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Guest Editorial: Special issue on spatial and temporal database management

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This special issue focuses on journal extensions of the best papers of the 17th International Symposium on Spatial and Temporal Databases, SSTD 2021, which was held online in August of 2021. SSTD is a biannual symposium that focuses on cutting edge research in the area of spatial and spatio-temporal databases. This area continues to evolve to incorporate the recent advances in research including machine learning, artificial intelligence, trajectory data processing, and indoor location-based data processing.

In SSTD 2021, a best paper award committee reviewed all publications and selected four papers that were invited to submit a journal article for this special issue that extends their conference papers. These journal submissions were then reviewed to ensure that they meet the standards of GeoInformatica and that they add a significant contribution on top of their conference versions. After rigorous review, two papers were selected to appear in this special edition of GeoInformatica.

The first paper titled "Time-Constrained Indoor Keyword-aware Routing: Foundations and Extensions" is authored by Harry Kai-Ho Chan, Tiantian Liu, Huan Li, and Hua Lu. This paper addresses the problem of routing in the indoor environment. This paper builds on the recent development in localization technology that provides accurate location in the indoor environment as well as the availability of indoor maps. It formulates a problem of routing in an indoor environment, e.g., a shopping mall, while being constrained by time. The second paper titled "NALMO: Transforming Queries in Natural Language for Moving Objects Databases" is authored by Xieyang Wang, Mengyi Liu, Jianqiu Xu, and Hua Lu. This paper bridges the gap between natural language processing (NLP) and moving object databases. With this work, users can query a moving object database with a query written in natural language. This has the potential of increasing the adoption of moving object databases by non-technical users who might not be able to learn a structured query language.

We believe that the selected papers in this special issue will not only provide a valuable resource for current researchers but also spark new ideas and avenues for exploration in the realm of spatio-temporal data management.

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