

International Journal of
**GEOGRAPHICAL
INFORMATION
SCIENCE**

Editor: B. Lees

2

8

4



Taylor & Francis
Taylor & Francis Group

CONTENTS

**Short Communication**

Some further clarification on Markov chain random fields and transiograms

W. Li and C. Zhang

423

Articles

Inferring properties and revealing geographical impacts of intercity mobile communication network of China using a subnet data set

C. Kang, Y. Zhang, X. Ma and Y. Liu

431

A heuristic cellular automata approach for modelling urban land-use change based on simulated annealing

Y. Feng and Y. Liu

449

Association of elevation error with surface type, vegetation class and data origin in discrete-returns airborne LiDAR

S. Coveney

467

Clustering of temporal event processes

T. Pei, X. Gong, S.-L. Shaw, T. Ma and C. Zhou

484

The comap as a diagnostic tool for non-stationary kriging models

P. Harris, C. Brunson and M. Charlton

511

Allocation of urban land uses by Multi-Objective Particle Swarm Optimization algorithm

Z. Masoomi, M.S. Mesgari and M. Hamrah

542

A fast, free-form rubber-sheet algorithm for contiguous area cartograms

S. Sun

567

Calibrating cellular automata based on landscape metrics by using genetic algorithms

X. Li, J. Lin, Y. Chen, X. Liu and B. Ai

594

An OLS regression model for context-aware tile prefetching in a web map cache

*R. García Martín, J.P. de Castro Fernández, E. Verdú Pérez,**M.J. Verdú Pérez and L.M. Regueras Santos*

614

Using geovisual analytics to compare the performance of geographically weighted discriminant analysis versus its global counterpart, linear discriminant analysis

P. Foley and U. Demšar

633

A context-aware personalized travel recommendation system based on geotagged social media data mining

A. Majid, L. Chen, G. Chen, H.T. Mirza, I. Hussain and J. Woodward

662

Combining geographical information and traditional plots: the checkerplot <i>M. Templ, B. Hulliger, A. Kowarik and K. Fürst</i>	685
Forest fire risk maps: a GIS open source application – a case study in Norwest of Portugal <i>A.C. Teodoro and L. Duarte</i>	699
A spatial cognition-based urban building clustering approach and its applications <i>Z. Liqiang, D. Hao, C. Dong and W. Zhen</i>	721
A Voronoi neighborhood-based search heuristic for distance/capacity constrained very large vehicle routing problems <i>Z. Fang, W. Tu, Q. Li, S.-L. Shaw, S. Chen and B.Y. Chen</i>	741
Using adaptively coupled models and high-performance computing for enabling the computability of dust storm forecasting <i>Q. Huang, C. Yang, K. Benedict, A. Rezgui, J. Xie, J. Xia and S. Chen</i>	765
Stochastic model-based methods for handling uncertainty in areal interpolation <i>A. Geddes, D.A. Elston, M.E.A. Hodgson and R.V. Birnie</i>	785
Simultaneous computation of total viewshed on large high resolution grids <i>S. Tabik, E.L. Zapata and L.F. Romero</i>	804
Efficiently implementable algebra for distributed in-network spatial analysis <i>F. Jabeen and A.A.A. Fernandes</i>	815