PROGRAMME

Wednesday 23 March 2011		
09:00 – 09:15	**Opening Ceremony** Alfred Stein, Conference Chair, *ITC, University of Twente, The Netherlands* Tom Veldkamp, Dean, *ITC, University of Twente, The Netherlands* Room: Agora Zaal	
09:15 - 10:45	**Plenary Session 1** Chairs: Alfred Stein, *ITC, University of Twente, The Netherlands* and Edzer Pebesma, University of *Universität Münster, Germany* Room: Agora Zaal	
09:15 – 10:00	**[K1] Models for spatial extreme values** M. Schlather, *Universität Göttingen, Germany*	
10:00 – 10:45	**[K2] Applying spatial data analysis: Concepts and tools for interdisciplinary research** R. Bivand, *Norwegian School of Economics and Business Administration, Norway*	
10:45 – 11:15	**Coffee Break**	
11:15 – 12:15	**Oral Session 1: Climate** Chair: Raymond Sluiter, *Royal Netherlands Meteorological Institute (KNMI), The Netherlands* Room: Agora Zaal	**Oral Session 2: Regression for Spatial Data** Chair: Werner Mueller, *Johannes Kepler University Liza, Austria* Room: Amphitheatre
11:15 – 11:35	**[O1] Incorporating spatial interaction between large dimensional temperature series in atmosphere-ocean modeling of global change** M.D. Ruiz-Medina*, R. Espejo, *University of Granada, Spain*	**[O4] Spatio-temporal modelling of total oxidized nitrate and orthophosphate concentrations in an aquatic ecosystem** J. Eze*[1], E.M. Scott[1], A.W. Bowman[1], M. Hallard[2], C. Ferguson[1], D. Lee[1], *[1]University of Glasgow, UK, [2]Scottish Environment Protection Agency, UK*
11:35 – 11:55	**[O2] Spatial disaggregation of regional climate model precipitation using Gibbs sampling** P. Gagnon*[1], A.N. Rousseau[1], A. Mailhot[1], D. Caya[2], *[1]Centre eau, Terre et Environnement, Canada, [2]Consortium Ouranos, Canada*	**[O5] GWR: Selected strengths, weaknesses, and associated challenges** D.A. Griffith*, R. Bivand, *University of Texas at Dallas, USA, [2]Norwegian School of Economics and Business Administration, Norway*
11:55 – 12:15	**[O3] Data fusion for remote sensing** H. Nguyen*[1], N. Cressie[2], A. Braverman[1], *[1]Jet Propulsion Laboratory, USA, [2]Ohio State University, USA*	**[O6] Spatial analysis of modern soil compaction roller measurement values** D. Heersink*, R. Furrer, *University of Zurich, Switzerland*
12:15 – 13:15	**Lunch**	
13:15 – 14:15	**Poster Session 1: Mapping Global Change, Climate, Epidemiology and Health** *Agora Zaal*	
14:15 – 15:00	**Plenary Session 2** Chair: Edzer Pebesma, *Universität Münster, Germany* Room: Agora Zaal	
14:15 – 15:00	**[K3] Incorporating spatial variability within epidemiological studies of environmental exposures** G. Shaddick, *University of Bath, UK*	

15:00 – 16:00	**Oral Session 3: Weather and Climate** Chair: Donald Myers, *University of Arizona, USA* Room: Agora Zaal	**Oral Session 4: Spatial Autoregressive Modelling** Chair: M. Dolores Ruíz-Medina, *Universidad de Granada, Spain* Room: Amphitheatre	
15:00 – 15:20	**[O7] An autoregressive spatio-temporal precipitation model** F. Sigrist*, W.A. Stahel, *ETH Zürich, Switzerland*	**[O10] An extended conditional autoregressive model for Bayesian disease mapping** D. Lee*, R. Mitchell, *University of Glasgow, UK*	
15:20 – 15:40	**[O8] A weathoe generator for simulating multivariate climatic series** D. Allard*[1], C. Flecher[2], P. Naveau[2], *[1]INRA, BioSP, France, [2]CNRS, LSCE, France*	**[O11] A generalized Poisson-Gamma model for spatially overdispersed data** T. Neyens*[1], C. Faes[1], G. Molenberghs[1,2], *[1]Universiteit Hasselt, Belgium, [2]Katholieke Universiteit Leuven, Belgium*	
15:40 – 16:00	**[O9] Optimal interpolation of daily potential evaporation measurements** R. Sluiter*, P. Hiemstra, *Royal Netherlands Meteorological Institute, The Netherlands*	**[O12] Transformed Gaussian Markov random fields: Properties and applications** M.O. Prates*, D.K. Dey, W.R. Willig, Y. Jun, *University of Connecticut, USA*	
16:00 – 16:30	**Coffee Break**		
16:30 – 17:30	**Oral Session 5: Epidemiology** Chair: Paul Eilers, *Erasmus Medical Center, The Netherlands* Room: Agora Zaal	**Oral Session 6: Spatial Sampling** Chair: Andreas Papritz, *ETH Zurich, Switzerland* Room: Amphitheatre	
16:30 – 16:50	**[O13] Geostatistical boundary analysis of temporal trends in late-stage prostate cancer incidence across Florida** P. Goovaerts,*BioMedware, Inc, USA*	16:30 – 16:45	**[O16] Space filling and beyond** W.G. Mueller*[1], L. Pronzato[2], M. Stehlik[1], *[1]JKU Linz, Austria, [2]CNRS Nice/Sophia Antipolis, France*
16: 50 –17:10	**[O14] Spatiotemporal epidemiology of child HIV/AIDS mortality for large zero-inflated data in Agincourt from 2000 to 2005** E. Musenge*[1,2], K. Kahn[1,3], P. Vounatsou[2], M. Collinson[1,3], S. Tollman[1,3], *[1]University of the Witwatersrand, South Africa, [2]Swiss Tropical and Public Health Institute, Switzerland, [3]Umeå University, Sweden*	16:45 – 17:00	**[O17] Adaptive sampling design for spatio-temporal prediction** T.R. Fanshawe*, P.J. Diggle, *Lancaster University, UK*
		17:00 – 17:15	**[O18] Sequential exploration program in spatially-correlated domains** G. Martinelli*, J. Eidsvik, *Norwegian University of Science and Technology, Norway*
17:10 – 17:30	**[O15] Risk mapping based on hidden Markov random field and variational approximations** L. Azizi*[1,2], D. Abrial[2], M. Charras-Garodo[2], F. Forbes[1], *[1]INRIA, French Guiana, [2]INRA, French Guiana*	17:15 – 17:30	**[O19] Viewing a non-stochastic spatial interpolator under a design based probabilistic framework** F. Bruno*, D. Cocchi, A. Vagheggini, *University of Bologna, Italy*
17:30 – 19:00	**Reception**		

Thursday 24 March 2011		
09:00 – 09:45	**Plenary Session 3** Chair: Alfred Stein, *ITC, University of Twente, The Netherlands* Room: Agora Zaal	
09:00 – 09:45	**[K4] Combining outputs from an ensemble of regional climate models** N. Cressie, *The Ohio State University, USA*	
09:45 – 10:45	**Oral Session 7: Earth and Environment** Chair: Phaedon Kyriakidis, *University of California, Santa Barbara, USA* Room: Agora Zaal	**Oral Session 8: Bayesian Spatial Statistics** Chair: Andrew Finley, *Michigan State University, USA* Room: Amphitheatre
09:45 – 10:05	**[O20] Assessing the spatio-temporal variability of fire activity in the protected areas of Sub-Saharan Africa derived from MODIS data** I. Palumbo*, J.M. Grégoire, D. Simonetti, M. Punga, *Joint Research Centre of the European Commission, Italy*	**[O23] Data augmentation approach in Bayesian modelling of presence-only data** F. Divino[1], N. Golini*[2], G. Jona Lasinio[2], A. Penttinen[3], *[1]University of Molise, Italy, [2]University of Rome, Italy, [3]University of Jyväskylä, Finland*
10:05 – 10:25	**[O21] Spatio-temporal pattern modelling of wildfires in Spain** M. Saez*[2], D. Varga[2], L. Serra*[2], P. Juan[1], J. Mateu[1], *[1]University of Castellón, Spain, [2]University of Girona, Spain*	**[O24] Generalized extreme value geoadditive models via variational Bayes** S.E. Neville*, M.P. Wand, *University of Wollongong, Australia*
10:25 – 10:45	**[O22] Using agent-based modelling to depict the processes leading to basin closure in the Naivasha basin, Kenya** P.R. Van Oel*, A. Van der Veen, *University of Twente, The Netherlands*	**[O25] An R implementation for Bayesian networks applied to spatial data** M.P. Mello*, B.F.T. Rudorff, M. Adami, D.A. Aguiar, *National Institute for Space Research, Brazil*
10:45 – 11:15	**Coffee Break**	
11:15 – 12:15	**Oral Session 9: Ecology** Chair: Stephanie Melles, *Trent University/ Ministry of Natural Resources, Canada* Room: Agora Zaal	**Oral Session 10: Point Processes and Patterns** Chair: Marie-Colette van Lieshout, *CWI/ Eindhoven University of Technology, The Netherlands* Room: Amphitheatre
11:15 – 11:35	**[O26] Climate envelopes for species distribution models** M.J. Brewer*[1], R.B. O'Hara[2], B.J. Anderson[3], R. Ohlemüller[4], *[1]Biomathematics and Statistics Scotland, UK, [2]Biodiversity and Climate Research Centre, Germany, [3]University of York, UK, [4]University of Durham, UK*	**[O29] Bayesian estimation of the intensity for independent cluster point processes: an analytic solution** D.E. Clark, A.J. Swain*, *Heriot Watt University, UK*
11:35 – 11:55	**[O27] Forecasting biomes of protected areas** J.O. Skoien*[1], A. Hartley[2], G. Dubois[1], J. de Jesus[1], S. Peedell[1], *[1]Joint Research Centre of the European Commission, Belgium, [2]Met Office Hadley Centre, UK*	**[O30] Abandoning the covariance function: Fast Bayesian inference for large spatio-temporal point processes** D.P. Simpson, F. Lindgren*, H. Rue, *NTNU, Norway*

11:55 – 12:15	**[O28] Modeling species distribution dynamics with spatiotemporal exploratory models: Discovering patterns and processes of broad-scale avian migrations** D. Fink*, W.M. Hochachka, B. Zuckerberg, S.T. Kelling, *Cornell University, USA*	**[O31] Modelling the spatial and space-time structure of forest stands: How to model asymmetric interaction between neighbouring trees** P.Y. Grabarnik*[1], A. Särkkä[2], *[1]Russian Academy of Sciences, Russian Federation, [2]Chalmers University of Technology, Sweden*
12:15 – 13:15	**Lunch**	
13:15 – 14:15	**Poster Session 2: Theory and Methods of Spatial Statistics** Room: Audio Zaal	
14:15-15:00	**Plenary Session 4** Chair: Alfred Stein, *ITC, University of Twente, The Netherlands* Room: Agora Zaal	
14:15 – 15:00	**[K5] Spatial modelling and computation using SPDE:s** H. Rue, *Norwegian University of Science and Technology, Norway*	
15:00 – 16:00	**Oral Session 11: Forestry** Chair: Yong Ge, *Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, China* Room: Agora Zaal	**Oral Session 12: Markov Random Fields** Chair: Denis Allard, *INRA, France* Room: Amphitheatre
15:00 – 15:20	**[O32] A Bayesian functional data model for predicting forest variables using high-dimensional waveform LiDAR over large geographic domains** A.O. Finley*[1], S. Banerjee[1], *[1]Michigan State University, USA, [2]University of Minnesota, USA*	**[O35] Classification method for disease risk mapping based on discrete hidden Markov random fields** M. Charras-Garrido*, D. Abrial, *INRA, France*
15:20 – 15:40	**[O33] Plot-level forest volume estimation using airborne laser sanner and TM data, comparison of boosting and random forest tree regression methods** S. Shataee*[1], H. Weinaker[2], *[1]Gorgan University of Agricultural and Natural Resources, Iran, [2]Freiburg University, Germany*	**[O36] Global temperature reconstruction with fast Bayesian inference in stochastic PDE models** F. Lindgren*[1], P. Guttorp[2,3], H. Rue[1], *[1]Norwegian University of Science and Technology, Norway, [2]University of Washington, USA, [3]Norwegian Computing Center, Norway*
15:40 – 16:00	**[O34] Application of the EM-algorithm for Bayesian network modelling to improve forest growth estimates** Y. Mustafa*, V. Tolpekin, A. Stein, *University of Twente, The Netherlands*	**[O37] Detection of Rumex obtusifolious via unsupervised segmentation using new GMRF texture features for a biological farming system** S.A. Hiremath*[2,1], V. Tolpekin[1], *[1]University of Twente, The Netherlands, [2]Wageningen University, The Netherlands*
16:00 – 16:30	**Coffee Break**	
16:30 – 18:00	**Plenary Session 5** Chairs: Alfred Stein, *ITC, University of Twente, The Netherlands* and Edzer Pebesma, University of *Universität Münster, Germany* Room: Agora Zaal	
16:30 – 17:15	**[K6] Sampling very high resolution satellite images** F.J. Gallego, *European Commission Joint Research Centre, Italy*	
17:15 – 18:00	**[K7] Extracting land use and land cover change information from large remote sensing image databases** G. Câmara, *National Institute for Space Research (INPE), Brazil*	

Friday 25 March 2011		
09:00-09:45	**Plenary Session 6** Chair: Gerard Heuvelink, *Wageningen University, The Netherlands* Room: Agora Zaal	
09:00 – 09:45	**[K8] Worldmaps: Building global covariates for automated mapping** T. Hengl, *ISRIC - World Soil Information, The Netherlands*	
09:45 – 10:45	**Oral Session 13: Geostatistics** Chair: Pierre Goovaerts, *BioMedware, Inc ./University of Florida, USA* Room: Agora Zaal	**Oral Session 14: Uncertainty** Chair: Nicholas Hamm, *ITC, University of Twente, The Netherlands* Room: Amphitheatre
09:45 – 10:05	**[O38] Robust REML estimation of the variogram and robust kriging** H.R. Kuensch[1], A. Papritz[2], C. Schwierz*[1,2], W.A. Stahel[1], *[1]ETH Zurich, Seminar für Statistik, Switzerland, [2]ETH Zurich, Institute of Terrestrial Ecosystems, Switzerland*	**[O41] Uncertainty calculation in the RIO air quality interpolation model and aggregation to yearly average and exceedance probability taking into account the temporal auto-correlation** B. Maiheu*[1], N. Veldeman[1], S. Janssen[1], F. Fierens[2], *[1]VITO, Belgium, [2]IRCEL-CELINE, Belgium*
10:05 – 10:25	**[39] Parameterizing training images used for multiple-point simulations** G. Mariethoz*, B.F.J. Kelly, *[1]National Centre for Groundwater Research and Training, The University of New South Wales, Australia*	**[O42] Modelling spatial and temporal uncertainties associated to emission disaggregation in the Luxembourg energy-air quality meta-model** U. Leopold*, L. Drouet, D.S. Zachary, *Public Research Centre Henri Tudor, Luxembourg*
10:25 – 10:45	**[O40] Latin hypercube sampling of Gaussian random fields on very large regular grids** P.H. Kyriakidis*[1,2], *[1]University of California Santa Barbara, USA, [2]University of the Aegean, Greece*	**[O43] Presentation of uncertainties on web platforms for climate change adaptation** D.E. Reusser, M. Wrobel, H. Förster, T. Nocke*, T. Sterzel, J.P. Kropp, *Potsdam Institute for Climate Impact Research, Germany*
10:45 – 11:15	**Coffee Break**	
11:15 – 12:15	**Oral Session 15: Interpolation and Smoothing** Chair: Daniel Griffith, *University of Texas at Dallas, USA* Room: Agora Zaal	**Oral Session 16: Social Sciences Applications** Chair: Jon Olav Skøien, *Joint Research Centre, IES, Italy* Room: Amphitheatre
11:15 – 11:35	**[O44] Multivariate areal interpolation for continuous and count data** K. Krivoruchko*, A. Gribov, E. Krause, *Environmental Systems Research Institute, USA*	**[O47] Spatial statistics for wireless networks research** J. Riihijärvi*, P. Mähönen, *RWTH Aachen University, Germany*
11:35 – 11:55	**[O45] No kernels, no kriging. fast smoothing on large grids with P-splines** P.H.C. Eilers, *Erasmus Medical Center, The Netherlands*	**[O48] Night on earth: Mapping decades of change in anthropogenic night light** C. Small*[1], C. Elvidge[1], *[1]Columbia University, United States, [2]National Geophysical Data Center, USA*
11:55 – 12:15	**[O46] A global multi-temporal and multi-dimensional data stream of the terrestrial biosphere based on integration of in-situ measurements of carbon and energy fluxes and global earth observation** M. Jung, M. Reichstei*, M. Mahecha, *Max Planck Institute for Biogeochemistry, Germany*	**[O49] Modelling interfirm interactions as spatial point processes** S. Protsiv, *Stockholm School of Economics, Sweden*

12:15 – 13:15	**Lunch**
13:15 – 14:15	**Poster Session 3: Earth and Environmental Sciences** Room: Audio Zaal
14:15 – 15:45	**Plenary Session 7** Chair: Gerard Heuvelink, *Wageningen University, The Netherlands* Room: Agora Zaal
14:15 – 15:00	**[K9] Providing finer land cover maps using multiple-point simulations for the estimation of NPP** Y. Ge, *Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, China*
15:00 – 15:45	**[K10] Downscaling in remote sensing** P.M. Atkinson, *University of Southampton, UK*
15:45 – 16:00	**Closer** Room: Agora Zaal