



World Statistics Congress

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Daily News

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An interview with a guru in Economics – Mr Kaushik Basu



It is our great honour to have **Mr Kaushik Basu**, an eminent thought leader in the field of economics, to speak in the ISI President's *Invited Paper Session* today. He has spared some time out of his busy schedule to have an interview with us, sharing some of his invaluable insights. Mr Basu is currently the Senior Vice President and Chief Economist of the World Bank. He has served as the Chief Economic Advisor to the Government of India during 2009-2012. He is also the Professor of Economics and C. Marks Professor of International Studies in Cornell University. He has been a visiting Professor at numerous world-class universities such as Harvard University, Princeton University and Massachusetts Institute of Technology.

In the interview, Mr Basu not only provided us with a glimpse of his speech to be delivered this afternoon, but also revealed his vision on the conceptual model that substantiates World Bank's goal of "eliminating extreme poverty and sharing prosperity". *"It's an exciting time to be at the World Bank Group, working with President Jim Yong Kim, who is re-energising the institution around two new goals. The first goal is to end extreme poverty, defined as reducing the percent of the world's population living on \$1.25 a day or less to below 3% by 2030. The second goal is to promote shared prosperity by fostering the income growth of the bottom 40% of the income distribution in all countries."*

Working on these two goals, Mr Basu explained the hard work ahead in terms of defining and measuring indicators in a continually robust mode. *"There will be many challenges involved in sticking to a rigorous approach when measuring poverty while at the same time crafting a 'shared prosperity' indicator that both complements the first goal and that motivates the institution in its drive to help all nations attain equitable growth and sustainable development."*

In elaborating this subtle initiative, Mr Basu said that he will, in his speech, outline the conceptual foundations of the two goals and talk on the data requirements of defining them. *"I'll also describe the general contours of the economic and social policy implications of focusing on the two ambitious objectives."*

We all understand the importance of interpretative data in driving economic policies. In discussing what gives substance to data, Mr Basu explained, *"Estimating extreme poverty rates require an elaborate process of data collection, consistency checks and a variety of extrapolation techniques. In this respect, the World Bank collects and catalogs household survey data and calculates the extreme poverty rate in each country, based on a \$1.25 PPP standard. I'll talk about the many challenges of this process and one example is the serious lack of data, especially from small island states, low income countries, and fragile states. We are pushing hard to change this as part of the World Bank Group's Open Data Initiative."* Mr Basu has recently established a Global Poverty Statistics Board, whose membership comprises regional development banks aimed at working with the World Bank on this task.

Having shared with us the infrastructure the World Bank is working on attaining her two goals, Mr Basu shedded insight on what captivated him behind all these works. *"What really intrigues me is the theory behind 'shared prosperity' as an indicator and I'm looking forward to outlining the rationale behind choosing the growth of incomes of the bottom 40% as goal number two. In my view, since shared prosperity refers to a multiplicity of ideas covering inter-generational equity and sustainable development and matters of cross-country equity, it needs a clear, theoretically sound narrative to go along with it, so it can steer debate and motivate policy."*

Let's all look forward to today's ISI President's *Invited Paper Session* to meet the guru (15:30-16:15 at Convention Hall).



P.2 Farewell message from Chairperson of LOC



P.2 Outgoing ISI President's thank you message



P.3 Incoming ISI President's message



P.3 See you in Rio de Janeiro



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Farewell message from Chairperson of Local Organising Committee



Over the years, time has changed and so have circumstances. But the Congress continues to network among the brightest minds in the statistics field, and inspire further development in face of challenges. If it was passion that first kick-started the Congress, it is perseverance of generations that keeps it going. Indeed, we are all part of an amiable tradition.

During the Congress this week, some 1 400 papers have been put forth by the various Associations of the ISI and other relevant groups. The volume of paper submission this year has been unparalleled covering a diverse range of interesting topics. Among others, these include recent advances in big data analyses, small area estimation and time-series analyses, just to mention a few.

Taking the opportunity, I would like to express my sincere gratitude to all relevant parties who have offered their great support to the Event. These include members of the ISI Executive Committee, the ISI Scientific Programme Committee, the Local Organising Committee, the Local Programme Committee, the Sub-Committee on Sponsorship and the Hong Kong Tourism Board. Also, we wish to give our special thanks and appreciation in particular to Professor Xuming He, Chairperson of the Scientific Programme Committee, and Professor Kai-wang Ng, Chairperson of the Local Programme Committee, for their enthusiasm in lining up an interesting and insightful agenda for the Congress and for every effort and devotion they made to the fine details.

And, my blessings go to Brazil, our host for the 60th WSC in July 2015. I trust that the upcoming Congress will continue to give statistics its great recognition as a key element which buttresses the further advances and developments of our society. On top of the 2014 FIFA World Cup which Brazil will also be playing host to, the 60th WSC is certainly an exciting occasion which we all very much look forward to.

Mrs Lily Ou-Yang

Commissioner for Census and Statistics
Hong Kong Special Administrative Region, China
Chairperson of the Local Organising Committee of the 59th WSC of the ISI

Outgoing ISI President's thank you message



It is my great privilege to extend a very warm thank you to all members of the ISI family who were involved in the organisation of the 59th ISI WSC here in Hong Kong. The planning, coordination and execution of this wonderful event required a lot of effort and devotion of everyone involved and I am happy to report that we succeeded in

making this Congress a very memorable event. I would like to congratulate everyone on the splendid job and thank all the participants who made this Congress a lively and meaningful happening.

My special thanks and congratulations are extended to the Local Organising Committee chaired by Commissioner Lily Ou-Yang and the Local Programme Committee chaired by Professor Kai-wang Ng who did a great job in arranging a comfortable stay for all participants and organising the scientific sessions.

My special thanks also go to the Scientific Programme Committee chaired by Professor Xuming He. He has demonstrated superb leadership and came up with the most rewarding Scientific Programme you all have enjoyed during the last five days.

There were over 60 administrative meetings all scheduled early in the morning or during lunch times. These meetings are crucial for keeping the ISI in motion and planning activities for the future. Thanks to those who took up responsibilities for the continuing well-being of the ISI.

In a few hours the Congress will be over. Many novelties have been introduced in an attempt to make the ISI WSCs the most important international happenings in statistics. I wish all of you a safe return home and look forward to meeting you again in Rio in two years.

Professor Jae Chang Lee

Outgoing ISI President

The 59th ISI WSC in figures

(as at 29 August 2013)

Papers presented at the 59th ISI WSC by region

| Region | Number of papers |
|---------------------------|------------------|
| Africa | 161 |
| Asia | 420 |
| Australasia and Oceania | 79 |
| Central and South America | 63 |
| Europe | 419 |
| Middle East | 24 |
| North America | 214 |
| Total | 1 380 |

Participants of the 59th ISI WSC by region

| Region | Number of participants* |
|------------------------------------|-------------------------|
| Africa | 123 |
| Asia including: - Hong Kong SAR | 1 259 |
| - The mainland of China | 591 |
| - Macao SAR | 234 |
| Australasia and Oceania | 88 |
| Australasia and Oceania | 101 |
| Central and South America | 72 |
| Europe | 613 |
| Middle East | 55 |
| North America | 276 |
| Total | 2 499 |

* Including 131 accompanying persons

Incoming ISI President's message



It is a huge honour to serve as President of the ISI. It is a hugely daunting task, although perhaps not quite as challenging as growing up in a poor family in a small village in Malaysia.

I have been on the ISI Executive Committee for the last six years, so I have a pretty good understanding of the opportunities as well as the challenges faced by our society.

We have accomplished a lot over the past four years: opening up ISI membership, starting efforts to build statistical capacity in developing countries, founding a new research journal, launching the Karl Pearson Prize for contemporary research contribution, and modernising our statutes and by-laws, to name a few. We worked closely with other major statistical societies to establish 2013 as the International Year of Statistics, and it has been a resounding success.

But there is a lot more to be done before the ISI will realise its full potential. It is the international nature of our society that makes us unique. We must continue to exploit this, and find effective ways to build bridges between the developing and developed worlds of statistics. In this regard, we will be accelerating our efforts in statistical capacity building, an area where the ISI has a lot to contribute and one that resonates with many ISI members. We are already examining different options, models for capacity building, ISI's strengths and resources, potential collaborators, and are engaging with local stakeholders to develop activities.

We will be calling on interested members for help with this important initiative.

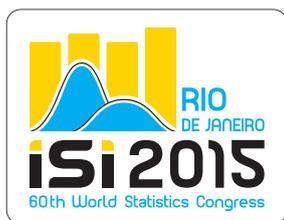
A second and related area is increasing ISI's footprint, by enlarging our membership base while also providing increased value and benefits for members. It is especially important to get more members from developing countries and increase the representation of women and young statisticians. ISI can help in career development by sharing best practices, providing a platform to discuss opportunities and exchange information. We have to collaborate with national organisations in developing countries and sister societies in developed regions.

These are just two examples of our activities and the bridges that I hope we can build over the next few years. I'm sure you will have your own ideas on what the ISI can and should be doing to better serve you and our profession. I would very much like to hear from you. The ISI Executive Committee and Council members really need your input and suggestions. Remember that the main task of a society's leadership team is to serve the needs and wishes of its members. So please e-mail me at vnn@umich.edu with your ideas and suggestions.

Finally, I want to thank the outgoing executive committee and council members for their excellent service to the ISI over the last few years. I am especially grateful to have had the opportunity to work with, and learn from, the past two Presidents, Jae Chang Lee and Jef L. Teugels.

Professor Vijay N. Nair
Incoming ISI President

ISI 2015 – See you in Rio de Janeiro, Brazil



The 60th ISI WSC preparation is moving full steam ahead. The Congress will be hosted by the Brazilian Institute of Geography and Statistics – IBGE and will take place in the wonderful city of Rio de Janeiro, from 26 to 31 July 2015.

Riocentro Convention Centre was chosen as the venue and will provide all the infrastructure and services required to host the ISI WSC. Riocentro was elected in the last five years as the best convention centre in South America by World Travel Awards. Throughout its history, the convention centre hosted some of the most important international events held in Rio de Janeiro, including the United Nations Conference for Environment and Development in 2012 (Rio +20).



The local organising team is chaired by Dr Pedro Silva from the National School of Statistical Science, leading

nine other IBGE staff from administrative, dissemination and IT areas. In addition to being engaged in academics and doing researches in statistics, they are also active members of the ISI as well as other national and international associations. The team is in charge of the national and local arrangements for preparing the ISI WSC.

Professor Nancy Lopes Garcia from Campinas University – UNICAMP will be chairing the Local Programme Committee that will handle the contributed paper/poster sessions and special topic sessions.

Professor Francisco Samaniego from University of California, Davis, USA will be chairing the Scientific Programme Committee.

To learn more about the preparations, please visit the 60th ISI WSC website at www.isi2015.ibge.gov.br.

Participation in ISI WSC 2015 will be a great opportunity to share and experience unforgettable moments in the wonderful city of Rio de Janeiro. We look forward to welcoming you there in July 2015!



Daily announcements

The Closing Ceremony and the Gala Dinner today

After 5 days of intensive seminars and knowledge-sharing sessions, it's time to relax and enjoy! All delegates are cordially invited to join the Closing Ceremony held today at 16:30 at the Convention Hall of the HKCEC, followed with the Gala Dinner held at the Grand Hall at 19:30. Cocktail reception to the dinner will start at 18:45.

The Grand Hall of the HKCEC holds a spectacular view of the Victoria Harbour, a perfect place to hold tonight's Gala Dinner serving fine Chinese cuisines. Fabulous performances will be staged including LED dragon dance, Chinese martial arts, Chinese opera excerpts, "East meets West" orchestral music and live band concert. Be there for a memorable evening to say farewell to old and new friends!

| Today's events | Time & venue |
|--|----------------------------------|
| International Association of Survey Statisticians (IASS) General Assembly II | 11:15 - 13:00 Theatre 1 |
| ISI President's Invited Paper Session | 15:30 - 16:15 Convention Hall |
| Closing Ceremony | 16:30 - 17:15 Convention Hall |
| Gala Dinner | 19:30 - 22:00 Grand Hall |

Scientific Programme

The Scientific Programme column of this **Daily News** introduces a number of scientific papers in diverse disciplines. Nevertheless, the papers introduced here are merely a fraction of the whole Scientific Programme. A full list of the scientific sessions and the corresponding papers and abstracts are available at the 59th ISI WSC website (www.isi2013.hk/en/index.php).

How informative is the design in analytic inference?



Jean D. Opsomer is Professor and Chair of the Department of Statistics at Colorado State University. He will be presenting to us his paper "Testing for informativeness in analytic inference from complex survey data" at today's *Invited Paper Session "Analytic inference for data from complex surveys"* (IPS087, 09:00 at Convention Hall C).

In the session, Professor Opsomer will review tests for informativeness of the design in analytic inference using data from a complex survey. Design informativeness occurs when a model correctly specified for the population does not hold in the sample. He will explain the process of generalising existing methods through likelihood ratio test that compares the design-based fit of the expanded model to the model-based fit. Asymptotic distribution of the test statistic is derived, which is a linear combination of independent Chi-square random variables, with coefficients being eigenvalues of a matrix that can be consistently estimated from the data. A bootstrap version is used to evaluate the tests via simulation and application to real data will be demonstrated.

UN Fundamental Principles of Official Statistics: Future applicability and implementation

During the early 1990s, the Conference of European Statistics had developed a set of UN Fundamental Principles of Official Statistics, which was subsequently adopted by the United Nations Statistical Commission (UNSC) in 1994. In 2012, the UNSC discussed the Fundamental Principles at its sessions. The discussion concluded that the Principles were still relevant to a full extent and that no revision of the 10 Principles was necessary. Today's panel discussion session on "The UN Fundamental Principles of Official Statistics – Applicability and implementation" (IPS107, 13:00 at Theatre 2) will focus on issues of the future applicability and implementation of the Fundamental Principles, monitoring of the application of the Principles, and the possibilities of extending the Principles to statistical activities outside official statistics.



Hallgrímur Snorrason



Professor Paul Cheung



Olav Ljones



Carmelita Nuguid Ericta

The panel is composed of Hallgrímur Snorrason, Vice President of ISI (organiser and chair), and the following experts in official statistics:

Professor Paul Cheung

Olav Ljones

Carmelita Nuguid Ericta

Dr Mario Palma Rojo

Former Director of the United Nations Statistics Division (UNSD)

Deputy Director General of Statistics Norway and former President of IAOS

Administrator and Civil Registrar General, National Statistics Office, Republic of the Philippines

Vice President of the National Institute of Statistics and Geography of Mexico

Statistical machine learning and its biomedical applications

Today at the *Invited Paper Session* of "Recent advances in statistical machine learning and its biomedical applications", two distinguished speakers will be leading us to the latest research on the topics (IPS089, 09:00 at Room S421).



Professor Susan A. Murphy, H.E. Robbins Professor of Statistics and Professor of Psychiatry at the Institute for Social Research of University of Michigan, will discuss her paper "Machine learning methods for individualising real-time treatment policies".

Mobile devices are being increasingly used by health researchers to collect symptoms and other information in real-time, and to provide health interventions via treatment policies, which specify how patient information should be used to determine suitable interventions to provide. Professor Murphy will present generalisations of methods from the field of Reinforcement Learning for customising individualised treatment policies. She will show that these methods are related to updated and improved stochastic approximation algorithms used in robotics, online games and online advertising.

Professor Heping Zhang, Susan Dwight Bliss Professor of Biostatistics and Director of the Collaborative Center for Statistics in Science, Yale University, will present his paper entitled "Genetic association test based on nonparametric stratification of propensity scores".



Adjusting for covariate effects is challenging for genetic association studies. Professor Zhang has introduced a combination of tree-based methods and propensity scores, which is used to form stratifications for genetic association studies that may involve many confounding factors including population stratification and environmental variables. He will also explain how simulation studies show that the tree-based stratification method is more robust than the parametric approach.

Training official statisticians through implementation of Core Skills Framework (CSF)

Manpower is an important asset to all public and private services. Training is the key to unlock the potentials of manpower. At today's *Invited Paper Session* on "Implementation of CSF for training official statisticians", Margarita Guerrero from the National Statistics Office of the Philippines will chair the panel discussion, comprising the following 3 presentations on this topic (IPS088, 09:00 at Theatre 2):

- Paper 1: "Training official statisticians in India" by Dr TCA Anant, Chief Statistician of the Ministry of Statistics and Programme Implementation of India
- Paper 2: "Training official statistician in Africa" by Professor Innocent Ngalinda from the Eastern Africa Statistical Training Centre of Tanzania
- Paper 3: "Training statisticians: Experience of the Russian Federation" by Alexander Surinov, Head of the Rosstat

Some perspectives on comparative statistical inference

Statistical theory provides a foundation for studying the collection and interpretation of data, yet statistical inference is crucial for analysing and drawing conclusions from data. At today's *Invited Paper Session* on "Some perspectives on comparative statistical inference", three renowned scholars, namely Nancy Reid, Nils Lid Hjort and Francisco J. Samaniego, will give their insight on the "Bayesians" and "frequentists" approaches, with Professor David Banks from Duke University in the USA being the discussant for the session (IPS092, 09:00 at Theatre 1).



Professor Nancy Reid, Canada Research Chair of Statistics of University of Toronto, will start off by presenting the paper "Principles of statistical inference", co-authored with Sir David Cox, to discuss some principles of statistical inference and outline how these are used to inform the interpretation of results, thus providing a greater degree of coherence for the foundations of statistics.

Confidence, likelihood and probability are three key elements in statistical inference, which are the focuses of the presentation by Professor Nils Lid Hjort from University of Oslo in Norway on his paper "Confidence, likelihood, probability". He will look into various issues and merits associated with the construction of a confidence distribution and certain optimality theorems, while outlining the links between confidence distributions and likelihoods.



We also have Francisco J. Samaniego, Distinguished Professor of Statistics in the Division of Mathematical and Physical Sciences, University of California, Davis, presenting his paper "Bayesian vs 'classical' estimation in practice". With many of his recent investigations centring on the performance of Bayesian methods, Professor Samaniego will conduct a brief discussion on the comparative performance of frequentist and Bayesian interval estimates.

The roles of administrative data in official statistics



Administrative data are widely used by official statisticians in compilation of population and employment statistics. At today's *Special Topic Session* on "The roles of administrative data in official statistics", Kido Seong, Deputy Director of Statistics Korea (KOSTAT), will present his paper titled "Wage and salary employment position statistics based on administrative data" (STS021, 13:00 at Room S423).

Kido will introduce the KOSTAT's move in utilising administrative data in compiling the wage and salary employment position statistics. He will explain the methodology adopted, present the key statistics compiled and discuss some concerns in using administrative data.

Why are the G-20 Data Gaps Initiative (DGI) and the SDDS Plus relevant for financial stability analysis?



In the wake of the recent global financial crisis, the international community is giving an increased focus on stability of the financial system. At today's *Special Topic Session* "International statistics - Supplying international statistics for decision making", Robert Heath, Deputy Director from the Statistics Department of International Monetary Fund (IMF), will present his paper "Why are the G-20 Data Gaps Initiative and the SDDS Plus relevant for financial stability analysis?" (STS045, 09:00 at Room S425).

While various data initiatives are underway, two initiatives at the forefront are: the IMF/FSB G-20 DGI created by the international statistical community and endorsed by the G-20 finance ministers and central bank governors as well as the IMF's International Monetary and Financial Committee, and the new Special Data Dissemination Standard Plus (SDDS Plus), aimed at economies with systemically important financial sectors. Robert will explain the relevance of the DGI for

financial stability analysis and the close link with the SDDS Plus. He will also demonstrate how these statistical initiatives are helping to meet the emerging policy needs of financial stability, drawing on the analysis in the IMF's financial surveillance strategy.

CCSA panel discussion:

International statistics – Supplying international statistics for decision making

The Committee for the Coordination of Statistical Activities (CCSA), currently comprising 39 international organisations, was established in 2002. The CCSA fosters good practices in accordance with the Principles Governing International Statistical Activities. At today's panel discussion on "International statistics – Supplying international statistics for decision making" (STS095, 13:00 at Room S426), Werner Bier, Co-chair of CCSA and Deputy Director-General Statistics of the European Central Bank (ECB), will chair the discussion of the panel, focusing on issues of supplying international statistics for decision making. The talks to be included are:

1. "Assuring high quality international statistics: A perspective from the BIS"
by Paul Van den Bergh, Assistant Head of Statistics & Research Support, Bank for International Settlements
2. "International trade in services in statistical frameworks"
by Andreas Maurer, Chief of the International Trade Statistics Section of the World Trade Organisation
3. "Politics and statistics: A happy marriage?"
by Peter Van de Ven, Head of the National Accounts Division of the Organisation for Economic Co-operation and Development (OECD)
4. "New collaborations to assess the reliability and relevance of food data collected in National Household Surveys"
by Grant Cameron, Manager of International Statistical Programs at the World Bank
5. "Supplying evidence based international statistics for decision making"
by Per Nymand-Andersen, Advisor in Directorate General Statistics of the ECB

Appreciation to the contributing parties

We would like to express our appreciation to the following organisations for their generous support in sponsoring local students to join the 59th ISI WSC:

- ▶ Fong Shu Fook Tong Foundation
- ▶ The Hong Kong Federation of Insurers
- ▶ Hong Kong Pei Hua Education Foundation
- ▶ Hong Kong Statistical Society
- ▶ SAS Institute Ltd.

In addition, there are other sponsors for the ISI side events/meetings/seminars, and for financing overseas participants of the 59th ISI WSC. They are:

- ▶ ISI African Development Bank Fund
- ▶ Asia Analytics
- ▶ Elsevier Publishers
- ▶ European Free Trade Association
- ▶ IBM
- ▶ Indian Government, Ministry of Statistics and Government Planning, for the ISI Mahalanobis Award
- ▶ ISI Statistics South Africa Fund
- ▶ Wakimoto Memorial Fund
- ▶ Wiley Blackwell Publishers
- ▶ ISI World Bank TFSCB

Snapshots of the Congress

Lunchtime Networking Meeting with National Statistical Offices and International Statistical Organisations



ISI & Associations' Awards Ceremony

