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Spatial Information Theory

12th International Conference, COSIT 2015
Santa Fe, NM, USA, October 12–16, 2015
Proceedings

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Preface

Since its inception in Elba (Italy) in 1993 (COSIT was born out of COSIT 0 in Pisa, Italy in 1992), the COSIT biennial conference series (www.cosit.org) has brought together leading researchers from all cognate disciplines reflecting the interdisciplinary breadth of spatial information theory, including (but not limited to) geography, psychology, cognitive science, computer science, information science, and linguistics.

Following the conference on the North Sea coast in Scarborough (UK) in 2013, the 12th COSIT conference returned to the USA for the fifth time. The COSIT 2015 conference was held in Santa Fe, New Mexico, during October 12–16, 2015 in the oldest capital city of the USA, located near the foothills of the Sangre de Cristo Mountains.

We received 52 full papers, which were each thoroughly reviewed by at least three Program Committee members; 22 were selected for presentation at the conference and are included in this volume.

The breadth of the topics in this volume also reflects the breadth of the disciplines involved in fundamental research related to geographic information theory. Excitingly, traditional research topics, such as space-time representations, spatial relations, navigation, (strong) spatial cognition, etc., are still alive and well. Empirical research on how to extract and analyze spatial information from rapidly growing user-generated online multimedia databases, for example, produced in a citizen science context, has clearly emerged as a new and popular research frontier in the field. Meanwhile, "big picture" theories and human behavioral studies have recently yielded fewer contributions (although still represented herein), despite being of great value to this interdisciplinary field.

In addition to the single-track paper session, COSIT 2015 also offered four peer-reviewed workshops and one tutorial before the conference, and a doctoral colloquium after the main conference as in previous years. These events were intended as complementary opportunities to additionally facilitate dialogue across disciplinary boundaries and research expertise. Two keynote speakers, a poster session, as well as social events rounded off the stimulating COSIT 2015 conference activities in the beautiful city of Santa Fe in the U.S. South West, renowned for the natural beauty of its landscape.

Organizing a successful conference is not possible without the commitment, additional effort, and diligent help of many people. We would like to thank the international Program Committee for their timely and thorough reviews and the sponsors and supporters for providing travel support for students and keynote speakers, for supplying materials at the conference, and for supporting social events. Furthermore, the organizers of the workshops, tutorials, and doctoral colloquium contributed an important part of the overall program. We would also like to thank the conference organizing crew for all the hard work in front of and behind the scenes. Our special thanks go to Tumasch Reichenbacher in the Department of Geography at the University of Zurich who efficiently handled proceedings production matters, and Danqing Xiao in the

Department of Geography at the University of New Mexico for setting up and managing conference registration. Finally, we would like to thank the most important people at any conference – those who attended COSIT 2015 to present and discuss their work, and who by so doing demonstrated the continuing strength of spatial information theory as a research field in its own right.

July 2015

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Contents

Formalizing and Modeling Space-Time

Outline of a Formal Theory of Processes and Events, and Why GIScience Needs One 3
Antony Galton

Extracting Causal Rules from Spatio-Temporal Data 23
Antony Galton, Matt Duckham, and Alan Both

Modelling Spatial Structures 44
Franz-Benjamin Mocnik and Andrew U. Frank

Strong Spatial Cognition 65
Christian Freksa

Qualitative Spatio-Temporal Reasoning and Representation I

A Conceptual Quality Framework for Volunteered Geographic Information 89
Andrea Ballatore and Alexander Zipf

A Coq-Based Axiomatization of Tarski's Mereogeometry 108
Richard Dapoigny and Patrick Barlatier

Shape Similarity Based on the Qualitative Spatial Reasoning Calculus eOPRAm 130
Christopher H. Dorr, Longin Jan Latecki, and Reinhard Moratz

From Metric to Topology: Determining Relations in Discrete Space 151
Matthew P. Dube, Jordan V. Barrett, and Max J. Egenhofer

Language and Space

Where Snow is a Landmark: Route Direction Elements in Alpine Contexts 175
Ekaterina Egorova, Thora Tenbrink, and Ross S. Purves

Spatial Natural Language Generation for Location Description in Photo Captions 196
Mark M. Hall, Christopher B. Jones, and Philip Smart

More Than a List: What Outdoor Free Listings of Landscape Categories Reveal About Commonsense Geographic Concepts and Memory Search Strategies 224
Flurina M. Wartmann, Ekaterina Egorova, Curdin Derungs, David M. Mark, and Ross S. Purves

Signs, Images, Maps, and other Representations of Space

Identifying the Geographical Scope of Prohibition Signs 247
Konstantin Hopf, Florian Dageförde, and Diedrich Wolter

Conceptualizing Landscapes: A Comparative Study of Landscape Categories with Navajo and English-Speaking Participants 268
Alexander Klippel, David Mark, Jan Oliver Wallgrün, and David Stea

Citizen Science Land Cover Classification Based on Ground and Aerial Imagery 289
Kevin Sparks, Alexander Klippel, Jan Oliver Wallgrün, and David Mark

Qualitative Spatio-Temporal Reasoning and Representation II

Swiss Canton Regions: A Model for Complex Objects in Geographic Partitions 309
Matthew P. Dube, Max J. Egenhofer, Joshua A. Lewis, Shirly Stephen, and Mark A. Plummer

Spatial Symmetry Driven Pruning Strategies for Efficient Declarative Spatial Reasoning 331
Carl Schultz and Mehul Bhatt

On Distributive Subalgebras of Qualitative Spatial and Temporal Calculi 354
Zhiguo Long and Sanjiang Li

What is in a Contour Map?: A Region-Based Logical Formalization of Contour Semantics 375
Torsten Hahmann and E. Lynn Usery

Navigation by Humans and Machines

Learning Spatial Models for Navigation 403
Susan L. Epstein, Anoop Aroor, Matthew Evanusa, Elizabeth I. Sklar, and Simon Parsons

Defensive Wayfinding: Incongruent Information in Route Following 426
Martin Tomko and Kai-Florian Richter

A Wayfinding Grammar Based on Reference System Transformations 447
Peter Kiefer, Simon Scheider, Ioannis Giannopoulos, and Paul Weiser

Quantifying the Significance of Semantic Landmarks in Familiar and Unfamiliar Environments 468
Teriitutea Quesnot and Stéphane Roche

Author Index 491