

Table of Contents

Keynote paper

Change of support: An inter-disciplinary challenge <i>C.A. Gotway Crawford and L.J. Young</i>	1
---	---

Methods

Combining categorical and continuous information using Bayesian Maximum Entropy <i>P. Bogaert and M.-A. Wibrin</i>	15
Geostatistical prediction of spatial extremes and their extent <i>N. Cressie, J. Zhang and P. F. Craigmile</i>	27
Monitoring network optimisation using support vector machines <i>A. Pozdnoukhov and M. Kanevski</i>	39
Bayesian kriging with lognormal data and uncertain covariance parameters <i>J. Pilz, P. Pluch and G. Spöck</i>	51
Kriging of scale-invariant data: optimal parameterization of the autocovariance model <i>R. Sidler and K. Holliger</i>	63
Scaling effects on finite-domain fractional brownian motion <i>S. Cintoli, S. P. Neuman and V. Di Federico</i>	75

Ecology, air and health

The delineation of fishing times and locations for the Shark Bay scallop fishery <i>U. Mueller, L. Bloom, M. Kangas, N. Caputi and T. Tran</i>	87
A spatial extension of CART: application to classification of ecological data <i>L. Bel, J.M. Laurent, A. Bar-Hen, D. Allard and R. Cheddadi</i>	99
Using a Markov-type model to combine trawl and acoustic data in fish surveys <i>M. Bouleau and N. Bez</i>	111
Mapping unobserved factors on vine plant mortality <i>N. Desassis, P. Monestiez, J. N. Bacro, P. Lagacherie, J. M. Robbez-Masson</i>	125
Analysis and modelling of spatially and temporally varying phenological phases <i>D. Doktor, F. W. Badeck, F. Hattermann, J. Schaber and M. McAllister</i>	137

Detection of spatial clusters and outliers in cancer rates using geostatistical filters and spatial neutral models <i>P. Goovaerts</i>	149
Geostatistical assessment of long term human exposure to air pollution <i>N. Jeannée, V. Nedellec, S. Bouallala, J. Deraisme and H. Desqueyroux</i>	161
Air quality models resulting from multi-source emissions <i>A. Russo, C. Nunes and A. Bio</i>	173
Variogram estimation with noisy data in the space-time domain: application to air quality modelling <i>C. Nunes and A. Soares</i>	185

Groundwater

Multiple-point geostatistics: a powerful tool to improve groundwater flow and transport predictions in multi-modal formations <i>L. Feyen and J. Caers</i>	197
Simulation of radionuclide mass fluxes in a heterogeneous clay formation locally disturbed by excavation <i>M. Huysmans, A. Berckmans and A. Dassargues</i>	209
Modelling density-dependent flow using hydraulic conductivity distributions obtained by means of non-stationary indicator simulation <i>K.-J. Röhligh, H. Fischer and B. Pörtl</i>	221
Random field approach to seawater intrusion in heterogeneous coastal aquifers: unconditional simulations and statistical analysis <i>A. Al-Bitar and R. Ababou</i>	233
Uncertainty estimation of well catchments: semi-analytical post-processing <i>F. Stauffer and H.-J. Hendricks Franssen</i>	249
Conditional moments of residence time of sorbent solutes under radial flow <i>C. Castillo-Cerdà, X. Sanchez-Vila, L. Nuñez-Calvet and A. Guadagnini</i>	261
Impact of the choice of the variogram model on flow and travel time predictors in radial flows <i>M. Riva, M. De Simoni and M. Willmann</i>	273
Strategies to determine dispersivities in heterogeneous aquifers <i>D. Fernández-García and J. Jaime Gómez-Hernández</i>	285
Solving the groundwater inverse problem by successive flux estimation <i>P. Pasquier and D. Marcotte</i>	297
Inverse problem for highly heterogeneous porous media: the factorial geostatistical analysis in differential system method <i>B. Ortuani</i>	309
Inverse stochastic estimation of well capture zones with application to the Lauswiesen site (Tübingen, Germany) <i>H.-J. Hendricks Franssen and F. Stauffer</i>	321

Soil contamination

"Soft" geostatistical analysis of radioactive soil contamination <i>R. Parkin, E. Savelieva and M. Serre</i>	331
Modelling the spatial distribution of copper in the soils around a metal smelter in northwestern Switzerland <i>A. Papritz, C. Herzig, F. Borer and R. Bono</i>	343
Towards a real-time multi-phase sampling strategy optimization <i>D. D'Or</i>	355
Spatio-temporal mapping of sea floor sediment pollution in the North Sea <i>E.J. Pebesma and R. N. M. Duin</i>	367

Remote sensing

Merging Landsat TM and SPOT-P images with geostatistical stochastic simulation <i>J. Carvalho; J. Delgado-garcía and H. Cateno</i>	379
Characterising spatial variation in land cover imagery using geostatistical functions and the discrete wavelet transform <i>C. Lloyd, P. Atkinson and P. Aplin</i>	391

Environment

Distinguishing features from outliers in automatic Kriging-based filtering of MBES data: a comparative study <i>P. Bottelier, C. Briese, N. Hennis, R. Lindenbergh and N. Pfeifer</i>	403
Forecasting volcanic eruptions using geostatistical methods <i>O. Jaquet, R. Carniel, R. Namar and M. Di Cecca</i>	415
Delineation of estuarine management units: evaluation of an automatic procedure <i>F. Bação, S. Caeiro, M. Painho, P. Goovaerts and M. H. Costa</i>	429
Estimating indicators of river quality by geostatistics <i>C. Bernard-Michel and C. de Fouquet</i>	443
Stochastic simulation of rainfall using a space-time geostatistical algorithm <i>J. A. Almeida and M. Lopes</i>	455
Inferring the lateral subsurface correlation structure from georadar data: methodological background and experimental evidence <i>B. Dafflon, J. Tronicke and K. Holliger</i>	467

Geostatistics for Environmental Applications
Proceedings of the Fifth European Conference on
Geostatistics for Environmental Applications

Renard, P.; Demougeot-Renard, H.; Froidevaux, R.
(Eds.)

2005, XIV, 480 p. With online files/update., Hardcover

ISBN: 978-3-540-26533-7