# INTERNATIONAL INDIAN STATISTICAL ASSOCIATION NEWSLETTER, FALL 2005

Dear IISA members,

Greetings! It is my pleasure to present the first newsletter of the year 2005-2006. This promises to be an exciting year. Due to the initiatives of our past President Professor N. Balakrishnan and the continued efforts of our present President Professor Hira Lal Koul, we have some new benefits for the IISA members mentioned in the President's note and in the Announcements section.

This newsletter includes a description of new membership dues, call for invited sessions for the IISA biannual conference in Cochin, India scheduled for January 2-5, 2007 and an update on C. R. Rao Academy for Advanced Sciences. The awards and honors section contains distinctions (though not exhaustive) achieved by several members of our association. The Chancy Life series features Professor Nitis Mukhopadhyay of University of Connecticut in this issue. We have also included the brochure for the Cochin conference and the first newsletter of C.R. Rao academy for advanced sciences with this newsletter. An updated (new dues) IISA membership form is also attached for your convenience

If you have any news or announcements that you would like to share with other IISA members, please send them to me directly at rsundara@uncc.edu or to Professor Paramjit Gill at paramjit.gill@ubc.ca.

I would like to thank the past newsletter editors Drs. Mousumi Banerjee and Anuradha Roy for their suggestions and advice. Last, but not the least I would like to thank Professors N. Balakrishnan, Paramjit Gill, S. R. Jammalamadaka and Hira Koul for their contributions to this newsletter.

Best Wishes Rajeshwari Sundaram (rsundara@uncc.edu) Newsletter Editor University of North Carolina at Charlotte

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## A note from the President, Professor Hira L. Koul



#### To IISA Members and beyond

To begin with I would like to thank the IISA members and the Nominating Committee for having given me an opportunity to serve as the president of the IISA for the year of 2005-2006. It is an honor and pleasure to serve in this capacity.

I would like to take this opportunity to let you know about some of the issues we have started to work on.

• Every year IISA submits a request to the JSM Programme Committee for having an invited session on some topic which is approved or not on the

competitive basis. It was felt by some members that IISA ought to have a permanent slot in JSMs for this purpose. I talked to Fritz Scheuren, the outgoing president of the ASA, in Minneapolis about this. He gave me the impression that it would be a good idea. I followed this conversation by sending a formal request for this about a month ago. So far have heard that the request will be going to an appropriate committee. I will be pursuing this till we get a definite response.

• We are also planning to have an electronic membership directory consisting of office and home (optional) addresses, besides e-mail addresses and telephone numbers. As you will see elsewhere in this newsletter this information is also needed for Elsevier so that the members can get certain benefits from Elsevier like a discount on the IISA journal *Statistical Methodology*. To help us in this endeavor, Rao Chaganty created an electronic form to be filled in by the members. This was already e-mailed to a large list of present and past members.

Please help us to complete this task by filling in the form and submitting it electronically. It takes two clicks and two minutes to complete this task. One click to open the form, then 1.5 minutes or less to fill in the form and finally one click to submit it. We will greatly appreciate your cooperation on this.

• New Membership Dues: The current IISA Executive Board has agreed to have the following membership dues structure:

\$25 US for 1 year; \$40 US for 2 years and \$50 US for 3 years.

Many of you intend to be members but due to time pressure do not get around to renewing it on time. That was one motivation to have this fee structure so that you have an incentive to become a member for at least 3 years, if not for life. If you have not renewed your membership, then **NOW** is the time to do it. Membership form is attached herewith.

More members we have stronger we will be in our negotiations with other groups.

In connection with the above request for a permanent slot for invited session in JSMs, I was asked how many members of IISA attend JSMs. It was implied larger this number better would be our argument for this request.

• The American Statistical Association asked us to write a one page article about IISA for the AMSTAT NEWS. I thank Srigopal Mohanty, Balakrishnan, Subir Ghosh, Sreenivas, Kirti Shah and Anand Vidhyashankar for helping me to complete this task. Please look for the write up about IISA in the February 2006 issue of the AMSTAT NEWS. In this connection if you any photo of any meeting please send it via e-mail to me ASAP. AMSTAT NEWS likes to publish pictures of activities of an organization.

Best wishes and regards Hira L. Koul (koul@stt.msu.edu) President, IISA Michigan State University

### IMPORTANT ANNOUNCEMENTS:

#### **♣** New Benefits for IISA Members:

Besides helping to promote the profession and foster the advancement of statistics in the Indian subcontinent, IISA members have the following benefits.

- IISA members are eligible for a 30% discount on all Elsevier books.
- IISA member has the opportunity to gain access to its journal STAMET at a reduced price of USD 75 for both print and electronic access, to be billed in advance by Elsevier.
- For a period of 2 years, Elsevier will test the "IISA Sponsor an Indian Library Scheme". In this new scheme, an IISA member can sponsor institutional access for an Indian library for an additional 50 USD. So for a total amount of USD 125, to be billed by Elsevier in advance, IISA members get both membership access for themselves, as well as institutional access for any Indian library of their choice.
- Elsevier will send promotional journal copies to all IISA members, and encourage them to subscribe to STAMET and the sponsoring scheme.

#### **&** Electronic Membership Directory:

IISA is in the process of forming an electronic members directory that will be available to all members. For this we need your utmost help and cooperation in collecting the information about your mailing addresses. This directory will be also used to secure members a discount on the IISA journal **Statistical Methodology**. The publisher of this journal has asked for this list for that purpose. The IISA Executive Board thus requests your prompt attention to this matter. Thanks to Prof Rao Chaganty, we have made it easy

for you. All you have to do is click on <a href="http://www.odu.edu/~rchagant/iisa">http://www.odu.edu/~rchagant/iisa</a> and fill in few entries and submit.

# ♣ The C.R. Rao Advanced Institute of Mathematics, Statistics and Computer Science, Hyderabad, India

The C.R. Rao Advanced Institute of Mathematics, Statistics and Computer Science, dedicated to the development of the three basic disciplines which play an important part in the advancement of science, was inaugurated on February 29, 2004 in Hyderabad, India, with a symposium on "Challenges in Mathematical and Computer Sciences". The mission of the Institute is to promote advanced study and basic and interdisciplinary research in mathematics, statistics, and computer science for the advancement of science and applications in industry, business, and socio-economic development and disseminate the knowledge through academic activities, consultancy services, and a museum. The Institute, that is temporarily housed in Osmania University, Hyderabad, will sponsor a two-day workshop on Hotspot Geoinformatics on December 24 and 25, 2005 in Hyderabad. The construction of the Institute building is scheduled for early 2006. The International Fund Raising Committee is intensifying efforts to raise funds for the United States. For further information, please http://www.stat.psu.edu/~crrao/. Also, their Newsletter is attached to this one for current information regarding the Institute.

# ♣ IISA Sponsored Session at Joint Statistical Meeting (Seattle, Washington, USA) 2006:

Please mark your calendar for the IISA session at JSM, 2006. We are happy to announce that the invited session has been finalized and promises to be an interesting session on "Statistical methodology for environmental applications". This session is organized and chaired by the Professor Soumendra N. Lahiri, Iowa State University, IISA Program Chair. It is scheduled for 8/10/2006, from 8:30 AM to 10:20 AM. The tentative list of speakers include Noel Cressie, Michael Stein, Jim Zidek, Hira Koul and Marc Genton. For any further question, please email snlahiri@iastate.edu.

#### **A** Call For Invited Papers Session Proposals for the IISA Conference 2007:

The next IISA biannual conference will be in Cochin in January 2007. The members of IISA are hereby invited to submit written proposals for Invited Papers Sessions for the conference. Please include a short description of the topic and a list of three or four speakers. Please consult with the speakers first so that they are committed to attend the conference. Also, note that IISA and the co-sponsors are not in a position to fund the invited papers sessions in anyway. The organizing committee will take a decision with respect to selecting the invited papers sessions. Please submit your proposals to Professor S. Rao Jammalmadka (USA) (jammalam@pstat.ucsb.edu) or to Professor P. G. Sankaran

(India) sankaranpg@yahoo.com by January 15, 2006. For further information, please see the attached newsletter or go to http://www.stat.osu.edu/~hnn/IISA.html.

#### **♣** IISA Workshop for Ministry of Defense

At the invitation of and fully founded by PXE, DRDO, Ministry of Defense, Government of India, IISA (India Chapter) conducted a Workshop on Statistical Reliability in Defense Applications at Chandipur, Orissa during September 28-30, 2005. The faculty consisted of Professors S. P. Mukherjee (Ex-President, IISA-India Chapter and President, IAPQR), Arun K. Adhikary (ISI), S. K. Majumdar (Dean, ISI), Somesh Kumar (IIT), C. Pal (Kalyani University) and Ashis Sengupta (President, IISA-India Chapter). The selected participants came from six different centers of DRDO situated at various parts of India.

# ♣ Forum on Geoinformatics of Hotspot Detection and Prioritization for Monitoring, Etiology, Early Warning and Management Around the World. Course Instructor and Workshop Leader: Dr G. P. Patil

You are invited to participate in the geoinformatics forum scheduled in various places and at various times between October 2005 and May 2006 when the final event occurs at the forthcoming Annual Digital Government Research Conference being held in San Diego, CA, USA. For information on short courses and workshops, please contact Professor G. P. Patil at gpp@stat.psu.edu, telephone: 814-865-9442 or go to the webpage http://www.stat.psu.edu/hotspots.

The forum emphasis is on geoinformatics of hotspot detection and prioritization in a wide variety of subject areas and critical issues confronting agencies, academia, and industry. You are invited to participate in a manner most productive for your purposes, whether presentation of a paper with live case studies, attendance in a timely short course, or both. You will have the benefit of a veteran cross disciplinary scientist as course instructor, workshop leader, and editor of resulting publications. And, of course, an opportunity to strengthen, advance, and accelerate your in-house research and work plan involving geoinformatics and hotspot dynamics.

# Invitation to National Conference in honor of Professor V. P. Godambe, Nagpur, India, January 1-2, 2006.

The department of Statistics and Institute of Science, Nagpur, India is holding a conference on January 1-2, 2006 on Recent Trends in Estimation and Optimization: Theory and Applications. The conference recognizes jointly the 50<sup>th</sup> anniversary of the establishment of the department of Statistics in the Institute of Science, and of Dsitinguished Professor Emeritus V. P. Godambe's famous theorem of 1955 (JRSSB, 17, 269-278) on the foundations of survey sampling. The conference intends to provide a platform for research workers in the field of both theoretical and applied Statistics. It will

include both invited talks by experts in various fields and also paper presentation sessions. We expect the delegates at the conference will cover the recent developments that are taking place in various fields like: Statistical Inference, Theory of Distributions, Stochastic Processes, Bayesian Statistics, Bioinformatics and Industrial Statistics and other fields. The conference will provide a good opportunity to young as well as experienced researchers from all over India and Vidarbha region in particular, to interact with each other and exchange ideas on the latest developments in Statistics. Information regarding the conference can be obtained from Dr. M. T. Bharambe by email to bharambemt@sify.com

## AWARDS AND HONORS:

#### Professor Mohan Chaudhry receives distinguished awards

Dr. Mohan Chaudhry, Professor with the Department of Mathematics and Computer Scie nce at the Royal Military College of Canada (RMC) in Kingston, Ont., has recently been awarded the Service Award from the Canadian Operational Research Society (CORS), "In appreciation from many years of dedicated and generous service to the Society." He was also recognized by the Korean Federation of Science and Technology Societies for the best paper award in 2005 for his paper "An invariance relation and a unified method to derive stationary queue length distributions" (Operations Research 52, pp. 756-764). The paper presents theoretical results that assist planners in deciding staffing requirement for service providers in the public and private sectors. This is the second major award for him from CORS. In 2003, he was awarded the Award of Merit for his significant contributions to queuing theory.

"Dr.Chaudhry was the first person to be invited as the Distinguished Professor by the Department of Industrial Engineering, Korea Advanced Institute of Science and Technology (KAIST) in South Korea where he gave a series of lectures to advanced PhD students" said Brigadier General Jean Leclerc, Commandant of RMC. "His work is being carried out under the operation between the Industrial Engineering and Management Research Institute of KAIST and RMC."

#### Professor Probal Chaudhuri receives distinguished awards

Professor Probal Chaudhuri of Indian Statistical Institute, Kolkata has been selected for the National Award in Statistics in honor of Prof. C. R. Rao for the year 2004-2005 for his outstanding contribution to the field of Statistics. This is one of the two National awards instituted by the Ministry of Statistics and Programme Implementation: one given to senior Statistician in the memory of Prof. P. V. Sukhatme and this one given to young statistician in honor of Prof. C. R. Rao. Professor Chaudhuri has also been elected as Institute of Mathematical Statistics Fellow for contributions to nonparametric quantile estimation, multivariate location estimation, the scale-space approach to nonparametric smoothing and classification.

#### A Past President IISA Prof. Dipak K. Dey Recognized at University of Connecticut

Dipak K. Dey, Professor and Head at the Department of Statistics, University of Connecticut, has been awarded 2005 Faculty Excellence in Research (Sciences) from the Alumni Association of the University of Connecticut. Professor Dey is both nationally and internationally known and respected for his research contributions in the areas of Statistical Decision Theory and Bayesian Statistics. He has been with the University of Connecticut since 1985. He was made full professor in 1990 and Department Head in 1997. He has supervised 16 PhD students and is currently working with 4 more. His stature in the statistical profession is indicated by his election to Fellowship in both the American Statistical Association and the Institute of Mathematical Statistics. He was the past president of the International Indian Statistical Association.

Dipak has served as Editor of the IMS Bulletin and Associate Editor of JASA, Theory and Methods section and several other journals and has published more than 150 research papers. He has developed collaborative research programs with colleagues from various other departments, universities and organizations. At the University of Connecticut, he was involved in the formation of the Center for Public Health and Health Policy, Center for Internet Data and Research Intelligence Services and Teachers for New Era at the Neag School of Education. In 2004, Dipak received the Research Excellence Award from the American Association of the University Professors at the University of Connecticut

#### ♣ Professor J. N. K. Rao honored with Waksberg Award

Professor J. N. K. Rao received the 2005 Waksberg Award for outstanding contributions in the theory and practice of survey methodology. He is the first survey statistician of Indian origin to receive this prestigious award. Professor Rao is also listed as ISI Highly Cited Researcher. His professional achievements and honors are listed on his biography page at http://www.isihighlycited.com. He is a Lifetime Professor Emeritus and Distinguished Research Professor at Carleton University, Ottawa, Canada.

#### ♣ Felicitations to ASA Fellows (2005):

*Professor Hariharan K Iyer*, Colorado State University for outstanding teaching; for dissemination of statistical knowledge through workshops and conferences; for consulting and collaborative research on measurement, standards, and monitoring; for research on design, calibration, and interval estimation.

*Professor Bani Mallick*, Texas A&M University for contributions to Bayesian modeling with applications to different scientific fields, for leadership in promoting statistical sciences, and for service to the profession.

*Professor Madhuri Mulekar*, University of South Alabama for innovative contributions to undergraduate statistical education and developing undergraduate research programs; for sustained high-quality contributions to the Advanced Placement Statistics program; and for service to the profession.

*Dr. Shyamal D. Peddada*, Biostatistician, National Institute of Environmental Health Sciences for broadening the scope of applications in statistics through excellence in consulting and innovative methodological research in order-restricted inference, tracking of Arctic sea ice and gene-expression microarrays.

# My Chancy Life as a Statistician: Professor Nitis Mukhopadhyay



#### **Early Life:**

I was born toward the end of 1950 in one of the poorest ghetto areas in Salkia (Howrah District, India). Salkia used to be (and still is) the industrial suburb of Calcutta. The river Ganges separates Calcutta's glitters from Howrah's slum-dwellers.

During the pre-independence era, my parents were freedom fighters and followers of Mahatma Gandhi. They hailed from Dhaka, the capital of Bangladesh. They were both jailed a number of times. In the wake of independence and in the midst of riots in

August 1947, my parents arrived in Calcutta with four children as refugees. They had no possessions, no money, no jobs or anywhere to go to.

I came along as the sixth child in the family with 2 wonderful brothers and 3 sisters. By that time, the family had settled in a room in the middle of the slums in Howrah. Fourteen rather large families lived in fourteen single rooms, all under one roof, with one out-house and without electricity or running water!

Local merchants and families routinely subsidized our existence out of respect. Some generously gave food and others gave clothes. Luckily, my father was a respected "mathematician". But, on the down side, he never held a job because he did not want to "serve" anyone.

In our rough neighborhood, I saw gambling, death, killing, desperation, and suicides since the time I could comprehend anything. Drugs, alcohol, and killer diseases such as cholera and typhoid were wiping out families in the shadowy suburb, only one-half hour away from the heartbeat of Calcutta. The fact that the family survived was too *chancy* at best.

My father started teaching me Euclid's geometry on the black cement floor of our room when I was probably four or five! Everything was done from memory. There was no paper or book or other frills. There was no drum-roll, ever!

My mother took care of us and kept the family together and taught us anything practical that we needed for our survival. She was our security. She was real, realistic, and strong - an iron-lady. She had to be.

#### **Schooling:**

I entered school in grade 7 with full scholarship. Mr. Gobinda B. Chowdhury was an exceptional math teacher who influenced me. Many teachers taught me privately on their own time and in their houses for free. I remain eternally grateful to all of them. Local family-friends continued supporting us with food, clothes, books, and paper to write on for a long time. They were kind enough to watch over us. Within two or three years, we moved outside the slums and went to live in a real apartment with two rooms, electricity, and running water. That was like going to moon! *Chancy*? Of course, it was.

#### **College:**

I did well in high school exams in 1967. My father expected me to study chemistry in college, but I did not rank high enough to enter the chemistry honors stream in Presidency College, Calcutta. I was selected for the mathematics honors program in this prestigious college though and my tuition was waived. I took physics and chemistry as electives, and soon enough I became convinced that I was not cut for chemistry anyway. Lucky me! Again, talk about *chance*.

Any way, at 16, I went to the Presidency College to study mathematics (honors) in the fall of 1967. I had great teachers including Professor Biren Bose, the Head of the Department of Mathematics, who taught real analyses and number theory. I realized that I was falling in love with number theory. I worked very hard and did really well. I started dreaming of pure mathematics as a career.

Incidentally, when I entered Presidency College, it was the infamous Naxalite period in West Bengal. Our college was the target of everything that was politically against the Naxalite doctrine. Presidency College was disrupted on a daily basis perhaps because it was seen as the shrine of power and the riches.

I was advised by my parents, elder brother (ACM), elder sister (SB) and her husband (KB) to get away from Calcutta University as soon as possible. I sat in the entrance exams for the Indian Statistical Institute (ISI), Calcutta, in the first half of 1970. I felt lucky that I was selected for the M.Stat degree program at ISI. Some purely social covariates (e.g., the political atmosphere in Calcutta at the time) led me to a career path in statistics. That was surely *chancy* for me.

#### **Indian Statistical Institute-Calcutta:**

In the fall of 1970, I enrolled in the M.Stat. degree program. I immediately came face-to-face with fantastic teachers and thinkers, for example, Professors D. Basu, S. K. Mitra, J. Roy, E. M. Paul and others. I slowly came to know Professors J. K. Ghosh (JKG), Malay Ghosh (MG), B. P. Adhikary, A. Maitra, T. J. Rao, and others.

ISI's academic environment allowed me the freedom to grow. In 1972, I received the M.Stat degree with advanced probability and mathematical statistics (APMS) as specialization. Then, I was selected as a research scholar to work toward a Ph.D. degree.

Some senior research scholars including M. B. Rao (MB), K. P. S. B. Rao (Kooparti), and G. Jogesh Babu (GJB) taught us some courses. They were wonderful. Professor Bimal K. Sinha (BKS) joined ISI upon returning from Montreal. He has been like a big brother to me ever since.

#### **Initiation in Research:**

Professor Malay Ghosh (MG) joined ISI's faculty almost at the same time when I entered ISI's M.Stat. degree program. MG taught us inference and Wald's SPRT-related theory. I was floored by his mathematical swiftness. I wanted to work under him as a Ph.D. student.

In a seminar course, either MB or Kooparti assigned a paper from a journal. In that particular bound journal, by *chance*, I saw an interesting paper on convergence of the sums of maxima. I started thinking about sums of minima! I approached MG. GJB was working on probabilistic number theory and he became interested. Ultimately, MG, GJB, and I wrote a joint paper that appeared in *ZW* (1975). That was a *chancy* exposure to paper writing, but it taught me that probably I could do 'research'!

#### **Gaining Confidence in Pursuits of Research:**

Another BIG *chancy* thing happened soon after. I used to visit some of my research scholar friends sharing an office. One day, I saw a big pile of journals there – *Annals*, *Sankhya*, and others. I picked up *AMS* (1966) and started thumbing through the big fat volume. Two papers caught my attention, both written by Norman Starr who referred to a path-breaking paper of Herb Robbins (1959) on sequential estimation. Robbins's piece was filled with ideas from start to finish. I read it a number of times before I approached MG. I immediately started working in the area and then there was no stopping! MG helped me in all respects through and through. MG's kindness and constant encouragement meant everything. I was his first Ph.D. student and I still feel ecstatic about that. Around 1973-1974, BKS and I got together and wrote a number of important papers on multivariate sequential estimation.

Within a year of completing the Masters degree, I was feeling rather hopeful that I had several types of research papers to show for a Ph.D. degree from ISI. Right around that time, approximately in the summer of 1974, MG left for Iowa State. I submitted my Ph.D. thesis in June 1975 at ISI, Calcutta. In March 1976, I finished all requirements. During 1977 ISI convocation, I received my Ph.D. degree in absentia.

#### **More Research:**

Since that time, I have been essentially hooked upon doing both research and practice in sequential methodologies. My wonderful Ph.D. students have been a big part of my life. They are: W. S. Chou (1982), H. I. Hamdy (1983), G. F. Hilton (1984), J. S. Al-Mousawi (1984), G. Vik (1984), M. E. Ekwo (1984), A. D. Abid (1985) from Oklahoma State University and S. Liberman (1987), S. Darmanto (1987), J. J. Judge (1988), D. S. Miller (1989), M. H. Moreno (1989), T. K. S. Solanky (1990), S. Chattopadhyay (1993), S. Datta (1995), W. T. Duggan (1999), and G. Cicconetti (2002) from the University of Connecticut.

I had written a Marcel Dekker book (1994) jointly with T. K. S. Solanky on *Selection and Ranking*. I edited a Marcel Dekker volume (2004) jointly with S. Datta and S. Chattopadhyay on *Applied Sequential Methodologies*.

I must mention two other dear colleagues: I came to know Professor P. K. Sen (PKS) initially via MG in 1972 or 1973 in the 3<sup>rd</sup> floor hallway of ISI. MG was the first or second Ph.D. student of PKS from UNC-Chapel Hill. PKS has been a steadfast mentor to me since then. I was so lucky that I could approach MG, JKG, BKS, and PKS at any time. MG, PKS, and I together wrote a Wiley book (1997) on *Sequential Estimation*. That was a privilege for me.

Another colleague I want to especially mention is Professor Basil de Silva from Melbourne, Australia. Basil and I go long way back and we have done joint collaborative research on a number of occasions. We still do. Together, Basil and I have edited the refereed proceedings of the Sri Lankan International Statistical Conference, December 28-30, 2004.

#### **Jobs and Other Colleagues:**

Since the time I was about to enter the professional life after finishing a Ph.D. degree, many colleagues and teachers have helped me in numerous ways. I have already mentioned some of them But, I must mention couple of other people who have helped in shaping my career: Professors A. P. Basu, Bon Berry, S. DasGupta, Ed Dudewicz, J. Leroy Folks, Kanti Mardia, G. Ramakrishna, Gordie Simons, Bikas K. Sinha, Milton Sobel, and Shelley Zacks. I apologize in advance for omissions.

#### **Personal Thoughts:**

I have been married nearly 27 years to a beautiful lady whom I met, by pure *chance*, in Melbourne, Australia. We feel blessed having two grown sons. They have kept me going. We have all gone places, both far and near.

Music is a big part of our family. Whenever we get an opportunity, we do musical programs here and there. We have done so in Albany, Boston, Baltimore, Oxford (Ohio), Melbourne (Australia), and in other places including all over Connecticut.

Knowing where my life began and where I am right now, many things seem unreal to me. At every turn, *chance* had a big role to play, and in every such turn, I could have become someone very different from a statistician that I am. However, I would not change a thing even if I could. I love who I am, what I do, and I thank my lucky stars everyday.

#### **Acknowledgement:**

I thank Professor Raji Sundaram, the IISA Newsletter Editor, for the honor and opportunity to walk down memory lane.

## Obituary: Professor Harshinder Singh

Remembering Harshinder Singh (1951-2005) by Jayant Deshpande

It is a sad occasion to write a posthumous appreciation of a younger colleague and friend. Harshinder Singh was both of these and much more to me and to many others. I vividly remember the first time I met him in the first week of July 1972. I had just joined the faculty of the Panjab University at Chandigarh and he had just topped in the MSc examination in Statistics of the University. He had already made up his mind to enter the research and teaching career. In his years (1970-1972) as an MSc student, his only teacher who could guide research was Dr A.B.Buche. Although a statistician to begin with, Dr Buche had moved to Functional Analysis, so Harshinder too started to work in it. He did good work for his PhD in functional equations and published it in reputed journals.

Simultaneously he kept in touch with statistical methodology. He participated in all the intra and inter university seminars and workshops, which we organized in Statistics. As an Instructor and Lecturer in Statistics he taught many courses in Probability and Inference to the MSc students. By and by he started looking at research problems in Statistics, beginning with characterization problems that were only a short step away from functional equations. By the mid eighties he was wholeheartedly in Statistical research. There is no doubt that his rigorous training and early exposure to mathematical analysis added strength to him in his new work.

One of the interests of the Statistics group at Chandigarh was Reliability Theory, particularly partial orders of probability distributions describing the ageing phenomena. Harshinder brought many insights to this work. I was privileged to have collaborated with him in publishing about half a dozen papers in this area. I left Chandigarh in 1984 but our collaboration continued over a further decade or so. A serendipitous event that occurred and broadened Harshinder's horizon in a big way was the visit of Prof Prem Puri to the Statistics Department at Chandigarh. They took to each other immediately and very happily started cooperative work. They spent time together in research at Chandigarh, ISI, Delhi as well at Purdue that resulted in two oft-quoted research papers in optimizing techniques. This fruitful and happy collaboration was cut short by the sudden and untimely death of Prof Puri. Absorbing this big shock, Harshinder went on to contribute significantly to the areas of Reliability Theory and Order Restricted Inference. He guided several MPhil and PhD students at Chandigarh in these areas.

Harshinder had a noticeable presence on the Panjab University campus. He deserved and received comparatively quick promotions. Successive administrations entrusted him with varied and important responsibilities such as Warden of a hostel and then as Dean of Student Affairs, in charge of the all the hostels and welfare activities for the students including foreign students. He headed the task force set up for networking the entire campus for computers and internet connectivity. He was always fearless and carried all the tasks without favour or bias. An early incident that took place while he was among the junior-most faculty members, is worth recalling. During a University Examination he was the invigilator and caught a couple of students copying from each other. He threw them out of the examination. Later other students came up to him and told him that

affected guys were 'influential' and were planning some sort of physical revenge in the market yard in the evening. Harshinder dismissed all the concern and just remarked; 'maybe they should know that I too carry my kirpan (the small dagger carried by all the Sikhs as a religious symbol) all the time'. Of course nothing came out of the threats made by the students caught copying.

In 1984 he took over as the Head of the Department when my turn was over. Soon I left for Pune. Subhash Kochar, another homegrown and upcoming star of the Department also left for ISI, Delhi soon afterwards. From about 1990 Harshinder started making extended trips to the USA and other countries. He established deep and enduring research collaborations with Alan Sampson, Phil Boland, Peter Kvam and others. Till the end of the nineties he was active both on the Indian scene and outside. My joint research with him continued till the mid nineties.

While in India he was a very useful and cooperative colleague on the professional scene. He was a member of the Statistics panel of the University Grants Commission; a member of the Review Committee whose report led to the establishment of the Centre for Advanced Studies in Statistics at the University of Pune in 1998, Chief Editor of the Journal of the Indian Society of Probability and Statistics and a member of the Governing Council of the Indian Statistical Association and so on. His own efforts led to the grant of UGC Special Assistance to the Department at Chandigarh. He was always an effective member of any committee on which he worked as he assiduously did his homework in advance.

But by the end of the nineties he was gravitating to the USA. He established his household consisting of his wife Gurmeet and son Manpreet at Pittsburgh. He held visiting Professorships at the University of Pittsburgh and the University of West Virginia at Morgantown in succession. At UWV he extended his interest in order restricted inference to models for random variables representing angles and directions. He collaborated with molecular chemists in a very significant breakthrough in providing probabilistic laws for the angles between the axes of various atoms within a molecular structure, subject to restrictions of intra-molecular forces of attraction. Had he been granted a few more years by the Almighty, he would have made path-breaking contributions in this and other areas.

Harshinder had the rare ability to effortlessly move from one area of research to another. He always quickly grasped the central paradigms of any statistical theory and could bring his insights to move towards improvements. Blessed with a keen inquiring mind, capacity for hard work and the instinct for calling a spade a spade, on top of an extremely friendly disposition, he was a valued colleague collaborator and friend.

He visited India in January 2005 and discussed with old friends such as Gobind Mehta at Chandigarh and Subhash Kochar at Delhi his plans to return to India and renew activity at Panjab University. But destiny had willed otherwise and he passed away at Pittsburgh during sleep in the early hours of February 4, 2005. It is unimaginable that he is not among us to provide help, encouragement and to solve problems. It is tragic

enough when someone passes on in the fullness of years after relinquishing worldly responsibilities and enjoying retired life for many years. It is a vastly greater tragedy when someone like Harshinder Singh passes away at the prime of his powers and with many unfulfilled promises. I pray to the Almighty to give strength to his family and all his friends to bear this loss.

#### Advertisement

Tenure-Track Assistant Professor Position in Statistics at University of New Mexico

# THE UNIVERSITY OF NEW MEXICO Albuquerque, New Mexico Department of Mathematics and Statistics

Subject to administrative and budgetary approval, the Department anticipates a tenure-track Assistant Professor position in Statistics beginning fall of 2006. Exceptional senior candidates may also be considered.

Preference will be given to candidates with research interests that are motivated by scientific problems. Minimal qualifications include a Ph.D. in Statistics or Biostatistics. Selection criteria include research potential and accomplishments, potential contributions to the educational and service goals of the statistics program, potential interactions with other Statistics faculty, and interest in strengthening our inter-disciplinary contacts at the university.

The Department has 8 faculty in statistics, offers B.S., M.S., and Ph. D. degrees in Statistics, and also administers the Statistics Clinic. It has a large graduate program with over 50 students. The university is in close proximity to Sandia National Laboratories and Los Alamos National Laboratory. Many faculty members have research ties with these and other institutions. The university has a major initiative in nanoscience. Complete information about the job description is available at http://stat.unm.edu.

Applicants should send Curriculum Vitae, a statement of research and teaching interests, and have three letters of recommendation sent to:

Ronald Christensen Chair, Statistics Search Committee Department of Mathematics and Statistics The University of New Mexico Albuquerque, NM 87131

To assure full consideration, completed applications including letters of recommendation must be received by December 1, 2005; however, the committee will review applications past that date until the position is filled. Candidates providing an electronic mail address will be informed when their application is complete. The University of New Mexico is an Equal Opportunity and Affirmative action Employer and Educator.

# International Indian Statistical Association (IISA)

# Joint Statistical Meeting and International Conference

on

### Statistics, Probability and Related Areas

January 2-5, 2007

Organized by

# Department of Statistics Cochin University of Science and Technology Cochin 682 022, INDIA

Co-sponsored by

Bayesian Society of India
Indian Society of Probability and Statistics
Indian Statistical Association
Calcutta Statistical Association
Indian Association for Productivity, Quality and Reliability

The objective of this conference is to assess recent developments in the fields of Statistics and Probability and to discuss future directions in terms of theory, practice and education. One of the primary goals is to foster international collaboration in these and related areas through the exchange of ideas and experiences and to enhance other technology transfer activities. Reforms needed in statistical education and training in order to meet the changing needs of the industry and government will receive special attention. The program of the conference will include several invited sessions, contributed sessions as well as workshops. English is the official language for all conference materials and presentations. The conference will be held at **Hotel Renaissance** in **Cochin.** 

Conference information through web:

http://www.stat.ohio-state.edu/~hnn/IISAConf2007.pdf

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#### **Topics:**

The Conference will feature topics including

- Applied Probability
- Bayes Inference
- Bio-statistics and Bio-informatics
- Data Mining
- Design of Experiments
- Directional Data Analysis
- Distribution Theory
- Econometrics
- Mathematical Finance
- Multivariate Analysis
- Nonparametric Inference
- Operations Research
- Probability Theory
- Statistical Education
- Statistical Quality Control and Reliability
- Stochastic Processes
- Survey Sampling
- Survival Analysis
- Time Series Analysis

#### Workshop:

On January 6, 2007, at the end of the conference we plan to organize a half-day workshop on a topic of current research interest, Mathematical Finance. This workshop will introduce new researchers to the field and will bring them up-to-date on current research in the area. Separate registration is needed for the workshop.

#### **Special Session:**

A special session will be organized to honour Prof.N.Unnikrishnan Nair, who is the founder professor of the Department of Statistics, Cochin University of Science and Technology. His areas of interest include Distribution Theory, Statistical Inference,

Reliability Analysis and Demography. He has more than 100 publications in international journals in addition to 5 books. He is the editor of the journal 'Statistical Methods' published from the Department of Statistics, Cochin University of Science and Technology. He retired as the Vice Chancellor of the Cochin University of Science and Technology in 2004.

#### **Registration:**

All participants are encouraged to pre-register to secure a guaranteed place at the Conference. The Registration Fee includes four lunches, conference banquets, coffee breaks and conference material. The registration fee is US\$125 (till August 31, 2006; US\$150 thereafter) for outside Indian participants. For the Indian participants the fee is Rs. 2000 till August 31, 2006 and Rs.2500 thereafter. Students need to pay only Rs 1000 as registration fee. The Registration Fee for the workshop is Rs.500.

#### Abstract Format:

Please observe the following instructions while preparing the abstract.

**Title:** Limited to 200 characters in length. Use initial caps in the title; do not use all caps.

**Author(s):** Type all authors' names with initial caps. Include affiliations for all authors using tags if necessary.

**Address:** Contact/Presenting authors' names and mailing address and e-mail addresses.

**Keywords and Phrases:** Maximum 5 Key words or Phrases.

**Abstract Body:** Limited to 200 words.

**Equipment Needs:** Indicate your Audio-Visual equipment needs at the end of the abstract.

Deadline for the Receipt of Abstracts is August 31, 2006.

For further details, please contact:

Dr.P.G.Sankaran (Coordinator)

**Department of Statistics** 

**Cochin University of Science and Technology** 

Cochin 682 022, Kerala, INDIA

Phone: 91-484-2575893 (Office)

91-484-2741693 (Residence) e-mail: sankaranpg@yahoo.com

pgsankaran@cusat.ac.in



### C.R.Rao Advanced Institute of Mathematics, Statistics and Computer Science

Hyderabad, Andhra Pradesh, India

Vol. 1 **Newsletter October 2005** No. 1

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S.Rao Jammalamadaka o@pstat.ucsb.edu Nandini Kannan Teiaswini Rao G.M.Naidu naidug@uww.edu

#### Mission

To promote advanced study and basic and interdisciplinary research in mathematics, statistics, and computer science for the advancement of science and applications in industry, business, and socio-economic development and disseminate the knowledge through academic activities, consultancy services, and a museum.

#### Initiation of the Institute

At the convocation address delivered at Osmania University in December 2000, Prof. C.R. Rao, one of the world leaders in Statistical Science for the past six decades, stated that the rank of India in basic research among all the countries is about 14 to 15 despite India having the third largest pool of scientists and technologists in the world. He highlighted the data compiled by S. Arunachalam of M.S. Swaminathan Research Institute that, of the 17,308 papers published from India, between 1988 and 1998, 45% were from institutions in Kolkata, Mumbai, New Delhi, Chennai and Bangalore. The contributions from other cities in India varied from near 0-4%. The higher percentage of research papers from certain cities was attributed to the existence of advanced institutes for research like Indian Statistical Institute in Kolkata, the Tata Institute of Fundamental Research in Mumbai, Institute of Mathematical Sciences in Chennai and similar organizations in Delhi and Bangalore. Prof. Rao suggested that Hyderabad would be an ideal location for the Advanced Institute for Mathematics, Statistics and Computer Science (AIMSCS) as the city had already acquired the status of a technological capital of India, had an excellent infrastructure and a number of research and educational institutions, and with such an Institute, could emerge as the science capital of India.

In response to the suggestion of Prof. C.R. Rao, Dr. D.C. Reddy, the then Vice-Chancellor of Osmania University, in cooperation with the Andhra Government, announced the establishment of AIMSCS on the campus of Osmania University and named it after Prof. Rao as it was his suggestion. The Andhra Pradesh State Council of Higher Education, Andhra Pradesh, provided seed funds of US\$114,000, and Osmania University provided five acres of land on the campus. The Institute was inaugurated on February 29, 2004 with temporary office space in Osmania University.

#### Structure of the Institute

The Institute is registered under the Andhra Pradesh Societies Registration Act 2001, India. The registered office is located at 8-3-767, 206 Royal Pavilion, Hyderabad, India. The Institute will be an autonomous body with all the powers that exist in similar institutes of advanced study in India.

The constitution of the Institute was formalized during Summer 2004 and is available at the website.

The Institute has a registered Society in India that is coordinating the Institute activities in India. The members of the Society include D.C. Reddy, former Vice-Chancellor of Osmania University (president), D. Balasubramanian and D. Saraswath (vice-presidents), B.L.S. Prakasa Rao (secretary), V. Shiva Rama Prasad (joint secretary), V. Malakonda Reddy, R.J. Ramalingaswamy, U. Yugandhar (members).

The Institute will function under the general control and supervision of the Governing Council comprising of elected, nominated, and ex-officio members from scientific societies and institutions, and local and central governments as outlined in the

Constitution of the Institute. C. Rangarajan, Chairman, Economic Advisory Council to the Prime Minister of India is the Chairman of the Governing Council of the Institute.

The Institute will have a director of international reputation and will function under the direction of the Governing Council.

The Institute also has an International Advisory Board comprised of internationally renowned mathematicians, statisticians, and computer scientists as listed in the newsletter. There is an International Fundraising Committee coordinating fundraising activities around the world. There is an Executive Committee for coordinating the activities of the Institute in the U.S.

#### **Activities of the Institute**

A symposium on "Challenges in Mathematical and Computer Sciences" was held on February 29, 2004 during the inauguration of the Institute.

#### **Current News**

- The Institute received tax exempt status for funds collected within India in September 2005.
- An Executive Committee was established in October 2005 for coordinating the activities of the Institute in the U.S. as listed in the Newsletter.
- The Institute will sponsor a two-day workshop on Hotspot Geoinformatics on December 24 and 25, 2005 in Hyderabad, India.
- The construction of the Institute is anticipated to begin in January 2006.
- There is an international search for a director of the Institute.

#### **Donations**

We gratefully acknowledge the following donations:

#### **Endowments**

Naming the Auditorium \$100,000 pledged by T.R. Rao of Market Probe (\$40,000 received)

Naming the Museum \$75,000 pledged by Bhargavi Rao (\$50,000 received)

#### **Donations**

Benefactor N.Balakrishnan

G.M. Naidu

Patron Nandini Kannan

Donor Anonymous (former student of C.R. Rao)

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Total Donations: \$110,960.00

### An Appeal to the Community: We need your support and help!

- The goal for donations and pledges for 2005 is \$250,000 to 300,000.
- Endowments may be made for establishing professorships (\$250,000), lectureships (\$150,000), scholarships (\$100,000), and sponsored thematic and annual workshops (\$10,000-\$100,000) and for naming the Institute building (\$50,000) and classrooms (\$25,000).
- Donations may be made under the categories of benefactor, patron, donor, sponsor, and supporter in amounts ranging from under \$500 to over \$5,000. For details, please contact the executive committee members or visit the website.
- Kindly spread the message to your colleagues and friends and request their donations as well.
- All donations are **tax deductible** in the United States of America (Social Security No.54-2021183 for Tax ID). All donations will be recognized in the AIMSCS Newsletter (unless chosen to remain anonymous) and acknowledged in the administrative records of the Institute.

Checks may be made to: **IISA: AIMSCS** (International Indian Statistical Association: AIMSCS)

Checks may be mailed to:

Dr. Nandini Kannan

Treasurer, International Fund Raising Committee

Dept. of Management Science and Statistics, Univ. of Texas at San Antonio, TX 78249

For all pertinent details, please visit http://www.stat.psu.edu/~crrao/

INTERNATIONAL INDIAN STATISTICAL ASSOCIATION  MEMBERSHIP APPLICATION FORM (2005 Calendar Year)	
First Name:	
Title:	
Affiliation:	
Mailing Address:	
Work Phone #:	
Home Phone #:	
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E-mail:	
Signature:	Date:

### Life Membership Fee: \$300.00 (US)

Regular Annual Membership Fee: \$25 US for 1 year; \$40 US for 2 years

and \$50 US for 3 years

Student Annual Membership Fee: \$5.00 (US).

Please write your check (in US funds) to: International Indian Statistical Association

Please return this form with cash/check(in person) or mail your check to:

N. R. Chaganty
Treasurer, IISA
Department of Mathematics & Statistics
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Norfolk, VA 23529

e-mail: rchagant@odu.edu