



IISA Newsletter

Winter 2013

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Message from Cyrus Mehta President, IISA

Dear IISA Member,

I am privileged to be the IISA President for the calendar year 2013 and I look forward to working with you for the good of our organization. Over the course of the year I will maintain an active communication through newsletters and will be very glad to hear and transmit your views on how we can strengthen IISA.

The IISA has just concluded a very successful conference in Chennai, celebrating "Statistics, Science and Society". Those of you who came to the conference will have fond memories of the high level of the sessions and workshops, the friendly atmosphere for sharing ideas and collaborating, and the great food. The active participation in the workshops and sessions by nearly 70 students, mostly from India, was especially gratifying. This was possible because of generous funding from various sources including the American Statistical Association, the National Science Foundation, the International Statistical Institute and the Indian Government. The students had the opportunity to interact directly with eminent statisticians from all over the world and to learn how statistics is actually practiced in the biomedical, public health, sample survey and many other areas.

Following up on this success I have an important request to make. For us to continue to have future conferences and workshops of this high caliber, it is crucial that we increase our membership both in India and in the United States. The larger our membership, the more resources we shall have to host future conferences and workshops,

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Mahabalipuram, Chennai, India

and the stronger will be our professional network. Conferences and workshops are doubly important in India where talented young students tend to gravitate to careers in engineering and computer sciences in preference to statistics. Perhaps this is because their course work does not expose students to real world applications or data. Were they to be exposed to statistics as it is really applied in the pharmaceutical industry, in the life sciences, in manufacturing, or in business, their eyes would be opened to the reality that statistics is an exciting, intellectually satisfying and lucrative profession where statisticians can have a major impact. The IISA can promote these important benefits of our profession through educational outreach. One of the highlights of the Chennai conference was the active participation by students in the workshops and in the subsequent discussions on statistical education. It became clear from these interactions that students are eager to apply what they learn in the classroom to real problems. More conferences, more workshops and more open discussions of this type would result in an increase in the supply of statisticians to fill the growing number of positions in industry.

We need IISA members to volunteer their time and knowledge by offering workshops in their areas of expertise and participating in conferences organized by IISA. The larger our membership the easier it will be to organize workshops, create interesting scientific programs, and increase participation in our conferences. For this reason we are launching this membership drive. Please contact your professional colleagues who have ties to India, or who are friends of India, and encourage them to become members of IISA. Equally important, encourage your students to become members. And if you are not already a lifetime member, please consider becoming one. The fee is extremely modest; \$300 in the USA and Rs. 1500 in India, for lifetime membership. Lifetime membership adds stability to the organization and saves you the inconvenience of having to remember to renew year after year. Instructions for enrolling either as a regular or lifetime member are available at www.intindstat.org

Best wishes for the New Year,
Cyrus Mehta (President, IISA)

"I would like to thank you and the committee of IISA conference held in Chennai, India 2013. My feeling, it is successful conference in statistics. I am very happy for attending this conference, it was useful in my presentation and many sessions."

Prof. Abd Allah Mohamed Abd Elfattah, Cairo University, Egypt

Message From Nandini Kannan IISA Past President

Dear IISA Executive Committee Members and friends,

I just returned from India after the IISA Conference. The conference was very well attended with over 280 participants including several students who attended the conference workshops. We had over 60 students who participated in the conference not just from Chennai but places like Kolhapur, colleges in Kerala, West Bengal, and Gujarat. The four conference workshops had over 70 attendees (in each workshop).

The feedback from the participants was really positive-technical sessions were very well attended and things ran smoothly. Overall, everyone seemed to be very pleased! The panel discussion generated quite a lot of feedback and many Indian participants expressed interest in having more regular events (workshops).

On a personal note, I would like to thank you for giving me the opportunity to serve as IISA President. I am truly grateful for your support and guidance over these past months.

Wishing all of you a very happy new year.

Warm Regards

Nandini

Cyrus Mehta, Nandini Kannan, HN Nagaraja



Message from Marie Davidian ASA President

I write on behalf of the Board of Directors of the American Statistical Association to congratulate and thank the IISA for launching the International Year of Statistics in fine form. Your conference, "Statistics, Science, and Society: New Challenges and Opportunities," held in Chennai, India, January 1-5, 2013, is a fitting start to Statistics 2013, especially given the rich history of statistics in India. Please extend my thanks and congratulations to the International Organizing Committee, chaired by Nandini Kannan, the Scientific Programme Committee, chaired by Jayant V. Deshpande, and the Local Organizing Committee, chaired by M. R. Srinivasan for their hard work in making this first conference of the International Year of Statistics such a great success.

I wish you, and all of the membership of IISA, a productive and prosperous International Year of Statistics.

Best regards,

Marie Davidian
2013 ASA President



Message from Sastry Pantula ASA Past President

I am elated to see that IISA took the lead to kick off the International Year of Statistics 2013 - a worldwide event celebrated by more than 1400 organizations! Statistical sciences are having an impeccable impact, though not always visible. The goals of the International Year of Statistics are to increase the public understanding of the impact of statistical sciences on all aspects of society, sciences, engineering and education; and, to nurture statistics as a profession among students at all levels.

This year, 2013, is the 300th anniversary of Bernoulli's *Ars Conjectandi*, the seminal work in probability; and, it is also the 250th anniversary of the public presentation of the Bayes Theorem. The International Year of Statistics 2013 gives us an opportunity to make statistical sciences more visible around the globe. There are many activities planned by various professional societies, universities, industries, businesses and government agencies. Conferences, workshops, statistics olympiads, competitions, 'Day of Data' events, public lectures, newspaper articles and editorials, developing resources for press, teachers and other professionals, cartoons with stories behind them, profiles of different types of careers in statistical sciences, and video competitions are some of the activities that are being organized in over 111 countries. There are plans for a "Future of Statistical Sciences" workshop in London in November, and an end of the year conference in Hyderabad at C.R. Rao Institute. I sincerely hope that all members of IISA celebrate the International Year of Statistics 2013 in their organizations and localities to make the impact of statistical sciences more visible and help train the future problem solvers!

Sastry Pantula giving the "Year of Statistics" session



"Kudos, Nandini, you and the whole team made the conference a huge success. It was a pleasure to be present at the conference which I felt was excellent both on academic and social grounds. Very well done, and it was particularly good to see such an overwhelming participation by the students in all the workshops."

N. Balakrishnan, McMaster University, Canada

Some Highlights from the IISA Conference in Chennai Jan 2-5, 2013

Heartfelt thanks to the International Organizing Committee, chaired by Nandini Kannan, the Scientific Program Committee, co-chaired by HN Nagraja, JV Deshpande and Debasis Kundu, and the Local Organizing Committee, chaired by MR Srinivasan for putting together a truly outstanding conference. Here are some highlights.

Four Plenary Sessions

On each of the four days the conference opened with an informative and entertaining plenary session led by an internationally recognized speaker. Each talk was completely different from all the others. Nilanjan Chatterjee of the National Cancer Institute opened day 1 with an outstanding survey of the potential of modern genome-wide association studies (GWAS), combined with high dimensional statistical models, to identify risk factors for diseases like Type 2 diabetes, coronary artery disease or prostate cancer. The plenary session on day 2, led by N Balakrishnan, dealt with the reliability of complex systems. In an exceptionally clear presentation, Professor Balakrishnan introduced the powerful concept of "signature" as an inherent underlying property of a reliability system and went on to describe how this property could simplify predicting the probability of system failure. Stephen Senn led the day 3 plenary with a scholarly account of the four great systems of statistical inference which in a two by two table could be depicted as Purpose: decision or inference and Probability Argument: direct or inverse. The plenary on day 4, led by Rajiv Karandikar, was again completely different but none the less fascinating. Professor Karandikar, a pure mathematician by training, described his foray into applied statistics for

predicting how many parliamentary seats a political party would win in the Indian elections. The talk was accompanied by a video clip showing a triumphant Dr. Karandikar announcing the winners on television on election night.

Workshops

More than 70 students (mostly from India) participated in four workshops on Clinical Trials, R-programming, Shape Restricted Regression and Personalized Medicine. Most had never been exposed to real-world problems involving statistical design, modeling and data analysis. This first exposure helped them realize that a career in statistics can be both lucrative and intellectually satisfying.



Workshop on Introduction to R

"The mandatory workshops for NSF funded students were very successful with skillful instructors and well-chosen topics."

Alexandra Kulinkina, Tufts University MS Candidate 2013, USA

Open Discussion on Statistical Outreach in India.

A special panel discussion to celebrate the International Year of Statistics was organized by Nandini Kannan. After an introductory speech by Sastry Pantula the session quickly transformed into an open discussion of the challenge of attracting young investigators and students to the statistics profession in India. Many students came forward to express their views on the limitations of the current system of statistical education in India. A common concern was the lack of practical training, exposure to real data, opportunities to consult with industry or the medical establishment, and inability to view statistics as an



Participants on their visit to Mahabalipuram

attractive career option. On the other hand many in the audience confirmed that there is a shortage of trained statisticians for industrial positions because students are increasingly drawn to the IT industry. As a result the role of statistician is filled by engineers and MBA's with limited statistical background. There was general agreement that in order to help reverse this trend the IISA should offer more workshops that emphasized the practical applications of statistics such as the ones that were offered at the conference. Steps are being taken by the IISA, in collaboration with the Indian Association for Statistics in Clinical Trials (IASCT), to organize such workshops every year, rather than wait until January 2016 when the next IISA conference will be held in India.

Other items of interest:

Blog by Srinivas Bhogle

on his presentation at the 2013 International Indian Statistical Association conference in Chennai, India.

<http://bademian.wordpress.com/2013/01/27/the-new-face/>

Need for Statisticians to Work Closely with Scientists

Dr Nilanjan Chatterjee in the Hindu, Jan 3, 2013

<http://www.thehindu.com/sci-tech/science/there-is-a-need-for-statisticians-to-work-closely-with-scientists/article4268015.ece>

Statisticians an Integral Part of Clinical Trials

Dr. Cyrus Mehta in the Hindu, Jan 10, 2013

<http://www.thehindu.com/sci-tech/statisticians-are-an-integral-part-of-clinical-trials/article4290659.ece>



Mahabalipuram, Chennai, India



Cyrus Mehta and Nandini Kannan at the award presentation

Honors and Awards

Two IISA Young Investigator Awards, co-sponsored by Statistical Methodology the IISA Journal published by Elsevier, were announced at the conference.

Theory and Methods



Awarded to Professor Sourav Chatterjee, Courant Institute of Mathematical Science, New York University.

Sourav Chatterjee is generally considered to be one of the best probabilist under 40 worldwide. He has introduced new methods for solving long-open problems. These include a new approach to Stein's method for large deviations, spin glasses, random graphs and nonlinear Schrödinger equations.

Application

Awarded to Professor Sudipto Bannerjee, Department of Biostatistics, University of Minnesota.



Sudipto Bannerjee is one of the top researchers worldwide in hierarchical modeling for complex spatial and spatiotemporally correlated datasets. His book, "Hierarchical Modeling and Analysis for Spatial Data" is regarded as one of the definitive works on Bayesian spatial statistics and is widely used as a resource by researchers and as a textbook by students.

IISA congratulates these two young investigators for their remarkable achievement and is proud to have them as members.

Best Student Papers

Two IISA Awards for the Best Student Papers presented at the conference were announced, one for Theory and Methods and one for Applications.

Theory and Methods

Awarded to Mr. Subhadeep Paul, University of Illinois, Urbana-Champaign, Illinois.
On Second Order Efficient Robust Inference.

Applications

Awarded to Mr. Suvra Pal, McMaster University, Canada.
EM Algorithm Based Likelihood Estimation for Some Cure Rate Models

Non-IISA Honors and Awards

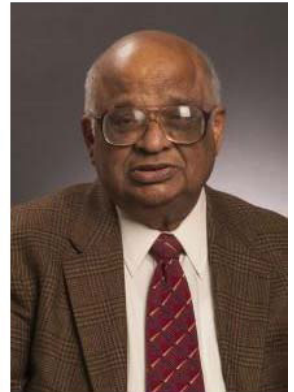
- Four IISA Members have been elected Fellows of the American Association for the Advancement of Science
 - Nitis Mukhopadhyay, Univ. of Conn.
 - Haikady N. Nagaraja, Ohio State Univ.
 - Ajit C. Tamhane, Northwestern Univ.
 - Ronald L. Wasserstein, American Statistical AssociationOur heartiest congratulations to all of them
- Prof. C.R. Rao honored by the President of India in Tirupathi, India in December, 2012.
- Prof. S. Rao Jammalamadaka, Department of Statistics and Applied Probability, University of California, Santa Barbara, USA has been awarded an Honorary Doctorate by the Faculty of Forest Sciences, the Swedish University of Agricultural Sciences, Sweden, in October 2012. The Award came with a Doctoral gold ring, a ceremonial hat, and a Diploma.
- Sujit Ghosh, North Carolina State Univ., USA has been elected President of the North Carolina Chapter of ASA in January 2013.

Obituary

Damaraju Raghavarao (1938-2013)

It is with profound sadness we report that Professor Damaraju Raghavarao, the Laura H. Carnell Professor of Statistics in the Fox School of Business, Temple University, died suddenly from cardiac arrest brought on by a flu on February 6, 2013.

Raghavarao was born on January 5, 1938, the youngest of four children to parents Mrs. Damaraju Lakhshminarasamma and Mr. Damaraju Venkatrayudu. Raghavarao's future career was foreshadowed at an early age, doing well in elementary and secondary school, especially in Mathematics. He completed his high school education in 1951, BA in Mathematics at Hindu College, Guntur in 1955 and MA in Mathematics from Nagpur University in 1956, where he received the prestigious Khan Bahadur H.M. Malek Gold Medal for highest marks. Raghavarao then continued studying briefly with Professor S.S. Shrikhande at Nagpur but when Shrikhande joined the University of North Carolina in 1958, he moved to Bombay University, completing his Ph.D. under the supervision of Professor M.C. Chakrabarti in 1961. Raghavarao remained at Bombay for the next 3 and a half years as a Research Fellow, where his interests focused on optimal non-orthogonal designs in the context of weighing designs and Partially Balanced Incomplete Block design association schemes. He then moved to Punjab Agricultural University as Associate Professor, where he had ample opportunity to apply much of the theory he had studied by carrying out field experiments on various crops. This work laid the foundation for the interest he developed in seeing the practical side of Statistics, an interest that remained with him for the rest of his life. Raghavarao remained at Punjab Agricultural University for 7 years, where he guided 11 students for either the M.A. or Ph.D. dissertation research, and published his landmark book *Constructions and Combinatorial Problems in Design of Experiments*, and wrote 17 research papers.



In 1972, Raghavarao left India, and joined the University of North Carolina, Chapel Hill as a Visiting Professor. He then held a summer research assignment at Cornell University in 1973 and spent the academic year 1973-74 at the University of Guelph (Canada). In 1974, he joined the Fox School of Business at Temple University as a full Professor where he served the school with great distinction for the next 39 years. Raghavarao expanded his areas of research interest beyond his original constructions and combinatorial problems. He branched into sample survey methods, application of block designs in randomized response, group testing experiments and partially balanced crossover designs. He developed a new class of designs useful in marketing, behavioral sciences and inter-cropping experiments. He published 8 books, more than 135 research papers and guided the Ph.D. dissertation research of 25 students. Raghavarao served as Chair of the Statistics Department on 2 separate 5 year terms, served as Director of the Data Analysis laboratory and arranged 4 conferences on Experimental Designs. For his research contributions, he was appointed the Laura H. Carnell Professor of Statistics in 1989 and awarded the Paul W. Eberman Research award in 1995. He was elected a Fellow of the Institute of Mathematical Statistics and a member of the International Statistical Institute in 1975, and a Fellow of the American Statistical Association in 1990. In 1999, his students and fellow academicians held a conference in honor of his 60th birthday. The conference was attended by leading researchers in experimental designs from all over the world. A special book titled *Recent Advances in Experimental Design and Related Topics* was published as a result of this conference. During his more than a half century of professional productivity, Raghavarao taught and influenced countless students through his undergraduate and graduate courses. He was unusually dedicated to his students, always ready to provide wise encouragement during their moments of academic doubt and insightful counseling during the inevitable brick walls that confront those pursuing a difficult research topic. Always a friend and support to his academic colleagues, always ready to stand in and do whatever it took for his department to meet its teaching and research commitments. But more than his qualities as an exceptional teacher and scholar, Raghavarao was a man of great humanity. No angry word escaped his lips. He was a devoted father to his 3 children, daughters Venkata Lakshmi and Sharada and son Venkatrayudu. No tribute to Raghavarao can be complete without mentioning his loving wife, Venkata Rathnam, who inspired Raghavarao's academic achievements and was an exceptional mother to their 3 children until her untimely death in 1989.

Raghavarao will be deeply missed not only for his scholarship and teaching, but also for the qualities that made him a man of such exceptional character and support to his family members, his colleagues and his students. We mourn his passing

Future Programs

Conferences in North America

2013 Joint Statistical Meetings

August 3-8, 2013

Palais des congrès de Montréal
Montréal, Québec, Canada,

Conference website:

<http://amstat.org/meetings/jsm/2013/index.cfm>

Contact e-mail address: meetings@amstat.org

The Fourth International Workshop in Sequential Methodologies (IWSM 2013)

July 18-21, 2013

Georgia Center for Continuing Education (<http://www.georgiacenter.uga.edu/uga-hotel/>),
University of Georgia in Athens
Georgia, USA

Conference website: <http://www.stat.uga.edu/IWSM2013>

Contact e-mail address: nitis.mukhopadhyay@uconn.edu; tn@uga.edu

2014 International Indian Statistical Association Conference

July 11-13, 2014

Riverside Convention Center
Riverside (<http://www.ucr.edu>)
California, USA

Preliminary conference website: <http://2014iisa.intindstat.org>

Contact e-mail address: 2014iisa@gmail.com

Conferences in India

Four day workshop "Statistics in Action"

organized by the Outreach Committee of
South Asia, International Statistical Institute and
International Indian Statistical Association

March 7-10, 2013

Nashik

Maharashtra, India

Conference website: <http://helpbiotech.blogspot.com/2013/01/statistics-in-action-four-day.html>

Contact e-mail address: goreanil@gmail.com;
madhavbk@gmail.com; anil.gore@cytel.com

International conference on "Role of Statistics in the advancement of Science and Technology"

organized by the Department of
Statistics, University of Pune on the occasion of
"Diamond Jubilee Year of the Department of
Statistics" & "The International Year of Statistics".

December 16-18, 2013

Pune

Maharashtra, India

Conference website: <http://stats.unipune.ac.in/brochure.pdf>

Contact e-mail address: stats.unipune@gmail.com

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