

Newsletter

Volume 17, No. 1, June 2011

Editor: Rosalba Ignaccolo

In This Issue:

- 1. A Message from the President
- 2. TIES News
- **3.** Environmetrics Conferences
 - **3.1.** Forthcoming Conferences
 - **3.2.** Meeting Reports
- 4. Summer schools
- 5. Outstanding Environmetricians
- **6.** Recently or soon-to-be Published Books
- 7. TIES Board of Directors

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 past few months have been very important for TIES as we continue to grow and assume a relevant role in the ISI family. ISI has continued to promote 2011 TIES membership to ISI members. We have also organized the cross-posting of TIES news on both ISI and TIES websites. In agreement with ISI, TIES fixed the student membership to a maximum of four years.

Regarding the changes to the ISI statutes, the TIES board examined and approved the proposals for Statute changes before ISI submitted the proposed modifications to ISI members at the end of November 2010.

The ballot for the election of TIES officers is underway. For the first time voting will be electronic. This activity is handled by ISI but there is a direct link on the TIES website to information about the election candidates.

In 2011 we will not hold a dedicated TIES annual conference; the next dedicated conference will be

held at the CR Rao Advanced Institute for Mathematics, Statistics and Computer Science in Hyderabad, India, in early January 2012.

In 2011 there will be two regional TIES conferences: a North American regional meeting on "Quantitative Methods for the Analysis of Long-Term Monitoring Data" at La Crosse, WI, USA in July; and a European regional meeting on "Spatial Data Methods in Environmental and Ecological Processes" at Foggia and Baia delle Zagare, Italy in September. The latter, together with a conference on data visualisation being held in Reykjavik, Iceland in August, are both satellite meetings of the 2011 ISI World Congress being held in Dublin.

The official TIES meeting for 2011, namely the Board of Directors meeting and the Annual General Assembly, will take place in Dublin in August. I hope to meet with many of you in Ireland. Check out the program and try to come along to the Congress. Don't forget there will be a full conference theme day on "Water - quantity and quality", organized under the guidance of Abdel El-Shaarawi!

I have the pleasure to inform you that TIES, through past activity of its North American Section, has made available some funding for encouraging the participation of researchers at the meeting of Young Statisticians in Dublin. Also, in Dublin the 2010 El-Shaarawi award will be officially presented to Marc Genton during the Award Ceremony on August 25.

World Bank funding of US\$10,000 has once again been obtained through ISI to help support statisticians from developing countries attend conferences. The Board has decided to direct this funding to support attendees at the TIES 2012 conference. The organizers of TIES 2012 are working on assigning these funds.

TIES is continuing to be involved in the activities planned for the next ISI World Congress in 2013 in Hong Kong; Don Stevens will be our representative on the Scientific Program Committee.

The forthcoming TIES annual conferences will be well spread around the world – Hyderabad, India in January 2012; Anchorage, Alaska, USA in June-July 2013; and Australia in 2014. I hope that most of us will be able to participate in these conferences and that regional activities can be organized simultaneously.

Our journal, Environmetrics, is going well, thanks to our Editors-in-Chief Peter Guttorp and Walt Piegorsch. The contract for the journal between TIES and Wiley is continuing with minor modifications. Again, I would encourage TIES members to use the free tokens during 2011 to download single articles from the journal. This is a very important and positive benefit for members: information about the tokens is available through ISI.

The Editors and the Publisher have decided not to continue hosting conference proceedings in the journal. TIES is exploring potential options for publishing conference proceedings.

TIES is particularly active in networking with environmental themes. We are participating in the surface temperature network (www.surfacetemperatures.org) with Peter Guttorp on the governance committee, and in a working group for upper air circulation data, GCOS Reference Upper Air Network (www.gruan.org) with Alessandro Fassò as the TIES representative.

This is my last message as TIES President. I wish to thank all board members for the continuous challenges and substantial help. A special thanks to the Secretary Alessandro Fassò and the Publication officer Michael Dowd. During my term as President, I received many interesting proposals from members of the society, in particular from our student members. Keep up the suggestions! I extend my best wishes to the incoming President, Don Stevens, and to the new officers that will be elected. I will happily be at their disposal should they need any help or support. Thanks to everyone!

2. TIES News

2011 Election of TIES Board of Directors

The ballot for the election of TIES officers is underway with the deadline for voting on 24 June 2011, 12.00 (CET). The following list of nominations for the seven positions for election in 2011 were received from the Election Committee (Daniela Cocchi, Ray Correll, Ian Mac Neill) and members:

President-Elect:

Bronwyn D. Harch, CSIRO, Australia

Secretary:

Jorge Mateu, University Jaume I, Castellon, Spain

Treasurer:

Sylvia R. Esterby, University of British Columbia Okanagan, Canada

Publications Officer:

Ayesha Ali, University of Guelph, Canada

Regional Representatives:

North America:

Yulia Gel, University of Waterloo, Canada

Timothy G. Gregoire, Yale University, USA

Europe:

Giovanna Jona Lasinio, Sapienza University of Rome, Italy

Other Regions:

Quanxi Shao, CSIRO, Australia

Every TIES member has been informed of the direct link on the TIES website where they can vote. If you have any questions or comments, please send an email to: secretary@environmetrics.org.

The following representatives will continue in their roles until August 31, 2013:

North America:

Brian Gray, Upper Midwest Environmental Sciences Center, Wisconsin, USA

Europe

Marian Scott, University of Glasgow, Scotland

Other Regions:

Lelys Bravo de Guenni, Universidad Simón Bolívar, Caracas, Venezuela

Abdel El-Shaarawi Young Researcher's Award 2011

This award was established through a motion of the Board of Directors in 2001 and subsequent definition

of the nature of the award. The award winner will not yet have reached his/her 41st birthday at the time of nomination and is recognized for having made outstanding contributions to the field of environmetrics (see TIES Awards at http://www.environmetrics.org/ for the guidelines for submitting an application).

The Award Committee comprising Reinhard Viertl (Chair), Sudipto Banerjee and Carlo Trivisano, is examining the submissions for the 2011 prize.

TIES members News

- Daniela Cocchi is Associate Editor of the International Statistical Review
- Alessandro Fassò is the TIES representative in the working group charged with overseeing the instigation of the GCOS Reference Upper Air Network (www.gruan.org)
- Bronwyn Harch is the Chair of the Statistical Society of Australia Inc Environmental Statistics section
- Don Stevens is the TIES representative on the Scientific Program Committee for the 59th World Statistics Congress of the International Statistical Institute, 25-30 August 2013, Hong Kong, China

TIES New Members

Noriah Al-Kandari Juliet Faith Aporomon Berrett Candace Kristin **Broms** Brian **Brost** Chebana Fateh Christman Mary David Clifford Cooley Daniel Eguchi Shinto Teodoro R. García León Amanda Hering Roland Langrock Yoshihiko Miyasato Sara Rodney Christien Thiart **Ruey Shiong** Tsav Westveld Anton Atsushi Yoshimoto

Forthcoming papers in Environmetrics

For forthcoming articles to be published in the society journal Environmetrics, please visit the following link

http://onlinelibrary.wiley.com/journal/10.1002/%28I SSN%291099-095X/earlyview

TIES members have the opportunity to download Environmetrics papers for free from the Wiley webpage. A username and password are required to make use of this opportunity; please email m.deruitermolloy@cbs.nl to obtain these details.

3. Environmetrics Conferences

3.1. Forthcoming Conferences

Already announced

TIES 2011 - 3rd North American Regional Meeting - La Crosse, Wisconsin, July 18-20, 2011

The 3rd TIES North American Regional meeting will be held in La Crosse, WI, USA over 18 - 20 July 2011. The theme of the meeting will be "Quantitative methods for the analysis of long-term monitoring data."

Abstracts are still being accepted for poster presentations only.

Further information is provided at http://www.uwlax.edu/conted/ties2011/

YSI 2011 - ISI Young Statisticians Meeting – Dublin, Ireland, August 19-21, 2011

As a satellite meeting to the 2011 ISI World Congress, and the first of its kind, the 2011 ISI

Young Statisticians Meeting (YSI 2011) seeks to promote the active participation of early career statisticians in the epicentre of the ISI World Congress.

Further information is provided at

http://www.scss.tcd.ie/conferences/YSI2011/

ISI 2011 – 58th Congress of the International Statistical Institute - Dublin, Ireland, August 21-26, 2011

The World Statistics Congress – the biennial meeting of the International Statistical Institute (ISI) - is unique in bringing together statisticians and probabilists from across the disciplinary spectrum – official statistics, surveying and sampling, computational & mathematical statistics, probability and stochastic modelling and education. Moreover, it brings together statisticians from developing nations and from developed nations to share experiences, expertise and challenges.

Further information is provided at

http://www.isi2011.ie/

WTD at ISI 2011 - Water Theme Day – Dublin, Ireland, August 24, 2011

In 2011, the ISI World Statistics Congress will have one day devoted to sessions addressing the many statistical challenges that are associated with "Water – quality and quantity". The Water Theme Day (WTD) is a new feature added to the traditional ISI meetings with the objectives of highlighting the important contributions statistics can make to the solution of water quality problems and quantity challenges facing the world, and identifying statistical research challenges that arise.

Further information is provided at

http://www.isi2011.ie/content/scientific-programme/water-day.html

SPATIAL2 - Spatial Data Methods for Environmental and Ecological Processes , Foggia and Baia delle Zagare, Italy, September 1-2, 2011

Spatial Data Methods for Environmental and Ecological Processes – 2nd Edition – is the 2011 European Regional Conference of The International Environmetrics Society and is an official Satellite Meeting of the ISI Dublin World Statistics Congress in 2011. The conference is interdisciplinary (statisticians, agronomists, biologists, ecologists and more are encouraged to attend) and fosters the exchange of experiences between researchers working on spatial and spatio-temporal environmental problems. The conference structured into general interest plenary sessions, parallel oral sessions and a big poster session with a general open discussion.

For further information: http://www.unifg.it/spatial

TIES 2012: 22nd Annual Conference of The International Environmetrics Society - Hyderabad, India, January 1-6, 2012

The 22nd TIES Annual Conference will be held in Hyderabad, India, over January 1-6, 2012, and is jointly organized by CRRAO AIMSCS, UOH Campus, and University of Hyderabad. The theme of the meeting will be "Environmental Challenges facing developed and developing countries in a Globalized World: Quantitative approaches to Comprehensive Solutions".

Invited sessions include:

- Waterborne Diseases: Seasonality and Environmental Drivers
- The use of Remote Sensing for forecasting water related diseases
- Applications of spatial statistics
- Remote sensing and Natural Resource Management
- Air Quality Monitoring & Assessment
- Ecology, Forestry & Environment
- Rainfall & Runoff Monitoring

- Application of Quantitative Methods in Environmental and Resource Economics
- Hierarchical models for spatial-temporal datasets
- Hierarchical modelling of environmental data
- Latent Processes and Inference with Applications to Climate Studies

and others yet to be confirmed.

The deadline for abstract submission is 14 October, 2011, and a full version needs to be sent by 15th November for inclusion in the proceedings.

Contact: <u>ties2012crr@gmail.com</u> or <u>tata.subbarao@gmail.com</u>

Further information is provided at http://www.ties2012.com

New Announcements

SARMA/TIES workshop on visualization of climate data - Reykjavik, Iceland, August 15-18, 2011

TIES is co-organizing a workshop on visualization of climate data and models with the Nordic Network on Statistical Approaches to Regional Climate Models for Adaptation (SARMA).

It will be a "working workshop", where participants will develop solutions to visualization problems in climate science.

The workshop instructors are visualization experts: Dianne Cook (Iowa State University), Haley Wickham (Rice University), and Heike Hofmann (Iowa State University).

Announcement, registration, etc. is available through the workshop web pages at

http://www.nrcse.washington.edu/NordicNetwork/visual.html

2nd International BIO-SI Workshop on Biostatistics, Rennes, France, October 6-7, 2011

The 2nd International BIO-SI Workshop on Biostatistics is being held at ENSAI near Rennes in France on October 6, 7th 2011. This is the result of the collaboration between the Science Foundation Ireland funded BIO-SI research programme at the Universities of Limerick and Galway (Ireland) and the research group at ENSAI. ENSAI, along with ENSAE, is a part of the Grouping of National Economics and Statistics Schools (GENES) which became a specialist University in Statistics and Economics.

Important dates

Opening announcement and first call for papers: May 15th, 2011

Registration opens: July 1st, 2011

Deadline for submission of abstracts: August 1st, 2011

Response to authors: August 8th, 2011

Online registration (inscription) will close on **September 29th, 2011**

Full details are available on the website at www.bio-si.ensai.com

iEMSs2012: 6th International Congress on Environmental Modelling and Software, Leipzig, Germany, 1 - 5 July 2012

The aim of the meeting is to enhance environmental processes understanding and decision making by fostering the discussion and interchange of challenges, solutions, ideas, new methods and techniques, and future research lines in environmental modeling and software.

The congress will take place at the "Leipziger KUBUS", the conference venue of the Helmholtz Centre for Environmental Research - UFZ.

Important Dates

Session/workshop proposals 1 July, 2011 Call for papers (abstract) 1 August, 2011 Abstract submission 1 November, 2011 Call for papers (full paper) 15 January, 2012 Full paper submission 1 March, 2012

For further information:

http://www.iemss.org/sites/iemss2012/

3.2 Meeting Reports

1st conference on Spatial Statistics 2011 - Mapping Global Change, University of Twente in Enschede, The Netherlands, 23-25 of March, 2011

Massimo Ventrucci and Maria Franco-Villoria

The conference was jointly organized by the Universities of Twente and Wageningen (The Netherlands) and the Universität Münster (Germany), with the support of Elsevier and the *International Journal of Applied Earth Observations and Geoinformation*.

The aim of the meeting was to present interdisciplinary research in the field of Spatial Statistics, focusing on two aspects of this growing discipline. First, the increasing relevance of quantitative analysis of spatial data in a broad range of environmental disciplines, and the augmented availability of spatial data through remote sensing technologies. Second, the crucial importance of Statistical Modelling tools in describing spatial variability and uncertainty in such data.

The scientific program was a fair mix of methodological and applied topics, through an arrangement of 8 plenary sessions with invited keynote speakers, 16 parallel sessions, plus a huge poster session. Applications included Meteorology Epidemiology, Climatology, Earth Environment, Ecology and Forestry. Methodological sessions focused on Markov Random Fields, Spatial Autoregressive Modelling, Spatial sampling and Bayesian Spatial Statistics. Keynote speakers in Statistical Modelling related issues were Noel Cressie (The Ohio State University), Håvard Rue (Norwegian University of Science and Technology), Martin Schlather (Universität Göttingen) and Gavin Shaddick (University of Bath). Other keynote speakers, presenting talks about remote sensing and related topics, included Gilberto Câmara (National Institute for Space Research, Brazil), Javier Gallego (European Commission Joint Research Centre, Italy) and Peter Atkinson (University of Southampton)

The conference was an enjoyable experience, everything was well organized and transport to and from the conference venue was provided wherever you were staying. The highlight of the social program was the conference dinner, organized by the Faculty of Geo-Information Science and Earth Observation (ITC). The conference had a rich scientific program but presented in a relaxed and friendly atmosphere. Personally, we found the poster session very stimulating as it gave us the chance to talk about our work to people from different backgrounds.

More information about the event can be found on the conference website http://www.spatialstatisticsconference.com where the oral and poster program can be downloaded. Selected papers from both oral and poster presentations will be published in a forthcoming special issue of the International Journal of Applied Earth Observations and Geoinformation.

4. Summer Schools

INLA Tutorial at Spatial2, Baia delle Zagare, Italy, September 3, 2011

Spatial Data Methods for Environmental and Ecological Processes – 2nd Edition – is the 2011 European Regional Conference of The International Environmetrics Society and is an official Satellite Meeting of the ISI Dublin World Statistics Congress in 2011. It will be held in Foggia and Baia delle Zagare, Italy, on September 1-2, 2011 and will be followed by a INLA Tutorial on "Fast Bayesian inference for Geostatistics and other latent Gaussian models", as described below.

Lecturer: Finn Lindgren, Department of Mathematical Sciences, Norwegian University of Science and technology (NTNU), Trondheim, Norway

Information: The Tutorial will be held on September 3, from 9am to 1pm in Baia delle Zagare. A minimum of 10 participants (maximum 15) is required. Participants are asked to bring their laptop computers with R already installed.

Description: In these lectures, approximate Bayesian inference for a class of models named "latent Gaussian models (LGM)" will be discussed. LGM's are perhaps the most commonly used class of models in statistical applications. It includes, among others, most of (generalized) linear models, (generalized) additive models, smoothing spline models, state space models, semiparametric regression, spatial and spatiotemporal models, log-Gaussian Cox processes and geostatistical and geoadditive models. The concept of LGM is intended for the modeling stage, but turns out to be extremely useful when doing inference as we can treat models listed above in a unified way and using the same algorithm and software tool. The approach to (approximate) Bayesian inference is to use integrated nested Laplace approximations (INLA). Using this new tool, can directly compute verv accurate approximations to the posterior marginals. The main benefit of these approximations is computational: where Markov chain Monte Carlo algorithms need hours or days to run, our approximations provide more precise estimates in seconds or minutes. Another advantage with our approach is its generality, which makes it possible to perform Bayesian analysis in an automatic, streamlined way, and to compute model comparison criteria and various predictive measures so that models can be compared and the model under study can be challenged. We introduce the required background and theory for understanding INLA, including details on spatially consistent Gaussian Markov random fields for spatial statistical models and fast of those computations using sparse algorithms. The lectures will conclude by illustrating INLA on a range of examples in R.

For information about fees and registration see: http://old.unifg.it/spatial/tutorial_inla.asp

For further information: http://www.unifg.it/spatial

Geostatistics school, Fontainebleau, France, October 3-21, 2011

A three-week course reviewing all disciplines currently practiced in geostatistics is organized every year by the Geostatistics Team of the Ecole des Mines de Paris (1st week: **Linear geostatistics**; 2nd week: **Non-stationary and multivariate geostatistics**; 3rd week: **Non-linear geostatistics** and simulations). Classes will be given in English.

This course is particularly useful for people who wish to understand geostatistical methods, their validity domains and the mechanisms of calculation. The techniques are described in detail, with emphasis put on a strict scientific framework and application fields. The proposed training is not focused on the use of any specific software.

Basic knowledge of mathematics is required. Participants have the possibility of attending a single week, two weeks or the whole training. The 2nd and 3rd weeks require understanding of the 1st week content.

For further information and details about registration, please consult the website:

http://www.geosciences.minesparistech.fr/organization/presentation-of-the-group-2/trainings-in-geostatistics/methods-of-geostatistics

5. Outstanding Environmetricians

David Brillinger: Publication of Selected works

David Brillinger is Professor of Statistics at the University of California at Berkeley and he was TIES President from September 2006 to August 2008.

He has made contributions to the theory of time series and point processes. His methodological work has always been motivated through collaborations with researchers from other fields. His techniques for spike train analysis are widely known in neurophysiology, and his work on modeling earthquake risk is equally well known in seismology. More recently, David Brillinger has also contributed to the advancement of environmental statistics by developing techniques for animal tracking, wildfire

risk and looking for climate change. He has also written papers on sports statistics, particularly hockey and soccer.

David Brillinger's Selected Works will soon be published by Springer. The volume, which is edited by another former TIES president, Peter Guttorp, contains 31 papers by Brillinger, and a Conversation to be published in Statistical Science. The papers are commented on by some of Brillinger's students: Pedro Morettin from Brazil discussing time series papers, Tore Schweder from Norway and Haiganoush Preisler from USA discussing biological applications, Victor Panaretos from Switzerland discussing theory papers, and Peter Guttorp from USA discussing point process papers. The volume will make some of Brillinger's difficult to find papers available to a broad audience.

6. Recently or soon-to-be Published Books

"Compositional Data Analysis: Theory and Applications" edited by Vera Pawlowsky-Glahn and Antonella Buccianti (expected Nov 29, 2011), Wiley

"Spatial and Spatiotemporal Data Mining" edited by Shashi Shekhar and Ranga Raju Vatsavai (expected Nov 15, 2011), Chapman & Hall/CRC

"Spatial Data Analysis: Models, Methods and Techniques" by Manfred M. Fischer and Jinfeng Wang (expected Sep 28, 2011), Springer

"Spatio-Temporal Heterogeneity: Concepts and Analyses" by Pierre Dutilleul (expected Jul 31, 2011), Cambridge University Press

"Bayesian Smoothing and Regression for Longitudinal, Spatial and Event History Data" by Ludwig Fahrmeir and Thomas Kneib (expected Jun 24, 2011), Oxford University Press

"Space-Time Processes and Challenges Related to Environmental Problems: Proceedings of the Spring School Advances and Challenges in Space-Time modelling of Natural Events" edited by Emilio Porcu, Jose Maria Montero and Martin Schlather (expected Jun 13, 2011), Springer "Geospatial Analysis of Environmental Health" edited by Juliana A. Maantay and Sara McLafferty (2011), Springer

The Editors would like to encourage TIES members to volunteer book reviews and to bring new publications to their attention.

7. TIES Board of Directors

The elected members of the TIES Board of Directors are:

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)

Brian Gray (brgray@usgs.gov)

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 editor: Rosalba Ignaccolo (ignaccolo@econ.unito.it). 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.

Newsletter Board

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Michael Dowd (mdowd@mathstat.dal.ca)
Andrew Finley (finleya@msu.edu)
Rosalba Ignaccolo (ignaccolo@econ.unito.it)
Duncan Lee (duncan@stats.gla.ac.uk)
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Alexandra Schmidt (alex@im.ufrj.br)

TIES Webpage: http://www.environmetrics.org/