Contents

Part I  Cognitive and Computational Aspects on Spatial Concepts

A Computational Model for Context and Spatial Concepts .............. 3
Juergen Hahn, Paolo Fogliaroni, Andrew U. Frank and Gerhard Navratil

Inferring Complex Geographical Concepts with Implicit Geometries
Using Ontologies: A Case of Peninsulas ............................... 21
Xiang Zhang, Tinghua Ai and Jantien Stoter

Question-Based Spatial Computing—A Case Study ..................... 37
Behzad Vahedi, Werner Kuhn and Andrea Ballatore

Measuring Space-Time Prism Similarity Through Temporal
Profile Curves .............................................................. 51
Harvey J. Miller, Martin Raubal and Young Jaegal

Deriving the Geographic Footprint of Cognitive Regions ............. 67
Heidelinde Hobel, Paolo Fogliaroni and Andrew U. Frank

Part II  Crowdsourcing and Social Networks

Android-Based Multi-Criteria Evaluation Approach for Enhancing
Public Participation for a Wind Farm Site Selection ................... 87
Pece V. Gorsevski and Alberto Manzano Torregrosa

Presenting Citizen Engagement Opportunities Online: The Relevancy
of Spatial Visualization .................................................. 105
Thore Fechner and Christian Kray

Spatial Data Relations as a Means to Enrich Species Observations
from Crowdsourcing ....................................................... 123
Stefan Wiemann
Cross-Linkage Between Mapillary Street Level Photos and OSM Edits .................................................. 141
Levente Juhász and Hartwig H. Hochmair

Geo-Privacy Beyond Coordinates ................................................. 157
Grant McKenzie, Krzysztof Janowicz and Dara Seidl

Part III Analysis and Visualization of (Big) Spatial Data

Modelling Spatial Patterns of Outdoor Physical Activities Using Mobile Sports Tracking Application Data ...................... 179
Rusne Silerytė, Pirouz Nourian and Stefan van der Spek

Estimating the Biasing Effect of Behavioural Patterns on Mobile Fitness App Data by Density-Based Clustering ...................... 199
Cecilia Bergman and Juha Oksanen

Enhancing Exploratory Analysis by Summarizing Spatiotemporal Events Across Multiple Levels of Detail .................. 219
Ricardo Almeida Silva, João Moura Pires, Maribel Yasmina Santos and Nuno Datia

Representation and Visualization of Imperfect Geohistorical Data About Natural Risks: A Qualitative Classification and Its Experimental Assessment .................................................. 239
Cécile Saint-Marc, Marlène Villanova-Oliver, Paule-Annick Davoine, Cicely Pams Capoccioni and Dorine Chenier

Part IV Pedestrian and Vehicle Mobility in Smart Cities

Conflict in Pedestrian Networks .................................................. 261
Jia Wang, Zena Wood and Mike Worboys

Personalizing Walkability: A Concept for Pedestrian Needs Profiling Based on Movement Trajectories ...................... 279
David Jonietz

Learning On-Street Parking Maps from Position Information of Parked Vehicles .................................................. 297
Fabian Bock, Jiaqi Liu and Monika Sester

Visualizing Location Uncertainty on Mobile Devices: Assessing Users’ Perception and Preferences .......................... 315
Champika Manel Ranasinghe and Christian Kray
Part V  Information Retrieval, Modelling and Analysis

Feature-Aware Surface Interpolation of Rooftops Using Low-Density Lidar Data for Photovoltaic Applications .......................... 337
René Buffat

Critical Situation Monitoring at Large Scale Events from Airborne Video Based Crowd Dynamics Analysis .......................... 351
Alexander Almer, Roland Perko, Helmut Schrom-Feiertag,
Thomas Schnabel and Lucas Paletta

Probabilistic Framework for Modelling the Evolution of Geomorphic Features in 10,000-Year Time Scale: The Eurajoki River Case ........ 369
Jari Pohjola, Jari Turunen, Tarmo Lipping and Ari T.K. Ikonen

GeoPipes Using GeoMQTT .................................................. 383
Stefan Herle and Jörg Blankenbach

Continuous Generalization of Administrative Boundaries Based on Compatible Triangulations ................................. 399
Dongliang Peng, Alexander Wolff and Jan-Henrik Haunert
Geospatial Data in a Changing World
Selected papers of the 19th AGILE Conference on Geographic Information Science
Sarjakoski, T.; Santos, M.Y.; Sarjakoski, L.T. (Eds.)
2016, XIII, 415 p. 168 illus., Hardcover
ISBN: 978-3-319-33782-1