Journal of Geographical Systems - Special Issue on Scale - Call for Papers

The Journal of Geographical Systems has tentatively agreed to publish a special issue on scale and its fundamental role in spatial analytics. Although the literature on scale is vast, there are several reasons for believing that the topic is especially timely. First, spatial data are becoming available at finer spatial (and temporal) scales, and it is likely that this process will continue. This is creating new opportunities, leading to the development of new research questions, methods, and findings. Second, multi-scale analysis is now possible under various learning frameworks, opening up the possibility of directly measuring the spatial scale at which different processes operate. Multiscale GWR, for example, allows data to be explored in new and potentially insightful ways. Learning from cross-scale and multi-scale representations has also been a key element in GeoAI and deep learning, as it allows the study of how geospatial patterns vary across scales. These topics have rarely been addressed in the literature to date, which has concentrated instead on single-scale analysis for numerous reasons. Finally, research at global scales raises a series of specific issues: for example, no flat, projected map of the Earth or part of the Earth can have an exactly constant representative fraction, and it is impossible to lay a raster on a curved surface. New techniques are becoming available, including discrete global grids, that allow scale to be treated in global research in much more consistent and rigorous ways, but that work remains largely unknown to social scientists and lacks extensive experience with applications.

Stimulated by these and related issues, in February 2020 the Spatial Analysis Research Center (SPARC) at Arizona State University organized and hosted an international workshop over two days in February 2020 near the Tempe campus. The workshop included keynotes, lightning talks, position papers, and plenary discussions; full details, including presentations, are available at the workshop Web site https://sgsup.asu.edu/sparc/ScaleWorkshop. This proposed special issue is one of several activities that are continuing the momentum established by that workshop.

Researchers interested in these topics are invited to contribute papers to the special issue. Please send an abstract of a proposed paper to Mike Goodchild, good@geog.ucsb.edu, by January 15, 2021. Authors of suitable abstracts will be asked to send full papers by the end of May.

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