NSF Spatiotemporal Innovation Center

May 2022 Monthly Newsletter

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MAY 2022 IAB MEETING

The I/UCRC for Spatiotemporal Thinking, Computing and Applications (a.k.a. NSF Spatiotemporal Innovation Center) held its successful 17th semi-annual Industrial Advisory Board meeting on May 11, 2022. Read more about this event on page two.

DEAN'S GRADUATE AWARD FOR EXCELLENCE IN RESEARCH GIVEN TO GMU RESEARCHER

This award recognizes excellence in research by a graduate student in the College of Science for the 2021-2022 academic year. Qian Liu's efforts were recognized by Dr. Phil Yang and endorsed by the Chair of the Department of Geography and Geoinformation Science, Dr. Dieter Pfoser. Read more regarding Qian Liu's success on page three.

FURTHER WORKBENCH FUNCTIONALITY

The Harvard team has successfully expanded the functionality of the Workbench project, HVD-21-07. The workbench is now capable of analyzing movement data of ancient Chinese literati, spatial weights conversion, MGWR, Covid-19 model comparison, and some new GIS functions and spatial regression workflows were shared on the KNIME web portal.

May 2022 IAB Meeting

The I/UCRC for Spatiotemporal Thinking, Computing and Applications (a.k.a. NSF Spatiotemporal Innovation Center) successfully held its 17th semi-annual Industrial Advisory Board meeting on May 11, 2022. The meeting recognized the progress of 11 different projects and had a total of 60 attendees. This meeting reviewed the center's innovative research and identifies new projects to be supported through collaborations among academia, industry, and agencies. A brief lunch-demo regarding a Ukrainian Rapid Response portal was also held, as well as several discussions regarding what the future looks like for the STC.

We thank the members of the community who attended this event.

DEAN'S GRADUATE AWARD FOR EXCELLENCE IN RESEARCH GIVEN TO GMU RESEARCHER

This award recognizes excellence in research by a graduate student in the College of Science for the 2021 – 2022 academic year. Qian Liu significantly contributes to the reputation and mission of the College of Science and George Mason University. Her nomination by Dr. Phil Yang and endorsed by the Chair of the Department of Geography and Geoinformation Science, Dr. Dieter Pfoser, emphasized her excellence in research and scholarship. Her efforts thus far have culminated in twenty-one publications, eight as first author, with two first-author manuscripts under review and two peer-reviewed book chapters.

Furthermore, Dr. Qian Liu received her PhD degree in May 2022. Her research found that the COVID-19 changed short-term climate/environment patterns and published a series of papers including the influence on air quality (AQ) in California (Science of the Total Environment, STOTEN, IF 7.96) and AQ globally (STOTEN, IF 7.96). Her 20 top-tier journal publications were cited over 300 times in less than one year. The findings are captured by public media such as Atlantic Magazine and Public Health Post.

PHD STUDENT ADMITTED TO MU SIGMA RHO

Ms. Seren Smith received a nomination from Dr. Scott LaCombe at Smith College to enter Mu Sigma Rho, a national honor society for achievements in statistics, upon the Smith College (Smith's undergraduate) commencement ceremony. Smith was admitted to Mu Sigma Rho and was granted admission to the American Statistics Association as part of this acceptance. Mu Sigma Rho promotes scholarly pursuits in statistics, and recognizes outstanding achievement amongst students, undergraduate and graduate, as well as the outstanding achievements of instructional staff.

INTERACTIVE ANALYSIS OF BIG GEOSPATIAL DATA WITH HIGH PERFORMANCE COMPUTING: A CASE STUDY OF PARTISAN SEGREGATION IN THE U.S.

The Harvard site of the STC recently published a paper entitled "Interactive Analysis of Big Geospatial Data with High Performance Computing: A Case Study of Partisan Segregation in the U.S." where researchers preposed a an interactive method development for geospatial data analysis. This work has been published in Transactions in GIS. The article can be accessed via this link: http://doi.org/10.1111/tgis.12955.

This work will also be presented in ESRI User conference, 2022. More of their work on "RINX: A Solution for Information Extraction from Big Raster Datasets" will be presented in FOSS4G, 2022.

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