



Newsletter

Volume 14, No. 1, March 2009

Editor: Michael Dowd

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1. **A Message from the President,**
Daniela Cocchi (daniela.cocchi@unibo.it)
Dipartimento di Scienze Statistiche
"Paolo Fortunati", Università di Bologna
Italy

Dear TIES members

The work I have begun to do in TIES has been facilitated by the preparatory work done by David Brillinger, who supervised the final steps of TIES passage to a Section of ISI, which was approved in April 2008. Here I describe some of the developments as well as looking at changes.

The contribution of the Board members who have completed their term in office: the Treasurer Quanxi Shao, the Secretary Kristina Voigt, and the Regional Representative Don Stevens, has been very important as well. All of them deserve our thanks. The new board members began their activity with enthusiasm: Don Stevens in the role of President Elect, Alessandro Fassò as Secretary, Sylvia Esterby as Treasurer, the new Regional Representatives Tillman Gneiting and Marian Scott. Montserrat Fuentes, Lelys Guenni, Bronwyn Harch and Ivana Horova are continuing to serve the Society as Regional Representatives, as is Michael Dowd

as Publications Officer and Grace Chiu as webmaster.

We had the opportunity of discussing many issues at our last TIES general meeting in Kelowna, during the annual conference on *Quantitative Methods for Environmental Sustainability*, perfectly organized by the local committee headed by Sylvia Esterby and comprising Zuzana Hrdlickova, Paramjit Gill, Jason Loeppky, and Loveday Conquest. It took place in the growing campus of the University of British Columbia at Okanagan. The atmosphere was as usual very friendly and the scientific sessions very well organized thanks to the efforts of the Scientific Committee, headed by Sylvia Esterby and David Brillinger.

Now we are preparing for the 20th TIES2009 Conference, which will be held in Bologna, Italy, in July, jointly with GRASPA2009 Conference, on the general theme *Handling complexity and uncertainty in environmental studies*. We are doing our best to construct a good scientific program to encourage a strong participation. We look forward to welcoming everyone.

We also began to organize Regional Conferences in different parts of the world. In December 2008 we had a workshop in London, organized jointly with the Royal Statistical Society, on *Evaluating our Environment: moving from a reductionist analysis to a holistic assessment of ecosystems*. The Regional activity for 2009 will include TIES North American Regional Meeting, June 15-17, 2009, Corvallis, Oregon, USA, on *Measuring, Monitoring, and Modeling Environmental Resources*.

Our official entry in ISI is increasing our visibility and we have a number of ISI initiatives that are being prepared. For ISI 2009 in Durban, David Brillinger succeeded in organizing, together with the General Topics Committee, six invited sessions, and TIES will participate in a panel discussion on *Sustainable Development Indicators* organized in collaboration with IAOS.

ISI members can now choose to subscribe TIES as a section. We trust that in this way more people will come to know of us, and our journal

TIES NEWSLETTER, VOL. 14, NO. 1, March 2009 *Environmetrics*. Moreover, we are involved in the organization of the next 2011 ISI Conference in Dublin, and represented by our delegate Bronwyn Harch. Abdel El-Shaarawi is the organizer of a full day on *Water, Quantity and Quality*, which is part of the Dublin program; 15 – 20 sessions will be built around this topic.

We have also been invited to organize TIES Sessions in collaboration with other ISI Sections. But, and this is the most important thing, we will participate in discussions about ISI restructuring. Being a Section of ISI will surely enhance our role on the interface between statistics and general environmental issues. For this purpose, and any other issue, the Board of Directors and myself are ready to receive suggestions from the TIES membership.

Daniela Cocchi

Bologna, March 2009

2. TIES News

TIES 2008 Best Student Paper Competition

The Best Student Paper Committee was composed of Loveday Conquest (Chair), Alessandro Fassó, Peter Guttorp and Alexandra Schmidt. The eleven papers that were presented in the competition are as follows:

Hierarchical Spatial Modeling of Additive and Dominance Genetic Variance for Large Spatial Trial Datasets. Sudipto Banerjee, Andrew O. Finley, Patrick Waldmann, Tore Ericsson.

Quantifying Local Creation and Regional Transport using a Hierarchical Space-Time Model of Ozone as a Function of Observed NO_x, a Latent Space-Time VOC Process, Emissions, and Meteorology. Amy Nail, Jacqueline Hughes-Oliver, John Monahan.

Fast Estimation of Spatially Dependent Temporal Trends using Gaussian Markov Random Fields. David Bolin, Johan Lindstrom, Lars Eklundh, Finn Lindgren.

Spatial Modelling of Water Quality on Large River Networks. David O'Donnell, Adrian Bowman, Marian Scott.

Searching of Periodic Components in the Lake Mina, Minnesota Time Series. Karim Rahim, Jeannine St. Jacques, David Thomson.

Quantitative Methods for Assessing Ecological Effect of Dam Construction and Operation. Bo Hu, Baoshan Cui.

Trends in Precipitation Extremes at Different Time Resolutions. Agne Burauskaite-Harju, Anders Grimvall, Claudia von Brömssen.

A Spatial Analysis of Emission Inventory Data: A Case Study in Poland. Joanna Horabik.

Estimating Status of Forest Attributes from Panoled Inventory Data using Nearest Neighbor Imputation Approaches. Bianca Eskelson, Hailemariam Temesgen, Tara Barrett.

Uncertainty Analysis of Criteria Air Contaminants from Mobile Sources in Canada. Mitch Murphy, Brett Taylor.

Smoothed Prediction of the Onset of Tree Stem Radius Increase Based on Temperature Patterns. Mikko Korpela, Harri Mäkinen, Mika Sulkava, Pekka Nöjd, Jaakko Hollmén.

The committee found that two papers were deserving of the award and thus the award was split between Amy Nail of North Carolina State University and David O'Donnell of The University of Glasgow. The award consists of a certificate and \$US500, split between the two winners.

TIES 2008 Best Poster Award

The Best Poster Committee was composed of Grace Chui, Brian Gay, Brent Henderson, Armand Maul and Paul Sampson (Chair). All posters presented during the conference were eligible for the award. The following 16 posters were presented:

Functional Data Analysis of Salmon Abundance in Rivers Inlet, B.C. Laurie Ainsworth, Rick Routledge, Jiguo Cao.

Reducing Seabird Bycatch in Alaska Longline Fisheries. Loveday Conquest, Edward Melvin, Kim Dietrich.

Canadian Agri-Environmental Indicators for Nitrogen: Residual Soil Nitrogen and the Risk of Water Contamination by Nitrogen. Reinder De Jong, Jingyi Yang, Craig Drury, Valerie Kirkwood

Bayesian Empirical Orthogonal Function and Its Application. Jim Zidek, Nhu Le, Yiping Dou.

Comparing Air Quality in Italy, Germany and Poland using BC Indexes. M. Cameletti, A. Fassó, O. Bodnar, W. Schmid.

Parametric and Nonparametric Regression Time Series Models for Total Ozone Data. Marie Forbelska, Jan Kolacek, Ivana Horova, Ladislav Budik, Pavel Prosek, Kamil Laska

Bayesian Updating of Non-Gaussian Atmospheric Dispersion Models. A. S. Gargoum, M. Y. El-Bassiouni.

Testing the Covariance Structure of Multivariate Random Fields. Bo Li, Marc Genton, Michael Sherman

An International Comparison of Water Quality Standards. Eric Guttorp, Bedii Altug, Kiel Rasp, Ryan Yougman, Peter Guttorp

Kriging for a Thermal Microclimate Network in the Okanagan Valley. Zuzana Hrdlickova, Paramjit Gill, Sylvia Esterby, Howard Thistlewood, Denise Neilsen, Scott Smith

Declining Vulnerability of Central-European Population to Heat Stress? Evaluation of Temporal Changes in Impacts of Hot Summer Periods on Mortality. Jan Kysely, Bohumir Kriz.

Spatio-Temporal Models for Fire Frequency and Severity from Panel Data. Hong Li, Steve Taylor, Farouk Nathoo

Fitting Random Walk Models to Motion Data with Measurement Error. Curtis Miller, Mary Christman

Bayesian Spatial-Temporal Modelling of Multiple Pollutants. Chritos Papamichael, Gavin Shaddick

Species-Area Relationships Determined by Dispersal and Habitat Heterogeneity. Guochun Shen, Mingjiang Yu

High Resolution Modelling of Large-Scale Spatial Datasets using Bayesian Spatial Models with Penalised Splines. Haojie Yan, Gavin Shaddick

The award was split between the two poster presentations by Hong (Yolanda) Li, University of Victoria, and Haojue Yan, University of Bath. The award consists of a certificate and \$US500, split between the two winners.

TIES sessions in ISI 2009 Durban

IPM81: Combining stochastic and deterministic models to determine global warming. Richard Smith, USA, rls@email.unc.edu

IPM82: Statistical Issues associated with climate change. David Marker, USA, markerd1@westat.com

IPM83: New studies of the association between human health and pollution and their impact in air quality regulation. Montserrat Fuentes, USA, fuentes@stat.ncsu.edu with Sudipto Banarjee, USA, sudiptob@biostat.umn.edu

IPM84: Spatial modelling of large and disparate environmental datasets. Montserrat Fuentes, USA, fuentes@stat.ncsu.edu with Gavin Shaddick, gavinshaddick@gmail.com (Chair)

IPM85: Meoscale studies of temperature trend. Robert Lund, USA, lund@clermson.edu

IPM86: Landscape based risk assessment. Bronwyn Harch, Australia, bronwyn.harch@csiro.au

IPM18: Sustainable Development Indicators - New Challenges. Rosie Fyfe, New Zealand, Rosie.Fyfe@stats.govt.nz with Rachael Milicich, New Zealand, rachael.milicich@stats.govt.nz (Chair)

TIES Sessions in Other Conferences

- XI CLAPEM November 1-6 2009 Club Puerto Azul– Naiguat´a–Venezuela

Latin American Congress in Probability and Mathematical Statistics sponsored by the Latin American Society for Probability and Mathematical Statistics (SLAPEM), the Latin American Chapter of the Bernoulli Society.

Confirmed Invited Sessions: Environmental Statistics, sponsored by TIES, organized by Alexandra Schmidt y Lelys Bravo

- 2008 International Conference on Applied Probability and Statistics (CAPS 2008), Hanoi, Vietnam 1- 3 December 2008.

Organized by Institute of Mathematics (VAST) & Hanoi University of Sciences (VNU). Sponsored by the International Society for Business and Industrial Statistics

Invited Session 8A organized by Quanxi Shao on Hydrological Statistics

Other News

- Marian Scott entered IAOSS 2010 (Santiago del Chile) Programme Committee. We hope that it will be possible to organize IAOS/TIES combined sessions. Any suggestion to Marian is welcome.

- The Annual General Meeting of The International Environmetrics Society will be held during TIES 2009, Bologna Italy, July 5 – 9, 2009. Please watch the conference page for an announcement of the day and time.

3. Environmetrics Conferences

3.1. Forthcoming TIES Conferences

TIES 2009, the 20th Annual Conference of The International Environmetrics Society, Bologna, Italy, July 5-9, 2009

(This is a joint meeting of The International Environmetrics Society (Section of the ISI) and GRASPA Conference 2009)

TIES and GRASPA (Italian Group for environmental applications) will hold a joint meeting reflecting their common interest in *Handling complexity and uncertainty in environmental studies*. The meeting will take place in Bologna, Italy, 5 - 9 July, 2009. The invited program includes four plenary talks:

TIES President Invited Lecture, given by **Walter Radermacher**, Chief Statistician of the European Union and Director-General of Eurostat, on *Sustainable Economics: the contribution of official statistics*

TIES Stuart Hunter Lecture, given by **Douglas W. Nychka**, Director of the Institute for Mathematics Applied to Geosciences National, Center for Atmospheric Research, on *Spatial statistics, computer models and regional climate change*

The GRASPA Invited Talks given by Lorenzo Fattorini, University of Siena, on *Multi-phase sampling strategies for large-scale environmental surveys* and **Giovanna Jona Lasinio**, "Sapienza" University of Roma, on *Spatio-temporal data modeling in environmental sciences: a review*.

The topics of the organized sessions are at present: Forest Inventories; Change-Point Methods for Environmental Data Analysis; Statistical Methods in the Reconstruction of Palaeoclimate; Uncertainty in Hydrological

Forecasting; Environmental Sampling Applications; Design-based versus Model-based Issues in Spatial and Environmental Sampling; Statistical Modelling for Water Resources; Analysis of Areal Data; Fuzzy Statistics; Ecosystem services; Measurements of biodiversity; Spatiotemporal Models in Air Quality; Advances in Air Quality Analysis; Source Apportionment with Multivariate Receptor Models; Environmental Point Process; Extreme Values for spatio-temporal Data; Nonparametric Statistics and Functional Analysis in Environmental Problems; Wavelet-based Analysis of Environmental Data; Epidemiology; Ocean Climatologies; Fast Computation for Spatial Data; Risk and Extremes in Climate Research; Modelling Spatial/Temporal Correlations.

Posters and oral communications on the conference themes are being solicited. For further details on the program and for information about registration, accommodation and social events see the conference website: <http://www2.stat.unibo.it/ties2009/default.htm>

Abstracts of not more than 250 words that include a title, key words (maximum 5), supporting grants (if applicable), and names, affiliations and contact information for presenting author should be uploaded at the conference website by **April 18, 2009**.

TIES North American Regional Meeting, Measuring, Monitoring, and Modeling Environmental Resources. June 15 – 17, 2009. Corvallis, OR, USA

Tracking the quality and quantity of environmental resources is an important issue that involves the gamut of environmental sciences, as well as statisticians, mathematicians, and environmental managers. The focus of the conference will be on forests and fisheries, but talks dealing with other resources are welcome.

Because of the regional significance of these two resources, a number of well-developed programs have explored issues of measuring, monitoring, and modeling them. Even so, many challenging issues remain in designing monitoring programs, and in analyzing and interpreting monitoring data.

Several monitoring programs in place in the Pacific Northwest have compiled some extraordinarily rich data sets for exploring questions of measuring, monitoring, and modeling environmental resources. The data sets were collected under a range of designs, from rigorous probability based surveys to very specific targeted surveys to convenience surveys. Many of these data sets are publicly available. For this Conference, potential participants are invited to exploit these data sets to illustrate or develop methodology to measure environmental characteristics, determine status, describe trend, and model relationships. Some of these data sets, together with metadata describing the objectives and design of the study that collected the data, are now available for download at <http://www.science.oregonstate.edu/~madsenl/test/index.html>. While participants are encouraged to illustrate methodology using one of these data sets, that is not a requirement.

Registration is now open at <https://secure.oregonstate.edu/ocs/register.php?event=353>. Registration includes a reception on Monday, June 15, refreshments for breaks, and lunch on Tuesday and Wednesday. Also included is dinner on Tuesday at Tye Wine Cellars (<http://www.tyewine.com/>). Please try to register by May 2; registration fee increases after that. Housing information is available on the registration page.

We have some funds to defray travel expenses for registered graduate students who present a paper at the conference, and who do not have other sources of travel funds. Please send a request to Don Stevens at stevens@stat.oregonstate.edu.

We encourage submissions covering any aspect of measuring, monitoring, or modeling an environmental resource. For further information,

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 contact Don Stevens at 541-737-3587, stevens@stat.oregonstate.edu, or see <http://www.science.oregonstate.edu/~madsenl/test/index.html>. Abstracts are due no later than May 1, 2009. Abstracts may be sent by email to stevens@stat.oregonstate.edu or mailed to TIES NA 2009, Statistics Department, 44 Kidder Hall, Oregon State University, Corvallis, OR 97331.

TIES 2010, the 20th Annual Conference of The International Environmetrics Society, is tentatively scheduled to take place in Isla Margarita, Venezuela, from June 20-25, 2010.

3.2 Meeting Reports

TIES 2008, the 19th Annual Conference of The International Environmetrics Society, Kelowna, British Columbia, Canada, June 8-13, 2008

The 2008 meeting of The International Environmetrics Society was held at the University of British Columbia Okanagan from June 8 – 13. The theme of the conference, Quantitative Methods for Environmental Sustainability, was covered very broadly in the forty-four oral sessions, the poster sessions, and the short course. Starting with the founding conference in Cairo in 1989, a tradition has developed which includes opportunities for informal discussion as well as structured scientific sessions. On-site lunches, a reception and banquet, and mid conference tours provided participants with ample opportunity for discussions and also an opportunity to enjoy the Okanagan Valley. The conference drew 173 participants from 17 countries with some as far away as Australia and China.

The importance of extremes in climate change has drawn much attention recently and the topic of extremes was addressed from both the methodological aspect and the relevance to particular environmental problems. The first event was the short course on Modelling Environmental Extremes given by David Walshaw and Lee Fawcett on Sunday. The Hunter Lecture by Jef Teugels, Change Point Analysis of Extreme Values, opened the conference Monday morning. Other sessions addressed extremes of climate, extremes in modelling turbulent dispersion, return values, and extremes of temperature, precipitation, atmospheric processes and wind speeds.



J Stuart Hunter Lecturer, Jef Teugels

Six invited sessions on spatio-temporal modelling covered methodology and applications to environmental health, air quality and epidemiology, precipitation, river networks and weather forecasts. Four invited sessions on sampling included a broad range of designs and populations including wildlife, fisheries and forests. Topics particularly relevant to British Columbia included sessions on the pine beetle, forests and fire spread. Other methodological papers included papers on trend and change-point analysis, monitoring design and analysis, analysis of count data, point processes, risk analysis, computer models and positive matrix factorization. Additional areas of application were included in papers on ozone, health effects, water and air quality, marine ecology, and

emission projections, receptor models and source apportionment.

TIES conferences also have a tradition of including panel sessions and of covering topics such as interdisciplinary communication and the impact of the field of Environmetrics. Extensive discussions ensued among the international and multidisciplinary group of participants during the four such sessions at TIES 2008: The President's Invited Lecture, The Role of Statisticians in International Science Policy, delivered by Peter Guttorp; the session, Communication of Risk and Uncertainty; the panel discussion, Current Research Challenges in Environmetrics; and the panel discussion, Training for a Career in Environmetrics.

As conference co-chair, I was particularly pleased to host a mini-symposium on Thursday organized by Nathaniel Newlands of Agriculture and Agri-Food Canada, Ecosystem Models: Windows into an Uncertain Future. The talks had an agricultural focus and showcased research projects by scientists of Agriculture and Agri-Food Canada and their collaborators from across Canada, including scientists from the nearby Pacific Agri-Food Research Centre in Summerland, British Columbia.



Current Research Challenges in Environmetrics panelists Charmaine Dean, Abdel El-Shaarawi, Jim Zidek (chair and organizer), David Higdson and Peter Guttorp

The short course, Modelling Environmental Extremes, ran from 8:30 to 5:30 Sunday and was well attended, with 29 registrants. The morning sessions covered classical and threshold models, dependence and non-stationarity and included a hands-on R session in the computer lab to analyse some data on weather extremes. In the afternoon, multivariate extremes, point processes and Bayesian inferences were covered, with another lab session for these topics.

Awards for the Best Student Paper and the Best Poster and two Abdel El-Shaarawi Young Researcher Awards were presented. See other sections of this Newsletter for more details. The Annual General Meeting of TIES was held Tuesday after the Scientific Sessions.



Hiking during the Kalamalka Lake excursion

A Welcome Reception was held on campus Sunday after the short course. The conference banquet, Thursday evening at the Summerland Pyramid Winery, included a wine tasting at this award-winning winery as well as a tour of the unique pyramid in which wines are stored. A choice of two tours was available to participants on Wednesday afternoon: a hiking tour in the spectacular Kalamalka Lake Provincial Park, guided by volunteers from the North Okanagan Naturalist's Club, or a winery tour of three distinctive wineries south of Kelowna which also provided a scenic bus route.



Wine-tasting prior to the banquet

This TIES 2008 Meeting report was prepared by Sylvia Esterby.

4. Forthcoming papers in Environmetrics

Abdel El-Shaarawi, Editor-in-Chief

<http://www3.interscience.wiley.com/cgi-bin/jissue/93013115>

- Sampling from Dirichlet partitions: estimating the number of species. Thierry Huillet, Christian Paroissin
- On spatial skew-Gaussian processes and applications. Hao Zhang, Abdel El-Shaarawi
- Modelling point patterns with the Ivanoff-Merzbach renewal process. Katherine F. Davies, W. John Braun
- Stochastic search algorithms for optimal design of monitoring networks. Ramiro Ruiz-Cárdenas, Marco A. R. Ferreira, Alexandra M. Schmidt
- A missing values imputation method for time series data: an efficient method to investigate the health effects of sulphur dioxide levels. Swarna Weerasinghe
- Cox processes for estimating temporal variation in disease risk. Marina Silva Paez, Peter J. Diggle
- Principal component analysis for compositional data with outliers. Peter Filzmoser, Karel Hron, Clemens Reimann
- Extreme limit distribution of truncated models for daily rainfall. Aracelis Hernández, Lelys Guenni, Bruno Sansó
- Statistics and biomedical informatics in forensic sciences. Jana Zvárová
- An evaluation of European air pollution regulations for particulate matter monitored from a heterogeneous network. Sujit K. Sahu, Orietta Nicolis
- Model averaging to combine simulations of future global vegetation carbon stocks. Adam Butler, Ruth M. Doherty, Glenn Marion
- Dynamic two state stochastic models for ecological regime shifts. Jan Kloppenborg Møller, Jacob Carstensen, Henrik Madsen, Tom Andersen
- PCA- and PMF-based methodology for air pollution sources identification and apportionment. Marie Chavent, Hervé Guégan, Vanessa Kuentz, Brigitte Patouille, Jérôme Saracco
- Second-order diagnostics for space-time point processes with application to seismic events. Giada Adelfio, Marcello Chiodi.
- Probabilistic risk modeling at the wildland urban interface: the 2003 Cedar Fire. D. R. Brillinger, B. S. Autrey, M. D. Cattaneo
- Evolution of polycyclic aromatic hydrocarbons (PAHs) and heavy metals in sludge samples from conventional activated sludge wastewater treatment plants. P. Villar, M. Villar, M. Callejón, J. L. Pérez, J. C. Jiménez, E. Alonso, A. Guiraúm
- Comparison of calibration methods for the reconstruction of space-time rainfall fields during a rain enhancement experiment in Southern Italy. Arianna Orasi, G. Jona Lasinio, Clarissa Ferrari
- An autoregressive point source model for spatial processes. Jacqueline M. Hughes-Oliver, Tae-Young Heo, Sujit K. Ghosh
- Analysis and prediction of faunal distributions from video and multi-beam sonar data using Markov models. Scott D. Foster, Mark V. Bravington, Alan Williams, Franziska Althaus, Geoff M. Laslett, Rudy J. Kloser
- An idealised model of turbulent dispersion: two rectangular pulse initial condition. Nils Mole, Rebecca Ring
- Analytical ecological epidemiology: exposure-response relations in spatially stratified time series. Hagen Scherb, Kristina Voigt
- Spatial metrics and methods for riverscapes: quantifying variability in riverine fish habitat patterns. Céline Le Pichon, Guillaume Gorges, Jacques Baudry, François Goreaud, Philippe Boët
- Assessing the effect of clustered and biased multi-stage sampling. Raquel Menezes, Jonathan Tawn
- Multivariate varying-coefficient models for an ecological system. C. A. Ferguson, A. W. Bowman, E. M. Scott, L. Carvalho
- Space-time modeling of 20 years of daily air temperature in the Chicago metropolitan region. Hae-Kyung Im, Paul J. Rathouz, John E. Frederick
- Spatial analysis of relative risk of lip cancer in Iran: a Bayesian approach. A. Kavousi, M. Reza Meshkani, M. Mohammadzadeh
- Modelling of nitrogen dioxide (NO₂) and fine particulate matter (PM₁₀) air pollution

in the metropolitan areas of Barcelona and Bilbao, Spain. Aitana Lertxundi-Manterola, Marc Saez

- A hierarchical model for non-stationary multivariate extremes: a case study of surface-level ozone and NO_x data in the UK. Emma F. Eastoe
- Estimation of change point and compound Poisson process parameters for the earthquake data in Turkey. Serpil Aktas, Hande Konsuk, Ayten Yigmacrîter
- Comparison of three expert elicitation methods for logistic regression on predicting the presence of the threatened brush-tailed rock-wallaby *Petrogale penicillata*. Rebecca A. O'Leary, Samantha Low Choy, Justine V. Murray, Mary Kynn, Robert Denham, Tara G. Martin, Kerrie Mengersen
- Spatial dependence in the tails of air pollutant distributions: alternatives to the spatial correlogram. G. Arbia, M. Copetti, G. Lafratta
- Evaluation of putative hazard tests under background risk heterogeneity. Yuan Liu, Andrew B. Lawson, Bo Ma
- Evaluation of reduced rank semiparametric models to assess excess of risk in cluster analysis. Marco Geraci, Andrew B. Lawson
- Hourly surface wind monitor consistency checking over an extended observation period. Scott Beaver, Ahmet Palazoglu
- Uncertainty assessment of a soil quality index using geostatistics. A. Castrignanò, A. Buondonno, P. Odierna, C. Fiorentino, E. Coppola
- Nonparametric trend detection in river monitoring network data: a spatio-temporal approach. Lieven Clement, Olivier Thas
- Smoothing splines for trend estimation and prediction in time series. Richard Morton, Emily L. Kang, Brent L. Henderson
- Maximum likelihood estimators of population parameters from multiply censored samples. Abou El-Makarim A. Aboueissa
- Time-distributed effect of exposure and infectious outbreaks. Elena N. Naumova, Ian B. MacNeill
- Predicting mating flights through meteorological cues using multi-scale logistic regression. MyungSuk Kim, Johan Lim, Suojin Wang

- Estimation of anthropogenic pollution using a Bayesian contamination model: an application to fractured bedrock groundwater from Han River Watershed, South Korea. Yongsung Joo, Dalho Kim, Keunbaik Lee, Seong-Taek Yun, Kyoung-Ho Kim, Donald Mercante

5. TIES Board of Directors

The following are the names of the elected members of TIES Board of Directors. All terms are from September 1, 2008, to August 31, 2010, except the 4-year terms of the regional directors.

President: Daniela Cocchi
(president@environmetrics.org)

President-Elect: Don Stevens
(stevens@science.oregonstate.edu)

Secretary: Alessandro Fassò
(secretary@environmetrics.org)

Treasurer: Sylvia Esterby
(treasurer@environmetrics.org)

Publications Officer: Mike Dowd
(mdowd@mathstat.dal.ca)

Regional Representatives:

North America:

Montserrat Fuentes (fuentes@stat.ncsu.edu)

Tilman Gneiting (tilmann@tat.washington.edu)

Europe:

Ivana Horova (horova@math.muni.cz)

Marian Scott (marian@stats.gla.ac.uk)

Other Regions:

Lelys Bravo de Guenni
(lbravo@cesma.ub.ve)

Bronwyn D. Harch
(Bronwyn.Harch@csiro.au)

TIES Newsletter is a publication of The International Environmetrics Society (TIES). It is published semi-annually, or whenever the need arises by The International Environmetrics Society and distributed to TIES members as part of their annual dues. Contact Alessandro Fassò at secretary@environmetrics.org for questions regarding membership and other benefits.

Objectives of the Newsletter include: to keep TIES members informed of what is happening within the Society;

- To cover news in latest developments in theory and applications of environmetrics;
- To be a forum for discussion of a broad range of issues which are of interest to members of TIES and are consistent with the objectives of the Society.
- To facilitate communication between environmental scientists and statisticians about research problems of mutual interest.
- To provide details about upcoming conferences and workshops related to Environmetrics;
- To announce members' news that are worthy of notice or recognition (e.g., awards, prizes and honours received, promotions, appointments, etc.)

Communications, (e.g., contributions, comments and suggestions) regarding this publication should be addressed to the TIES Newsletter editors: Michael Dowd (mdowd@mathstat.dal.ca). The Editors would like to encourage TIES members to submit items for publication in the Newsletter. We would like to thank the members who responded to our call and contributed to this issue.

TIES Webpage:

<http://www.environmetrics.org/>