13th International Conference on Spatial Information Theory

COSIT 2017, September 4–8, 2017, L'Aquila, Italy

Edited by

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Preface

COSIT 2017 is the latest edition of the conference series on spatial information theory that has been bringing together leading researchers of the field for more than twenty years now. On its trajectory through time and space, the conference has returned to where it started: Italy. This year, it is held at L'Aquila, the capital city of the Abruzzo region, in Central Italy. The beauty of the city and the region is matched by the diversity and quality of the paper selected for presentation. In total, we received 51 submissions that were then reviewed by at least three members of the program committee. Based on the reviews, 22 papers were selected to be presented at the main conference and are included in this volume.

A quick look at the table of contents is enough to appreciate the breadth and diversity of the topics covered by the articles included in the proceedings. In addition to well-established topics, such as qualitative reasoning, spatial semantics, and wayfinding, the trend towards tackling the fundamental theoretical issues inherent to crowd-sourced spatial information continues from previous COSIT conferences. As it happens at COSIT, there are atypical topics being discussed, such as the interesting foray into a quantum theory applied to geographic fields. Overall, the program provides rich contributions for researchers in the key sub-domains of spatial information theory while at the same time extending the scientific scope of the field.

As in previous years, the main single-track program is complemented by satellite events. First of all, an intensive poster session gives the opportunity especially to young researchers to present their work to the community in a designated session. Preceding the single-track program, COSIT 2017 offers five workshops covering hot and emerging topics in spatial information theory, such as 'rethinking wayfinding support systems' and 'future directions in geospatial natural language research'. In addition, two tutorials are offered as well as the doctoral colloquium. The proceedings of the satellite events are available as a separate publication. Three keynotes complement the technical program: by Sang Ah Lee on a neuroscientist point of view on spatial cognition, by Stefano Borgo on the formalization of spatial environments of artificial agents, and by Bin Jiang on scaling and order in geographic space. Last but not least, COSIT 2017 also hosts several social events facilitating informal exchanges.

Organizing an event such as COSIT and making it a success is only possible with the help and commitment of many people. The program committee plays a pivotal role in ensuring a quality program, and we would like to thank all reviewers for their time and for the thorough reviews they produced. We would like to thank the University of L'Aquila that hosts the conference, offering the location and technical and logistic support, in addition to a financial contribution. For the first time, this year COSIT is an IFIP (International Federation for Information Processing) supported conference and an AICA (Italian Association for Informatics and Automatic Calculus) supported conference with no financial involvement of IFIP and AICA. Finally, we would like to thank all who attended COSIT 2017 to present their work, to discuss the work showcased at the conference and beyond, and to advance the state of the art in the field of spatial information theory.

July 2017

Eliseo Clementini, Maureen Donnelly,
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