. While most of the conference and workshop talks were pre-recorded, we decided to keep the live interaction between the workshop participants through live virtual meetings. This way, the participants have the opportunity to ask questions to the tutorial speakers to get the immediate feedback, which is desired in this workshop.

This year, we invited the community to submit their tutorial proposals. We received seven tutorial proposals and a careful review process is carried out with the help of a strong technical program committee. Each tutorial received two to three reviews, which included a diverse set of evaluation criteria on the topic, scope, and detailed tutorial timeline and plan. While all the tutorials we received were high quality, due to the time constraint of the workshop, we selected two long tutorials (90 minutes each) and three short tutorials (30 minutes each) based on the program committee's reviews and recommendations. In addition, we are fortunate to have SafeGraph to give an invited talk featuring their Data-As-A-Service product.

The 3rd SpatialAPI workshop contains 5 tutorials which cover data integration, data visualization and data analytics. The first tutorial titled "Interactive Mapping and Geospatial Analysis with Leafmap and Jupyter" is from Qiusheng Wu from the University of Tennessee, Knoxville. The second tutorial is titled "MobilityDB: Hands on Tutorial on Managing and Visualizing Geospatial Trajectories in SQL" and is presented by Esteban Zimanyi, Mahmoud Sakr, Mohamed Bakli, Maxime Schoemans, Dimitris Tsismelis and Robin Choquet from the Université Libre de Bruxelles. The third tutorial is titled "CyberGIS-Compute for enabling computationally intensive geospatial research" by Anand Padmanabhan, Rebecca Vandewalle, Zimo Xiao, Furqan Baig, Alexander Michels, Zhiyu Li and Shaowen Wang from the University of Illinois at Urbana-Champaign. The fourth tutorial titled "A Brief Introduction to Geospatial Big Data Analytics with Apache AsterixDB" is presented by Akil Sevim, Mehnaz Tabassum Mahin, Tin Vu, Ian Maxon, Ahmed Eldawy, Michael Carey and Vassilis Tsotras from the University of California, Riverside and University of California, Irvine. The last tutorial titled "Heavy-Lifting API for Massive Multi-Dimensional Data: the OGC/ISO Coverage API Standards" is presented by Peter Baumann from Jacobs University.

Yiqun Xie
Co-Chair
University of Maryland

Jia Yu
Co-Chair
Washington State University
Apache Software Foundation

Organization

Workshop Co-chair

Yiqun Xie (University of Maryland)

Jia Yu (Washington State university, Apache Software Foundation)

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