

Contents

Introduction	
Going Local—Evolution of Location-Based Services	xxi
Jukka M. Krisp, Liqiu Meng	
Location Matters: LBS 2030	xxv
Georg Gartner	
Location-Based Services in 2030: From Sharing to Collective Action.	xxix
Harvey J. Miller	
 Part I Spatio-Temporal Data Acquisition, Processing, and Analysis	
Extraction of Location-Based Emotions from Photo Platforms	3
Eva Hauthal and Dirk Burghardt	
Combining Float Car Data and Multispectral Satellite Images to Extract Road Features and Networks.	29
Chun Liu, Zhiwei Jian and Xiaolin Meng	
Space-Time Mapping of Mass Event Data	45
Christian E. Murphy	
Analyzing Human Activities Through Volunteered Geographic Information: Using Flickr to Analyze Spatial and Temporal Pattern of Tourist Accommodation	57
Yeran Sun, Hongchao Fan, Marco Helbich and Alexander zipf	

A Platform for Location-Based App Development for Citizen Science and Community Mapping	71
Claire Ellul, Suneeta Gupta, Mordechai Muki Haklay and Kevin Bryson	
A Framework for On-line Detection of Custom Group Movement Patterns	91
Colin Kuntzsch and Alexander Bohn	
Mining Event-Related Knowledge from OpenStreetMap.	109
Khatereh Polous, Peter Mooney, Jukka M. Krisp and Liqiu Meng	
 Part II Positioning/Indoor Positioning	
Evaluation of Bluetooth Properties for Indoor Localisation.	127
Khuong Nguyen and Zhiyuan Luo	
Pedestrian Indoor Localization Using Foot Mounted Inertial Sensors in Combination with a Magnetometer, a Barometer and RFID.	151
Michailas Romanovas, Vadim Goridko, Lasse Klingbeil, Mohamed Bourouah, Ahmed Al-Jawad, Martin Traechtler and Yiannos Manoli	
Quantitative and Spatial Evaluation of Distance-Based Localization Algorithms.	173
Thomas Hillebrandt, Heiko Will and Marcel Kyas	
Using the Magnetic Field for Indoor Localisation on a Mobile Phone	195
Andreas Bilke and Jürgen Sieck	
 Part III Wayfinding/Navigation (Indoor/Outdoor) and Smart Mobile Phone Navigation and LBS Technologies	
Indoor Route Planning with Volunteered Geographic Information on a (Mobile) Web-Based Platform	211
Marcus Goetz and Alexander Zipf	
Indoor and Outdoor Mobile Navigation by Using a Combination of Floor Plans and Street Maps	233
Jussi Nikander, Juha Järvi, Muhammad Usman and Kirsi Virrantaus	

Augmented Maps with Route Sketches.	251
Padraig Corcoran, Peter Mooney, Michela Bertolotto and Basel Magableh	

High Precision 3D Indoor Routing on Reduced Visibility Graphs	265
Horst Steuer	

Travel-Mode Classification for Optimizing Vehicular Travel Route Planning.	277
Lijuan Zhang, Sagi Dalyot and Monika Sester	

Taxonomy of Navigation for First Responders	297
Zhiyong Wang and Sisi Zlatanova	

Part IV Interactions, User Studies and Evaluations

App-Free Zone: Paper Maps as Alternative to Electronic Indoor Navigation Aids and Their Empirical Evaluation with Large User Bases.	319
Alexandra Lorenz, Cornelia Thierbach, Nina Baur and Thomas H. Kolbe	

Zooming In–Zooming Out Hierarchies in Place Descriptions	339
Daniela Richter, Maria Vasardani, Lesley Stirling, Kai-Florian Richter and Stephan Winter	

Understanding the Roles of Communities in Volunteered Geographic Information Projects.	357
Peter Mooney and Padraig Corcoran	

A Conceptual Model for Analyzing Contribution Patterns in the Context of VGI	373
Karl Rehrl, Simon Gröechenig, Hartwig Hochmair, Sven Leitinger, Renate Steinmann and Andreas Wagner	

Part V Innovative LBS Systems and Applications

People as Sensors and Collective Sensing-Contextual Observations Complementing Geo-Sensor Network Measurements.	391
Bernd Resch	

Design and Implementation of a Daily Activity Scheduler in the Context of a Personal Travel Information System.	407
Jianwei Zhang and Theo Arentze	
Map-Based Storytelling Tool for Real-World Walking Tour	435
Min Lu and Masatoshi Arikawa	
A 3D Indoor Routing Service with 2D Visualization Based on the Multi-Layered Space-Event Model	453
Andreas Donaubauer, Florian Straub, Nadia Panchaud and Claude Vessaz	
Adapting OSM-3D to the Mobile World: Challenges and Potentials	471
Ming Li, Marcus Goetz, Hongchao Fan and Alexander Zipf	



<http://www.springer.com/978-3-642-34202-8>

Progress in Location-Based Services

Krisp, J.M. (Ed.)

2013, XXXV, 492 p., Hardcover

ISBN: 978-3-642-34202-8