ENVIRONMETRICS

The International Society - TIES

Newsletter

Volume 19, No. 1, April 2013

Editor: Ayesha Ali

From the Editor: *Please note that the December issue of the newsletter was skipped while the Board convened on the TIES-ISI relation. However the latest information on this issue is provided here, in the Message from the President.*

In This Issue:

1. A Message from the President,

Don Stevens
(stevens@science.oregonstate.edu)
Department of Statistics
Oregon State University, USA

Dear TIES members,

In the last two newsletters, I discussed the financial relationship between ISI and TIES, and summarized the communication between the TIES Board of Directors and ISI Executive Committee and Permanent Office. The issue has not been resolved, but we must do so soon. The association between TIES and ISI will be critical in determining the future evolution of TIES, so it is important that all TIES members are informed about the issues and concerns, and have an opportunity to express their viewpoints.

In the July 2012 newsletter, I reported that a Board-approved TIES delegate would meet with ISI in Rome in conjunction with the ISI Council meeting. We received a brief response from ISI that (1) acknowledged receipt of our original letter; (2) agreed on a meeting in Rome; and (3) expressed a willingness to work with TIES to see if we can find a solution that will work for everyone.

Giovanna Jona Lasinio, one of TIES European Regional Representatives on the Board, met with ISI representatives in Rome in July 2012. The meeting was followed by a reply to our letter of May 10, 2012. In both the meeting and the letter, ISI expressed a willingness to search for a sustainable structure for TIES/ISI association. It was also made clear that ISI wants environmental statistics included

in the ISI umbrella, and would like TIES to fill that role.

ISI agreed that some administrative charges (bank charges, auditors, and consultants) could be waived so long as TIES is an independent financial entity. (TIES is a not-for-profit corporation chartered in Canada; the other ISI Associations are legally a part of ISI.). ISI also agreed that TIES could manage student members as we wish, but questioned the value of doing so. ISI pointed out that even with these changes, the present basis for a long-term financial relationship between ISI and TIES did not appear sustainable. The TIES Board has reached the same conclusion.

We now find ourselves in the same position as the U.S. Government: we either have to reduce costs, increase revenue, or both. ISI wants us to increase revenue, via sponsored workshops, conferences, or publications. An offer to help TIES find ways to increase revenue was extended. From ISI's perspective, the preferred solution would be for TIES to dissolve itself and reform as another ISI Association, i.e., to become legally a part of ISI.

The Board has had an extensive email conversation over the last several months. The Board does not support giving up TIES's independence, nor do we want to turn into an organization focused on revenue generation. Instead, we have proposed a cost-cutting alternative to ISI. To understand our proposal, some insight into ISI overhead allocation is helpful. ISI apportions its overhead by first assigning some fraction of the total to ISI and the rest to the Associations (collectively). The fraction varies a bit by cost category, but tends to be something like a 50/50 split, a 75/25 (ISI/Assoc) split, or a split based on relative numbers. Once that split is made, the Association's share is apportioned equally among the Associations (except for the two that were apportioned based on relative membership).

TIES membership is made up of ISI members who are also TIES members, and TIES members who are not ISI members. ISI/TIES members pay dues to ISI, and TIES gets a portion (currently 17€). TIES members pay their dues (35€) to TIES, and ISI gets a fee for collecting the dues. Because TIES relies primarily on dues for revenue, TIES portion of ISI's overhead has to be covered by dues revenue, most of which comes from non-ISI TIES members. The

Board's position is that the benefits of ISI accrue primarily to ISI members, and that ISI members should bear most of the overhead cost. A fair way to apportion overhead is to charge a flat rate for non-ISI association members. That flat rate should reflect the value of association with ISI for the non-ISI members; say something on the order of half the value for ISI members. The Board suggested approximately 15-20€ per year, inclusive of membership processing. Discounted rates for students and less-developed-country members can be negotiated.

ISI has acknowledged receipt of our proposal, but has not yet formally responded. The relationship between TIES and ISI is an agenda item for the TIES Board Meeting and the Society's Annual General Meeting at TIES2013 in Anchorage, June 10-14. Between now and then, I encourage all members to express their thoughts to the Board. Send your comments to me at president@environmetrics.org and I'll pass them on to the Board.

On another note, TIES officers are elected in odd-number years, so this year is an election year. We need candidates for the Executive Committee (President-Elect, Secretary, Treasurer, and Publications Officer) as well as a Regional Representative from each of our three regions (North America, Europe, and Other Regions). Terms are two years for the EC, and four years for the Regional Representatives. Anyone interested and willing to stand for election, please let me know.

2. TIES News

Sudipto Banerjee becomes a new Fellow of the ASA

Dr. Sudipto Banerjee, Professor of Biostatistics in the

School of Public Health at the University of Minnesota, Twin Cities recently became a new Fellow of the ASA at the 2012 Joint Statistical Meeting in San Diego.

Sudipto holds an M.S. (1998) and a Ph.D. in Statistics from the

University of Connecticut, Storrs. Prior to this, he held a B.S. (Honors) from Presidency College and an M.Stat from the Indian Statistical Institute, both in Kolkata, India. Sudipto's research focuses upon statistical modeling and analysis of geographically referenced data, Bayesian statistics, interface between statistics and Geographical Information Systems, statistical computing and Bayesian melding of physical models with observational data. He has published over eighty peer-reviewed journal articles, several book chapters and has co-authored a book titled "Hierarchical Modeling and Analysis for Spatial Data".

Sudipto is an elected member of the International Statistical Institute (2010) and a Fellow of the American Statistical Association (2012). In 2009 he was honored with the Abdel El Sharaawi Investigator Award from The International Environmetrics Society. This award is given to a young investigator who has made outstanding contributions to the field of quantitative and analytical methods in the environmental and natural sciences. In 2011 he was honored with the Mortimer Spiegelman Award from the American Association of Public Health. This award, given annually since 1970, is presented to an outstanding public health statistician under the age of 40.

Dr Bronwyn Harch new Chief of Mathematics, Informatics and Statistics division of CSIRO since 8 October 2012.
Quanxi Shao

Dr Bronwyn Harch was appointed as new chief of Mathematics, Informatics and Statistics division of the Commonwealth Scientific and Industrial Research Organization (CSIRO), a position that commenced 8 October 2012. Bronwyn joined CSIRO in 1995 as a Postdoctoral Fellow and during the past four years has been the Deputy Chief of CMIS and more recently the Deputy Director of the Sustainable Agriculture Flagship. She holds a PhD in Statistics from the University of Queensland, is an Elected Member of the International Statistical Institute, an Accredited Member of the Statistical Society of Australia Inc., President-Elect of The International Environmetrics Society, Co-Chair of the Environmental Statistics Section of the Statistical Society of Australia Inc., Adjunct Professor at Griffith University and a Distinguished Research

Professor at the Chinese National Administration of Surveying, Mapping and Geoinformation. During her time with CSIRO, Bronwyn has worked on the statistical design of landscape-scale sampling protocols and monitoring programs, as well as the statistical modelling of spatio-temporal agri-environmental systems. Bronwyn has received numerous awards, particularly ICT Outstanding Achievement Award at the Women in Technology Awards (2010) and the society's Abdel El-Shaarawi Young Investigator Award (2008). She was selected as a delegate to the Federal Government's 2020 Summit with the theme: "Australia's future security & prosperity in a rapidly changing region & world" (2008). In her new role, she provides research oversight for the division which applies mathematical and statistical research methods to diverse scientific problems. For more information about Bronwyn, see http://www.csiro.au/Organisation-Structure/Divisions/Mathematics-Informatics-and-Statistics/BronwynHarch.aspx.

Bronwyn Harch was appointed new Chief of Mathematics, Informatics and Statistics at CSIRO.

TIES first president, Abdel El-Shaarawi receives honorary degree, 3 December 2012
Sylvia Esterby

In the first ceremony conferring doctorate degrees at the newly unified Université de Lorraine in Metz, France on December 3, 2012 Abdel El-Shaarawi was awarded the honorary degree docteur *honoris causa* for his contributions to the field of Environmetrics. Abdel is currently Emeritus Research Scientist at the

National Water Research Institute in Burlington, Canada and Distinguished AIG Visiting Professor of Actuarial Science at The American University in Cairo, Egypt.

Abdel with Pierre Mutzenhardt, Président de l'Université de Lorraine, and Armand Maul, Professeur á l'IUT de Metz, Laboratoire de mathématiques.

For citation, see:

http://www.univ-lorraine.fr/content/docteurs-honoris-causa

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/%28ISSN%291099-095X/earlyview

Most recent Special Issue: *"Modern quantitative methods for environmental risk assessment"*, December 2012, Volume 23, Issue 8, Pages i–iii, 637–737. Edited by: Lelys Bravo de Guenni, Susan J. Simmons

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.

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3. Environmetrics Conferences

3.1. Forthcoming Conferences

Already announced

TIES 2013: 23nd Annual Conference of The International Environmetrics Society,
Anchorage Alaska, June 10-14, 2013
Don Stevens

The TIES 2013 conference will be held at the Hilton Hotel on June 10-14, 2013, in downtown Anchorage. See our web page at http://www.ties2013.com/ for complete details. The theme of the conference will be *Statistics & Natural Resources: assessment, regulation, development, use and conservation.*

We have put together an exciting program of invited sessions and keynote speakers. Professor Jennifer Hoeting, Colorado State University, will deliver this year's Stuart Hunter Lecture; Dr Barry Nussbaum, Chief Statistician of the U.S. Environmental Protection Agency, is the President's Invited Lecturer; and Dr. Gordon Reeves, U.S. Forest Service, will deliver the keynote address. Jay Ver Hoef has organized a two-day modular course on statistical methods for estimating abundance for wildlife and fisheries, with four one-half day modules. See Section 4, Short Courses and Workshops for details.

We are still accepting contributed abstracts and proposals for invited sessions. Submit abstracts by following the "Call for Abstracts" link on the conference web page or going to http://www.ties2013.com/call.htm.html.

Send proposals for invited session to Don Stevens at president@environmetrics.org.

ISI WSC 2013: 59th ISI World Statistic Congress – Hong Kong, August 25-30, 2013

The 59th WSC meeting will be held in Hong Kong August 25-30, 2013. The meeting venue will be the Hong Kong Convention and Exhibition Centre (HKCEC), which is a magnificent, multi-purpose venue located right in the heart of Hong Kong on the Victoria Harbour. The unique theme this year is

"Youth" and a series of sessions will be organised on the "Theme Day" of the 59th with this in mind.

www.isi2013.hk/

Important Dates
Early Registration has already started:
June 8, 2012 to May 31, 2013

EYSM 2013: 18th Edition of the European Young Statisticians Meeting, Osijek, Croatia, August 26-30, 2013

The 18th ESYM will take place in the city of Osijek, Croatia from August 26-30, 2013. The Local Organizing Committee will be chaired by Nenad Suvak (Department of Mathematics, J.J. Strossmayer University of Osijek).

The main aim of the meeting is to provide young researchers (less than thirty years of age or two to eight years of research experience) an introduction to the international scene within the broad subject area - from pure probability theory to applied statistics.

www.mathos.hr/eysm18/

New Announcements

TIES Regional Conference CANCELLED
Gunagzhou, China, 22-24 August 2013

In the last newsletter it was noted that Quanxi Shao and The Chinese Society of Environmental & Industrial Statistics were organizing a TIES Regional Conference as a Satellite meeting of the World Statistical Congress (WSC2013).

However, this event has now been CANCELLED in favour of holding a full Annual TIES meeting in China in 2014. Quanxi is working with The Chinese Society of Environmental & Industrial Statistics to organize this meeting. More details will follow as they develop.

3.2 Meeting Reports

STATMOS Ten Lectures on Statistical Climatology by Doug Nychka
August 6-10, 2012
Grace Chiu

This week-long workshop took place at the University of Washington in Seattle immediately after this year's Joint Statistical Meeting in San Diego. Doug Nychka (NCAR), a leader in statistical methodologies for climate modelling, led the workshop by giving ten lectures that covered a wide range of topics. They included basic physics for the Earth's climate, statistical models for spatial data, data assimilation, and more. One of the most stimulating aspects of the lectures was how Doug designed them so that the intricate relationship among smoothing spline techniques, ridge regression, and spatial modelling would be gradually revealed and become solidified in the audience's minds. The workshop also featured presentations on cutting-edge climate-related research from various individuals.

http://www.nrcse.washington.edu/statmos/wp/?p=42

Italian Ecological Society (SItE) meeting
10-13 September 2012
Giovanna Jona Lasinio

The XXII meeting of the Italian Ecological Society (SItE) was held in Alessandria, Italy, on 10-13 September 2012. This conference covered a very large number of topics related to ecological studies and is attended by the majority of the Italian ecological community. This year, for the first time, the Quantitative Ecology session was jointly organized by ecologists and TIES as a consequence of the working group recently established by SItE and TIES. Sessions are organized to have one invited talk and several short contributed presentations for a total time of 2 hours.

The first remarkable outcome was that there were so many papers submitted for the Quantitative Ecology topic that the conference organizers decided to have 2 sessions on the subject and invited statisticians to give the key talks in each session. Session organizers were Lisandro Benedetti-Cecchi (for SItE) and Giovanna Jona-Lasinio (for TIES).

The first session had as key speaker Antonella Bodini from CNR of Milan with the talk "Metapopulation models as useful tools for management in a fragmented habitat" joint work with G. Gilioli, followed by 5 talks. Two talks received the largest number of questions; one was given by TIES member Alessio Pollice (on "Analysis of environmental/anthropogenic effects on the spatio-temporal distribution of population parameters in deep-sea shrimps from the North-Western Ionian Sea by Generalized Additive Models" by S. Arcuti, C. Calculli, A. Pollice, N. Ribecco, A. Tursi, G. D'Onghia, M.T. Minerva, P. Maiorano) and the work by Lisandro Benedetti Cecchi (on "Scales of variability of biofilm abundance on rocky shores" by M. Dal Bello, E. Maggi, L. Benedetti-Cecchi).

The second session started with the invited talk by Giovanna Jona-Lasinio, namely "Some statistical tools for the analysis of aquatic systems data", which is joint work with A. Pollice, S. Arima, L. Rossi, M.L. Costantini, A. Basset, and I. Rosati. Then 6 talks followed on several subjects, with a very interesting discussion involving question on the modeling of space-time distribution of juveniles of several species of demersal fishes in the Mediterranean (G. Mastrantonio), the use of marine species as bio-indicators of pollution (P. Mellià, G.Strona, A. Gomiero and coauthors). The two sessions were the most well-attended of the conference (about 100 in the audience), confirming the considerable interest that the joint working group is receiving.

Statistical Week, Vienna
18-21 September 2012
Giovanna Jona Lasinio

This year Statistical week, a meeting of the German and Austrian Statistical societies, had Environmetrics as one of the main topics. A keynote presentation was given by Jorge Mateu (on Classification and clustering in spatial and spatio-temporal point patterns), and an invited TIES session was organized by Alessandro Fassò at the invitation of Wolfgang Schmid, the President of the German Statistical Society and TIES member. There were also two Environmetrics-flavoured contributed sessions.

The focus of the TIES session was on space-time models and spatial clustering. It was attended by about 50 participants. The session included three presentations: a keynote presentation by A. Fassò (Spatio temporal models for environmental data) and two shorter presentations by Veronica Berrocal (Space-time data fusion under error in computer model output: an application to air quality, joint work with Alan Gelfand) and Giovanna Jona-Lasinio (A hierarchical bayesian model for modelling benthic macroinvertebrates densities in lagoons joint work with S. Arima, A. Pollice, A. Basset, I. Rosati).

METMAVI International Workshop on Spatio-Temporal Modelling
12-14 September, 2012
A Manuela Gonçalves

The VI International Workshop on Spatio-Temporal Modelling (METMAVI) was held with 105 participants in Guimarães (Portugal), from 12th to 14th September 2012, locally organized by the Research Centre of Mathematics - CMAT of Minho University. The workshop, a satellite conference of The International Environmetrics Society (TIES), has been organized since 2001, mainly in Spain and also in Italy, and this was the sixth edition, the first one in Portugal. METMAVI, a satellite conference of **TIES**, built on the success of previous workshops of this series held in Spain—Benicassim (2001), Granada (2004), Pamplona (2006), and Santiago de Compostela (2010)—and in Italy (Alghero, 2008).

The purpose of these workshops was to promote the development and application of spatio-temporal statistical methods in different fields related to Environmental and Health Sciences, providing a forum for scientists to exchange views and formulate future research directions. The scientific programme was characterized by having special invited sessions covering topics on the latest in theory, methods and applications, as well as contributed papers and posters.

The scientific program of the conference included 12 invited and 57 contributed presentations, all of them on the latest in theory, methods and applications on spatio-temporal modelling. Among the 12 invited sessions, we had 3 plenary sessions. Two of them were dedicated to disease epidemiology given by Leonhard Held (University of Zurich, Switzerland)

and Nicky Best (Imperial College, UK), and the third was on the analysis of massive data sets, an important issue within the scope of environmental applications, given by Abdel El-Shaarawi (McMaster University, Ontario, Canada).

Participants of METMAVI pose for the camera.

The rest of the invited papers (Andrew Finley, Feridun Turkman, Jose M. Angulo, Jorge Mateu, M. Dolores Ugarte, Marian Scott, Patrick Brown, Rasmus Waagepetersen and Wenceslao González-Manteiga) covered a wide variety of topics, from geostatistics, lattice data and spatial point processes to different spatio-temporal approaches. There was an award for the best poster presented at METMAVI, the "Best Poster", which was given to Miguel Ángel Martinez-Beneito from *Centro Superior de Investigación en Salud Pública, Valencia, Spain*, for his joint work with P. Botella-Rocamora and A. López-Quílez entitled "A spatio-temporal disease mapping proposal based on a moving average spatial process".

The authors were encouraged to submit their papers for possible publication in a special issue of the *Biometrical Journal* that will be devoted to the topic "Statistical methods in spatio-temporal disease epidemiology". A special issue of the *Journal of Stochastic Environmental Research and Risk Assessment* (SERRA) and another special issue of *Journal of Environmental Statistics* will also be edited for the conference papers, following the usual reviewing procedure. A book of abstracts was also edited, including all the invited and contributed papers.

The social program of METMAVI included a welcome reception held at the Martins Sarmento Archaeological Museum. This museum holds

important collections on the pre-Roman Castreja culture, as well as other archaeological items. The conference dinner took place in Guimarães, at the Palace of the Dukes of Bragança, built in the 15th century by the then-future duke Dom Afonso.

During the dinner there was a concert by a group of Portuguese traditional folkloric music. The program also included a guided visit to the Historic City Centre of Guimarães, which the UNESCO granted the distinction of "World Heritage Site" on the basis of its strong link to the people and events involved in founding the Portuguese Nation. Guimarães was chosen by the Portuguese government to be the European Capital of Culture in 2012. Thus, it made the perfect venue for a scientific meeting, where reflection and debate could be inspired by the city's legacy. The participants had the opportunity to attend some of the cultural events such as a medieval fair.

The METMAVI was sponsored by CMAT (Research Centre of Mathematics of Minho University), SPE (The Portuguese Society of Statistics), Calouste Gulbenkian Foundation and TIES (The International Environmetrics Society), as well as by the European Capital of Culture - Guimarães 2012.

The workshop organizers would like to thank all invited speakers for their important contribution for the quality of this workshop. We are especially grateful to all colleagues who served as evaluators of the submitted extended abstracts, and whose work was crucial to the high scientific value of these proceedings. We would also like to express our gratitude to our sponsors, for their generous support. Finally, a great thanks to all the authors and participants, without whom the conference would have not been possible.

In the end of the workshop it was announced that Professor Abdel El-Shaarawi will be the responsible for the next METMA in Cairo in 2014.

Hope to see you at the next METMA in Cairo.

2012 ENVR Workshop "Spatial Modeling and Inference for Environmental Science", Raleigh, North Carolina, 4-6 October 2012

Murali Haran and Brian Reich (co-chairs of ENVR 2012)

The 2012 ENVR Workshop "Spatial Modeling and Inference for Environmental Science" was held on October 4-6 at North Carolina State University, Raleigh, North Carolina. There were two half-day short courses, an invited program, and a poster session. Over 80 researchers participated, including a significant proportion of graduate students and postdoctoral fellows. The short courses -- one on methods for spatial data with long range dependence by Professor Michael Stein (U of Chicago) and the other on spatial extremes by Professor Dan Cooley (Colorado State) -- were well attended by researchers from a wide range of backgrounds.

The invited program, featuring a number of leading researchers, was divided into 5 themed sessions on important topics of current interest including complex computer models, high-dimensional spatial data, and non-Gaussian spatial processes. Each session had 4 speakers and the talks prompted lively floor discussions. The well attended poster session showcased recent developments in theory and applications by some senior researchers and numerous graduate students, postdoctoral fellows and other new researchers.

Twenty young researchers were selected by a competitive application process to receive funding to attend the workshop; each awardee presented a poster at the workshop. The funding for the travel awards was generously provided by the Statistics and Environment Section of the American Statistical Association. The travel scholarships increased the participation of new researchers in the workshop, greatly increasing the potential impact of this workshop in the long run. All in all, the workshop seems to have been a wonderful experience for all the participants, including the organizers!

The Four-year International Congress of Geostatistics, Oslo, Norway, June 11-15, 2012

Laure Malherbe

Environmental applications can benefit from experience acquired in mining (threshold exceedance, support and information effect) and oil applications (modelling of heterogeneous reservoirs). The broad question of the inverse problem to characterize reservoirs and especially permeability fields was addressed in several sessions.

A number of issues were more specific to the environmental sphere, in particular:

i. The development of random functions in non-Euclidean topology to characterize concentrations: use of curvilinear coordinates characterizing the flow to improve the description of pollution in ground water (M. Rivest, D. Marcotte, P. Pasquier) and a review of models adapted to hydrographic networks (G. Laaha, J.O. Skoien, G. Blöschl) ;

ii. The use of the Linear Model of Coregionalization to describe the relationships between observation and deterministic simulations (C. de Fouquet, N. Flipo, L. Létinois, L. Malherbe et al.) and the extension of this multivariate model to take account of shifted correlations and differential relationships (D. Marcotte) ;

iii. Measurement siting for environmental monitoring (R. Garcia-Flores, P. Toscas, D.-J. Lee, O. Graviliouk et al. ; T. Romary, C. de Fouquet, L. Malherbe ; G. Spoeck) and representativeness of monitoring sites (M. Beauchamp, L. Malherbe, L. Létinois, C. de Fouquet) ; and

iv. Estimation of water running (J. Skøien, G. Blöschl, G. Laaha, E. J. Pebesma, et al. ; E. Mouche, M-A. Harel).

Many other subjects were addressed among which contaminated soils and sites (H. Demougeot-Renard, M. Garcia, N. Jeannée), the mapping of nitrate concentrations in ground water (B.Bourgine, B. Lopez, N. Baran), air quality (N. Jeannée, O. Lemarchand), rain height (B.H. Auestad, A. Henriksen, H. A. Karlsen), sismic risk (O. Jaquet, C. Lantuéjoul, J. Goto) or the distribution of species (J.O. Skøien, G. Dubois, G. B. M. Heuvelink, M. Schulz).

Detailed abstracts are available in Geostatistics Oslo 2012, Quantitative Geology and Geostatistics, Vol. 17, Editors: Petter Abrahamsen, Ragnar Hauge, Odd Kolbjørnsen (Springer).

http://link.springer.com/book/10.1007/978-94-007-4153-9/page/1.

TIES 2013 International Workshop on "Statistical Methods for Environmental Data Analysis", Hyderabad, India, March 4-7, 2013
T Subba Rao

The CRRAO Advanced Institute for Mathematics, Statistics and Computer Sciences (AIMSCS), jointly with the Centre of Earth and Space Sciences of the University of Hyderabad organized a four day Short course/workshop on Statistical Methods for Environmental data Analysis from 4-7th March, 2013 at the CRRAO AIMSCS. The short course/workshop was attended by 55 participants, mainly from various Indian universities, research institutions and governmental departments. However, one came from Sri Lanka (sponsored by the Ministry of Environment, Government of Sri Lanka), and two PhD students came from The Islamic Republic of Iran (currently studying in Hyderabad). Since participants had some knowledge of statistics, the main purpose of the workshop was to train them on the central ideas of statistical modeling and data analysis using R software.

The first two days were used for lectures on basic methods of statistical modelling (e.g. Bayesian methods), extreme value theory and applications, spatial analysis, and basic methods on detection of trend and spatial processing. The last two days were devoted to a hands-on session of data analysis organized by Dr Sourav Das (from the National University of Singapore), Dr M Bhattacharjee (University of Hyderabad) and Dr PVS Anand (CRRAO AIMSCS).

Professor CR Rao FRS, gave a key note talk emphasizing the need in studying changes in environmental factors that cause pollution and global warming with harmful effects on the health of the population. He also highlighted the need for collecting reliable statistics to estimate change in various measurements (e.g. pollution, ozone levels, automobile carbon dioxide emissions, etc.) and to forecast expected changes over various periods of time and across regions.

Professor TJ Rao gave a talk on environmental data collection, Professor KPN Murthy and Professor T Subba Rao gave talks on the underlying theory of extremes with applications to atmoshperic pollution and floods. Dr M Bhattacharjee gave talks on

regression and the basics of Bayesian methodology. Professor AC Narayana discussed applications of statistical methods to coastal environmental data.

The workshop was supported by the International Statistical Institute (through World Bank Funding), the Ministry of Earth Sciences, Government of India and the Department of Science and Technology, Government of India; we are grateful to these organizations for their support. We also wish to thank the Director of the CRRAO AIMSCS, Professor Allam Appa Rao, for providing all facilities to make the workshop a success.

Participant photo at TIES workshop on Statistical Methods for Environmental Data Analysis.

Workshop Organizers: T Subba Rao, The University of Manchester,U.K.; AC Narayana, Centre of Earth and Space Sciences, University of Hyderabad; VK Jandhyala, The University of Washington, Pullman.

4. Short Courses and Workshops

Statistical Methods for Estimating Abundance of Natural Resources

When: June 8 - 9, 2013
Where: 23rd Annual Conference of The International Environmetrics Society, Anchorage, Alaska, USA

This two-day modular course covers statistical methods for estimating abundance for natural resources. Management and research for natural resources starts with a basic understanding of the abundance of a resource, from which temporal

changes and relationships to other factors are established. If the resource is easily visible, it is often counted or estimated from a sample of plots. If the resource is only partly visible, distance sampling methods can be used. If the resource is not visible, mark-encounter methods may be used. For all methods, appropriate designs can help extract the most information for survey effort. This course aims to cover these topics in a modular fashion, taught by some of the leaders in their respective fields.

Modules	Instructors
1. Plot-based spatial methods	Jay Ver Hoef
2. Distance sampling methods	Steve Buckland
3. Mark-Encounter population estimation methods	Gary White
4. Sampling designs	Don Stevens

See http://ties2013.com/ for more information.

NCAR/IMAGe workshop on Next Generation Climate Data Products

When: July 15-19, 2013
Where: NCAR, Boulder, Colorado, USA

This workshop will bring together statistical and data scientists with those modeling climate and climate impacts to share ideas on improving the creation of data products. Some specific goals of the workshop are to:

- Identify data products and analytical tools needed by the climate impact research communities.
- Explore and address challenges to creating high spatial- and temporal-resolution data products, with associated uncertainty.
- Facilitate collaboration among the statistics, climate modeling, and climate impact communities.
- Form working groups, where appropriate, on specific topics that will persist beyond the workshop.

See http://www2.image.ucar.edu/event/ngcdp13 for more information.

5. Regional Updates

Australia
Quanxi Shao

Professor Noel Cressie presented webinar with the Statistical Society of Australia Inc (SSAI) on "Hot Enough for You? Uncertainty Quantification for Regional Climate Projections in North America" on the 9th of November 2012.

Uncertainty is a big issue in many sciences and statistics plays a key role in dealing with the uncertainty. In this webinar, Noel provided an overview of climate models including the large-scale GCM (General Circulation Models) and smaller-scale RCM (Regional Climate Models), which are widely used in climatology and related sciences to model the change of climate variables. These physically based climate models are subject to various sources of uncertainty. In his presentation, Noel proposed a statistical framework based on Uncertainly Quantification through Bayesian statistical inference including Bayesian hierarchical spatial analysis of variance (ANOVA) models. His study showed that for all of North America showed a warming trend of usually more than 2 degrees C, or 3.6 degrees F. More information about this research and the research program can be found at this research at http://www.stat.osu.edu/~sses/index.html.

Impromptu "TIES reunion" at the Statistical Society of Canada Meeting in Guelph, ON, June, 2012: Ian MacNeill, Ayesha Ali, Sylvia Esterby and Abdel El-Sharaawi.

6. Recently or soon-to-be Published Books

"Floods in a Changing Climate: Extreme Precipitation" by Ramesh S. V. Teegavarapu (expected December 2012), Cambridge University Press.

"Statistical Analysis of Spatial and Spatio-Temporal Point Patterns", Third Edition, by Peter Diggle (expected June 2013), Chapman and Hall/CRC.

"Data Analysis and Statistics for Geography, Environmental Science, and Engineering" by Miguel F. Acevedo (expected December 2012), CRC Press.

"Spatial Statistics and Geostatistics" by Yongwan Chun (expected January 2013), Sage.

"Bayesian-hierarchical Space-Time Models for Significant Wave Height" by Erik Vanem (expected January 2013), Springer.

"Statistical Analysis of Climate Series: Analyzing, Plotting, Modeling, and Predicting with R" by Helmut Pruscha (2012), Springer.
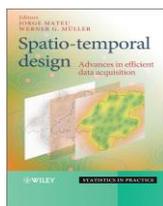
"Spatio-temporal Design: Advances in Efficient Data Acquisition" edited by Jorge Mateu and Werner G. Müller (expected January 2013), Wiley.
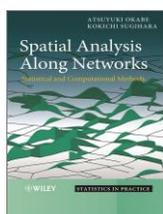
"Spatial Analysis Along Networks: Statistical and Computational Methods" by Atsuyuki Okabe and Kokichi Sugihara (2012), Wiley.

"Encyclopedia of Environmetrics, 2nd Edition, 6 Volume Set" edited by Abdel H. El-Shaarawi and Walter W. Piegorsch (2012), Wiley.
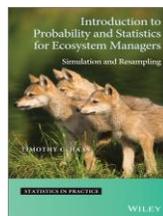
"Introduction to Probability and Statistics for Ecosystem Managers: Simulation and Resampling" by Timothy C. Haas (expected June, 2013), Wiley.
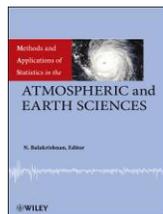
"Methods and Applications of Statistics in the Atmospheric and Earth Sciences" edited by N. Balakrishnan (2012), Wiley.

The Editors would like to encourage TIES members to volunteer for books' review and to bring new publications to their attention.

7. TIES Board of Directors

The elected members of the TIES Board of Directors are:

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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. For questions regarding membership and other benefits, please contact Jorge Mateu at secretary@environmetrics.org.

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: Ayesha Ali (aali@uoguelph.ca). As Editor, I would like to encourage TIES members to submit items for publication in the Newsletter. I would like to thank the members who responded to my call and contributed to this issue.

Newsletter Board

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