

Contents

Part I Spatio (Temporal) Data Modeling and Visualisation

1 Usability of Spatio-Temporal Uncertainty Visualisation Methods.	3
Hansi Senaratne, Lydia Gerharz, Edzer Pebesma and Angela Schwing	
2 Line Simplification in the Presence of Non-Planar Topological Relationships	25
Padraig Corcoran, Peter Mooney and Michela Bertolotto	
3 Critical Remarks on the Use of Conceptual Schemas in Geospatial Data Modelling—A Schema Translation Perspective	43
Tatjana Kutzner and Andreas Donaubauer	

Part II Spatial Data Infrastructures, Geo Web Services and Geo Semantic Web

4 Towards an Active Directory of Geospatial Web Services	63
Francisco J. Lopez-Pellicer, Walter Rentería-Agualimpia, Javier Nogueras-Iso, F. Javier Zarazaga-Soria and Pedro R. Muro-Medrano	
5 Spatial Sensor Web for the Prediction of Electric Power Supply System Behaviour	81
Miloš Bogdanović, Nataša Veljković and Leonid Stoimenov	
6 Live Geoinformation with Standardized Geoprocessing Services	99
Theodor Foerster, Bastian Baranski and Harald Borsutzky	

7	Interlinking Geospatial Information in the Web of Data	119
	Luis M. Vilches-Blázquez, Víctor Saquicela and Oscar Corcho	
 Part III Modelling and Management of Uncertainty, Spatio (Temporal) Data Quality and Metadata		
8	QualESTIM: Interactive Quality Assessment of Socioeconomic Data Using Outlier Detection	143
	Christine Plumejeaud and Marlène Villanova-Oliver	
9	Distributed Integration of Spatial Data with Different Positional Accuracies	161
	Alberto Belussi and Sara Migliorini	
10	Through a Fuzzy Spatiotemporal Information System for Handling Excavation Data.	179
	Asma Zoghalmi, Cyril de Runz, Herman Akdag and Dominique Pargny	
 Part IV Mobility of Persons, Objects and Systems, Transports and Flows		
11	Using Weather Information to Improve Route Planning	199
	Paul Litzinger, Gerhard Navratil, Åke Sivertun and Daniela Knorr	
12	Simulation of Laser Attacks against Aircrafts	215
	Václav Talhofer, Teodor Baláž, František Racek, Alois Hofmann and Šárka Hošková-Mayerová	
13	Automated Traffic Route Identification Through the Shared Nearest Neighbour Algorithm	231
	Maribel Yasmina Santos, Joaquim P. Silva, João Moura-Pires and Monica Wachowicz	
 Part V Spatial Analysis, Geostatistics, and Geo Information Retrieval		
14	Comparing Support Vector Regression and Statistical Linear Regression for Predicting Poverty Incidence in Vietnam	251
	Cornelius Senf and Tobia Lakes	

15 Do Expressive Geographic Queries Lead to Improvement in Retrieval Effectiveness? 267
Damien Palacio, Christian Sallaberry, Guillaume Cabanac,
Gilles Hubert and Mauro Gaio

16 The GP-SET Method: A Spatial and Temporal Probabilistic Model for Geoprospective. 287
Stéphane Bourrelly and Christine Voiron-Canicio

Part VI Modelling and Spatial Analysis of Urban Dynamics, Urban GIS

17 Predicting Spatiotemporal Distribution of Transient Occupants in Urban Areas 307
Toshihiro Osaragi and Takeshi Hoshino

18 Towards Urban Fabrics Characterization Based on Buildings Footprints 327
Rachid Hamaina, Thomas Leduc and Guillaume Moreau

19 The Use of Point Pattern Statistics in Urban Analysis 347
Ioannis Pissourios, Pery Lafazani, Stavros Spyrellis,
Anastasia Christodoulou and Myron Myridis

Part VII GIS and Spatial Analysis for Global Change Modelling, Impact on Space

20 Beach-Dune Morphological Relationships at Youghal Beach, Cork 367
Sarah Kandrot

21 A New Method for Computing the Drainage Network Based on Raising the Level of an Ocean Surrounding the Terrain 391
Salles V. G. Magalhães, Marcus V. A. Andrade,
W. Randolph Franklin and Guilherme C. Pena

**Part VIII Geographic Information Science: Links with other
Disciplines and Citizens**

**22 Geographic Information Science as a Common Cause
for Interdisciplinary Research. 411**
Thomas Blaschke, Josef Strobl, Lothar Schrott, Robert Marschallinger,
Franz Neubauer, Andreas Koch, Euro Beinat, Thomas Heistracher,
Siegfried Reich, Michael Leitner and Karl Donert

**23 Enhancing the Quality of Volunteered Geographic Information:
A Constraint-Based Approach. 429**
Olga Yanenko and Christoph Schlieder

Index 447