

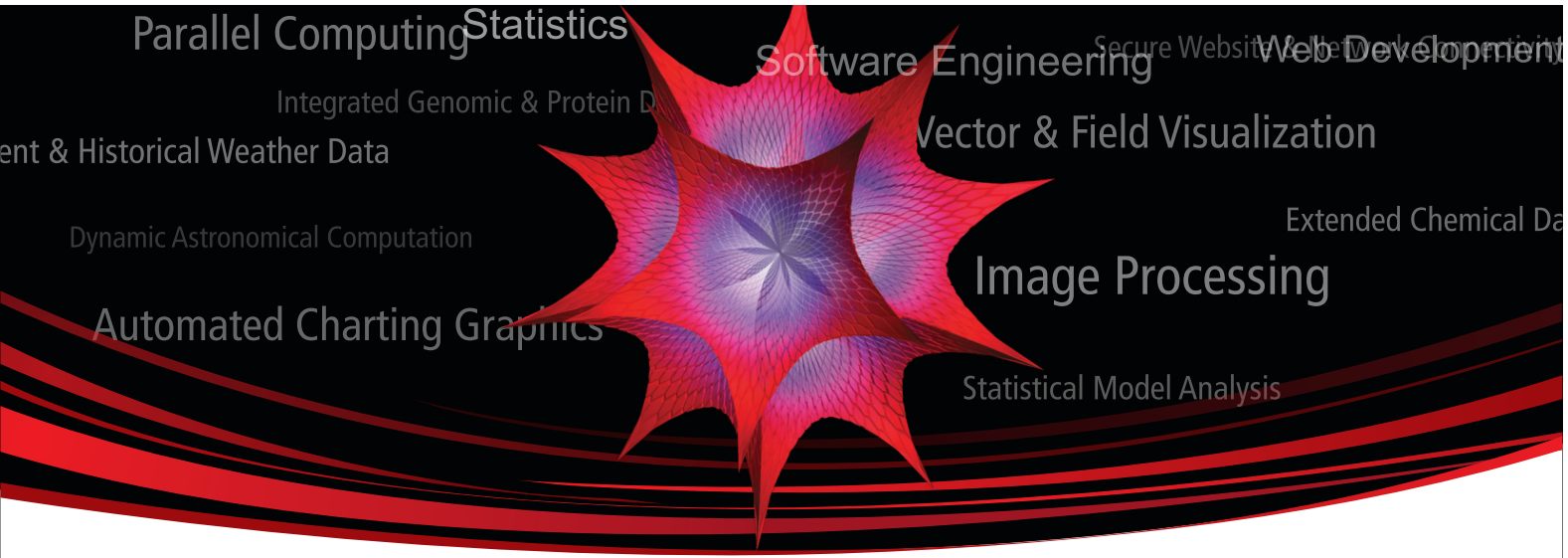


Newsletter

Operations Research Society of South Africa
Operasionele Navorsingsvereniging van Suid-Afrika



October 2011
www.orssa.org.za



Parallel Computing

Statistics

Software Engineering

Secure Website Web Development

Integrated Genomic & Protein D

Vector & Field Visualization

ent & Historical Weather Data

Extended Chemical Da

Dynamic Astronomical Computation

Image Processing

Automated Charting Graphics

Statistical Model Analysis

Wolfram *Mathematica*® 8

500 new features • 7 new application areas • 1 highly integrated system

If you are doing anything technical, think *Mathematica*—not just for computation, but for modelling, simulation, visualisation, development, documentation, and deployment.

Why *Mathematica*? Because this one integrated system delivers unprecedented workflow, coherence, reliability, and innovation. Rather than different toolkits for different jobs, *Mathematica* has been built over 20 years to deliver one vision: the ultimate technical application and environment.

➔ Find out more at wolfram.com/mathematica



Distributed by:
 Blue Stallion Technologies
 Tel: (011) 447 9916
 Fax: (011) 447 9911
 info@bluestallion.co.za



AnyLogic®

www.anylogic.com

**The only simulation software supporting ALL modeling methods:
 Discrete Event, System Dynamics, and Agent Based**

-  **Social Dynamics**
-  **Business Process**
-  **Pedestrian Dynamics**
-  **Asset Management**
-  **Healthcare**
-  **Manufacturing**
-  **Supply Chain & Logistics**
-  **Transportation**



Distributed by:
 Blue Stallion Technologies
 Tel: (011) 447 9916
 Fax: (011) 447 9911
 info@bluestallion.co.za

**MULTI-METHOD
 SIMULATION SOFTWARE**

FROM THE EDITOR

Contactable at: 14556561@sun.ac.za



Danie Lötter

Hello to all ORSSA members. I trust that everyone who attended ORSSA's 40th conference at Victoria Falls a few weeks ago, had a splendid time. From what I've heard, those of us who could not attend seriously missed out-not only on an academic level,

but also on the social events associated with the conference. My colleagues couldn't stop talking about it for days, making the rest of us very envious.

As usual this edition is dedicated to the conference, and therefore I decided to include a collage of photos from the conference, which may be found in the centrefold of this edition. This edition kicks off with the president's desk, followed by some feedback on the happenings at IFORS, which took place in Melbourne, Australia, during July.

A very interesting personal perspective on the conference follows by Jacques du Toit, and the Newsletter concludes with citations of various awards, which were made at the conference banquet.

Enjoy ☺.

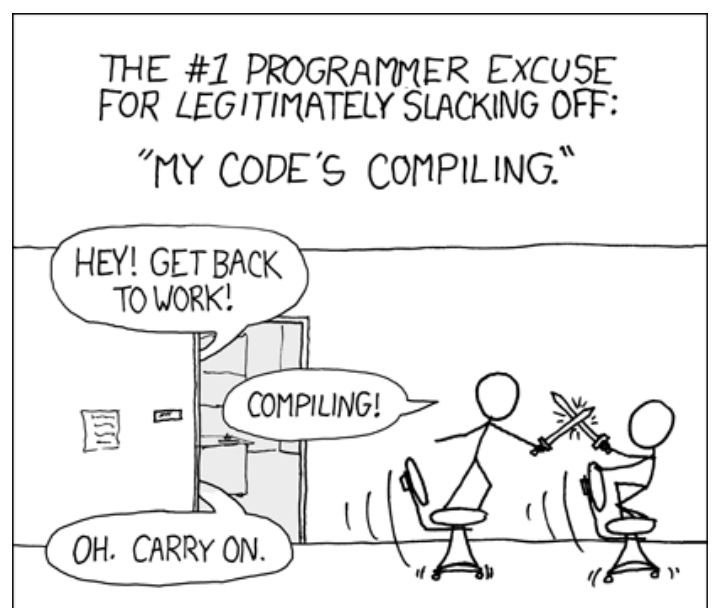
QUERIES AND CONTRIBUTIONS

Any queries and contributions to the newsletter are most welcome, especially article submissions. For any queries and contributions, please contact the newsletter editor: Danie Lötter

Email: 14556561@sun.ac.za

Features	Page
FROM THE EDITOR	1
FROM THE PRESIDENT'S DESK	2
IFORS 2011 – A PERSONAL PERSPECTIVE	3
THE 40 TH ANNUAL CONFERENCE OF ORSSA	4
PHOTO COLLAGE	6
ORSSA CATEGORY I AWARD: HANS ITTMAN	10
ORSSA CATEGORY II AWARD: MARLIZE MEYER	11
ORSSA CATEGORY III AWARD: SANTOSH KUMAR	12
TOM ROZWADOWSKI MEDAL: 2011	13

From: www.xkcd.com



FROM THE PRESIDENT'S DESK

by Dave Evans (*davee@dbsa.org*)

ORSSA President



As covered elsewhere in the Newsletter, the national conference at the Elephant Hills Hotel, Victoria Falls, in Zimbabwe was an outstanding success. I won't repeat what you can read elsewhere, other than to say my own personal thanks to everyone who contributed to making it the wonderful event that it was. We've been receiving extensive positive feedback from delegates, and jealous comments from the unfortunates who couldn't get there but have heard about it from colleagues. Well done to everyone who made it possible: the dozens of people involved 'behind the scenes', both here and in Zimbabwe, (who can now relax a bit) and the delegates who presented the jam-packed programme of papers.

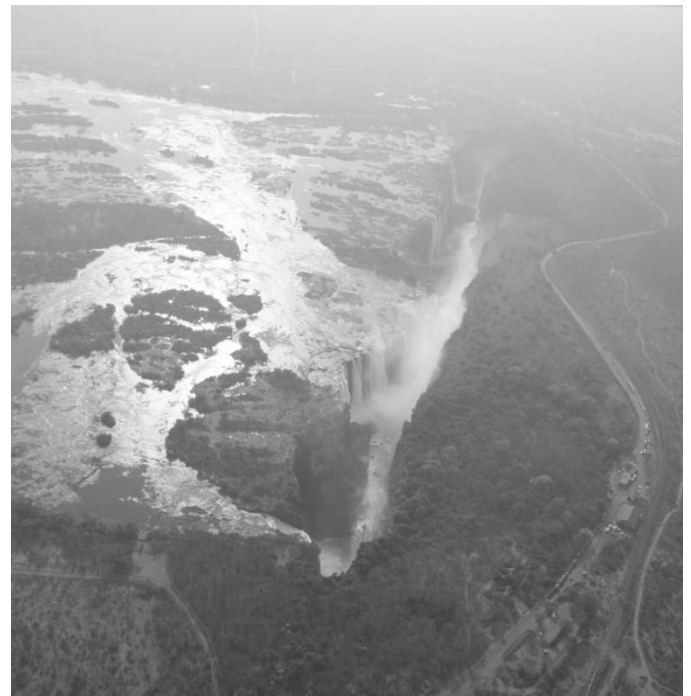
Particularly encouraging for me was the extensive spread of papers on the use of OR to address a wide range of developmental issues – keep up the good work. The single area where OR can make the biggest impact in our region is to help the public sector function more effectively. I know this is something I've been harping on about now for almost two years – that doesn't alter the reality. OR's track record in this area is extensive, world wide, and we owe it to our country and ourselves to be effective in this area, whatever else we may also be doing.

One of the things which has come out of this is a newly established interface between ORSSA and NUST – the National University of Science and Technology in Bulawayo, Zimbabwe. They have been working away for many years to develop OR in their country, and we all agreed that we must keep up this relationship and support them wherever we can, in taking the understanding and use of OR forward in their country. If anyone who wasn't there wants to make contact with them, I will gladly pass on details. Thanks also to everyone at the University of Limpopo, who have been opening this door for us over the past few years.

We attracted some thirty non-RSA delegates, which is a very encouraging first for us in anything other than events like the IFORS conference in 2008.

We are very grateful for the sponsorship from IFORS and EURO, although even with that, we are heading for a significant loss on the conference. In the circumstance, the Executive Committee agreed that we can take it this once, and it is money well spent.

Considerable sightseeing was also undertaken by the delegates who arrived early or stayed on afterwards; I'm not aware of any bungee jumpers, but we certainly had white water rafters who lived to tell the tale, and I treated myself to a helicopter tour of the Falls – photos available on request! ☺



A bird's eye view of the majestic Victoria Falls.

DISCLAIMER

The views expressed in this newsletter are those of the contributors and not necessarily of the Operations Research Society of South Africa. The society takes no responsibility for the accuracy of details concerning conferences, advertisements, etc., appearing in this newsletter. Members should verify these aspects themselves if they wish to respond to them.

IFORS 2011 – A personal perspective

by Jan van Vuuren (vuuren@sun.ac.za)

Department of Logistics, University of Stellenbosch

The 19th Triennial Conference of the International Federation of Operational Research Societies was held during the week of 10-15 July 2011 in the Melbourne Convention and Exhibition Centre, Melbourne, Australia. The facilities of the venue were excellent, and it was good to see a relatively large contingent of delegates from South Africa – I counted fourteen South African delegates (from the CSIR, North-West University, Stellenbosch University, UNISA and the University of Limpopo) – so ORSSA was well represented.

Presentations were organized into four daily sessions, which ran in twenty-one parallel streams on the Monday, Tuesday, Thursday and Friday. The contributed papers were very varied in nature and generally of a high standard as one has become accustomed to at IFORS conferences, covering topics in OR in the airline industry; bioinformatics; continuous and non-smooth optimization; cutting and packing problems; data envelopment analysis; OR in forestry and agriculture; education; fuzzy logic; finance; game theory; knowledge management; linear, nonlinear and integer programming; metaheuristics; military, defense and security; multi-criteria decision analysis; network optimization and telecommunications; public transit; operations management; services and sustainability; soft OR and problem structuring; supply chain management; transportation and logistics; and vehicle routing. There were also three fascinating plenary lectures:

- Prof Sir James Mirrlees (Nobel Laureate in Economic Sciences), *Optimum choice sets: How tightly should we regulate?*
- Dr Brenda Dietrich (IBM), *Operations research for a smarter planet*
- Prof Daniel Ralph (University of Cambridge), *Risk trading and capacity expansion in energy markets*

As usual, the Wednesday was reserved for the social part of the programme, with a choice of a tour to Sovereign Hill (an outdoor museum presenting the story of Australia's goldrush history) and Ballarat Wildlife Park, or a tour to the Healesville Wildlife Sanctuary and to a local winery.

During the fabulous conference banquet on the Thursday evening, the winners and runners-up of the IFORS OR for Development prize were announced:

- **Winners: Joao Neiva de Figueiredo & Miguel Angel Marca Barrientos** (Bolivia), *A decision support methodology for increasing school efficiency in Bolivia's low-income communities*
- **Runners-up: Angel Luis Udias, David Rios Insua, Javier Cano & Hocine Fellag** (Algeria), *Cost efficient equitable water distribution in Algeria: A bi-criteria fair division problem with network constraints*

The 20th Triennial Conference of the International Federation of Operational Research Societies will be held in Barcelona, Spain in 2014.



An Australian oddity.

The 40th Annual conference of ORSSA

by Jacques du Toit (jacques@dip.ac.za)

Department of Logistics, University of Stellenbosch

The views expressed in this article are the personal views held, only at the time of writing, by Jacques du Toit.

I was hoping to travel (cheaply) to Mozambique to see in the coming New Year and while I was doing a little investigating I came across the US Department of State's Bureau of Consular Affairs website. They provide "country specific information" and they painted a terrifying picture of Mozambique. Having just returned from the ORSSA conference that was hosted in Zimbabwe, I thought I would see what they had to say about the country. Now I realise that I was only there for a short time and that the website likely takes a 'better safe than sorry' approach. I will also admit that I'm overly optimistic about most things (like I was about the 2010's conference bag --- mine has suffered a number of malfunctions). However, it turns out that Mozambique is probably just fine considering that they paint an even more dismal picture of Zimbabwe.

My experience was quite different. It was a wonderful place and the people were good fun and I wish that I had visited sooner. I'm not trivialising any problems experienced there by anyone (for those who may take offence, particularly if they suffered any of the outcomes listed on that website), I'm just saying that the people I met along the way were friendly, accommodating and generally good natured. "But you were only there for a week", you may say (you would almost be right, I was there for nine days in fact). I wasn't there for long but I certainly took the long route to Victoria Falls.

Myself and six other students departed from Cape Town and arrived at OR Tambo on a Friday afternoon. Having used the Gautrain to get most of the way from the airport to the bus station, we negotiated the next leg of our journey in a dilapidated mini-bus taxi that had three functioning gears, a broken speedometer and a front passenger door that was partially secured with a belt. Bargaining in a dark and relatively quiet taxi rank

and using the services of a strangely competent (in his own way) but suicidal driver was probably the most dangerous part of our journey.

The bus departed from Johannesburg at 20h30 and arrived in Bulawayo the following morning at 10h30. Those who were travelling from abroad or from neighbouring countries will likely have many things to say about their border experiences. Indeed, some of the stories I heard were a great deal more exciting (or perhaps infuriating) than ours. Waiting around was the worst of it and it took us roughly two hours to cross the border each time. The South African immigration officials did their best to convey their displeasure through body language and various unintelligible grunts. I suspect that one might expect this when crossing the border at 04h00.

The view from the bus window was one of parched earth and naked trees (the conference coincided with the dry season). We stopped a few times along the way and vendors offered succulent oranges to passengers that must have come from afar because there was nothing as far as the eye could see. We spent that evening in Bulawayo and used the opportunity to visit a few local watering holes. Some of our party invaded the dance floor at our last port of call and tried to hold their own in dance-offs with Bulawayo locals. After a wonderful evening and a little sleep we embarked on the final 440km to Victoria Falls. Checkpoints along the roads were quite common but we were waived through most of them. On the occasion that we were stopped, officials were satisfied that we were law-abiding tourists (and a citizen) after we opened the trailer for them. Once they had surveyed its contents and we asked if we were free to go, a policeman replied that we could go, but that we were not free. Everyone at the checkpoint had a philosophical chuckle and we were on our merry way once more.

We arrived at Elephant Hills hotel in Victoria Falls three days after departing from Stellenbosch. The exterior of

the hotel was imposing but I suppose it was intended to be that way (elephant-like presumably). This is the second year running that the conference has been hosted in a hotel that had burnt down at some point (Magoebaskloof Hotel being the previous one). The Elephant Hills hotel suffered this fate during the Zimbabwean struggle for independence and once again in 2001. The hotel is situated 4km upstream of the Falls and may lazily be described as a big hotel on a small hill overlooking the Zambezi River. Once delegates had registered they embarked on a sunset cruise on the river. From what I heard around town this is typically called a booze cruise, but I guess that sounds less elegant. After plenty of networking and a few funny tales from the guide/host on the boat, we all filed into buses that returned us to the hotel. I noticed that vehicles travelling on dirt roads in Zimbabwe are not afraid of a few corrugations. Luckily these buses did not have to travel far.

The conference began on Monday with a welcoming by the Dean of Applied Sciences at NUST and Edward Chiyaka. Dave Evans gave an interesting presidential address in a matching tie and Dag Ericsson followed suit with an engaging keynote address on demand chain management. Although I'm not one to pursue available texts or presentations on supply chain management topics, I found this presentation to be very engaging. His vast knowledge coupled with metaphors and examples made for a thoroughly enjoyable talk.

As was the case with my travel companions, I attended as many presentations as I could. This is how I learned to attend conferences and it made the relaxing time thereafter so much sweeter. The fact that we had planned to stay until the Saturday probably contributed substantially to this mindset though. I spent Monday in the decision making sessions (part I and II) and the data sampling and analysis session. It was a long day that started at 08h00 and ended at 18h00 but we were able to unwind afterwards at a braai hosted at the hotel. It was during that evening that I met Erica Klampfl and her husband and heard their lovely stories about the Chobe National Park and the white water rafting that they had enjoyed.

Tuesday was another long day shortened for some by the AGM. I spent my morning in the modelling of serious diseases session and thoroughly enjoyed it. In

the plenary session Erica Klampfl spoke about operations research at Ford. Something that I identified with in her talk was that students should be given real world data to play with as it is quite wild and messy. I agree with the wild and messy part (and with making students experience what people too easily call the 'real world') --- I've been wrestling with data for what feels like too long now. She also showed a few photographs from their game viewing in the Chobe and their white water rafting on the Zambezi. It was getting harder and harder to ignore it. Tuesday afternoon required some session-hopping and I attended a few talks in the session about operations research in Zimbabwe, as well as the applications of metaheuristics session. After tea it was time for the AGM and I must say that I'm even more impressed this year than I was with last year's AGM. Principally because it seemed to end sooner than I expected, constitutional wrangling included. I suppose the society is quite experienced in these matters as it would seem that at each iteration the administrative machinery runs ever more smoothly.

The conference banquet was held on Tuesday evening in a cozy room with kitsch chandeliers and very attentive staff. Edward Chiyaka spoke of the fabulous hospitality we would experience at the elephant hills hotel and I'll admit that I felt quite spoilt much of the time. I'm also not used to someone pulling my chair out for me before I sit or placing my napkin on my lap. Two of my travel companions and I shared a table with students from NUST and we had a very enjoyable evening. One of the students suggested Sun City as a possible location for next year's conference but I checked online recently and it has not yet burnt down. There was no dancing to be had that evening but the usual suspects stayed to the end nonetheless.

The final day of the conference arrived and it was a short day. Delegates were still rearing to go though and I found myself in some very energetic question and answer sessions that sometimes seemed more like loosely-related-statement sessions. I avoided the presentations of my travel companions I've seen and heard them before. This allowed me to attend the sessions on poverty relief and humanitarian OR, as well as the second part of the operations research in Zimbabwe session. The final session I attended was a *fait accompli* for me as I found myself presenting in it.

The conference ended with a keynote address by Dag Ericsson on the implementation of demand chain management. He finished in-time, on-time and seemingly having said all he intended to say. A remarkable skill I hope to learn someday (I finish late and seldom say all I should or all I intend to).



From left to right is, Mr Philimon Nyamugure (Chairperson of the department of Applied Mathematics at NUST), Prof Lindela Ndlovu (Vice-chancellor of Nust), Prof Dag Ericsson (Keynote speaker), Mr Dave Evans (ORSSA President) and Prof Jan van Vuuren (ORSSA Vice President).

I was assured by someone in the know that although the program said eighty five delegates were in attendance, that there were at least that many. Last year's program listed sixty seven delegates. The list of papers also jumped from fifty three to ninety two and the list of authors increased from sixty nine to one hundred and twenty nine. I personally enjoyed this conference immensely. It was strange to be at a non-international conference in another country but as Dave Evans explained in the program, this has occurred before (Swaziland in 1995). Dave also encouraged us to "relax, contribute, participate and enjoy" ourselves. I'm happy to say I managed that and from what I saw many others did too. There were a few hiccups of course, a reservation was lost, adapters didn't fit/work and the air-conditioning was sometimes erratic (I mention these only for those who may take offence at my constant complimenting).

Many said their goodbyes at a lovely lunch at the hotel pool on a sweltering Wednesday afternoon and as the conference ended, the business of not going to a conference could begin. As I hope many of you did while in Victoria Falls, we popped out to see the extraordinarily beautiful falls that afternoon. It was an

amazing sight indeed and very refreshing considering the heat. I spoke to Erica once more at the final lunch just be sure and sure enough some of us went to the Chobe National Park on Thursday, as well as white water rafting on Friday (to be fair, Citizen Mark had talked us into the rafting before we left South Africa). If you are ever in the area again I would highly recommend it. We even managed to negotiate a discount on the activities. For those of you who were unable to attend the conference, going there for the Falls and these attractions would also be worth it (the conference just sweetened the deal).

This article would not be complete without mentioning the gentlemen operating the security boom at the hotel. We stayed in a lodge nearby and so we saw them whenever we entered or exited the hotel premises. Not only do they greet you with incredible enthusiasm, they dance-welcome you. It put a smile on our faces everyday.

I heartily congratulate all those involved on a job well done and I wish to extend my gratitude to the local organising committee nominated by the National University of Science and Technology, and to the program committee. This conference delegate was a happy delegate (clearly).



In the front row, from left to right is, Michele Fisher, Marlize Meyer, Erica Klampfl, Bernie Klampfl, Theophelous Mathema. In the back row, from left to right is, Hentie van den Berg, Simon Monyai, Lieschen Venter and Lenyora Sihwa.

P.S. I naturally had to see what the Bureau of Consular Affairs had to say about South Africa. It seems that I have less to fear traveling to neighbouring countries than I do drawing money at an ATM in South Africa. Will I be going to Mozambique? Not yet (it is too expensive over the New Year), but I'll certainly be

returning to Zimbabwe the first chance I get. Thanks to Citizen Mark and his folks for their hospitality and thanks to all those friendly Zimbabweans we met out-

and-about who will never read this. You won't know who you are, but you were all awesome.

ECCO 2012

25th Conference of European Chapter on Combinatorial Optimization

Antalya, Turkey

April 26-28, 2012

The ECCO annual meetings aim to bring together researchers in the field of *Combinatorial Optimization* to present their work, share experiences, and discuss recent advances in theory and applications. Topics of interest include:

- applications of combinatorial optimization in logistics and supply chain management, manufacturing, energy production and distribution, telecommunications, bioinformatics, finance, discrete and hybrid dynamical systems, and other fields,
- exact solution algorithms, approximation algorithms, heuristics, and meta-heuristics for combinatorial optimization problems,
- graph theory and network flows,
- integer programming, global optimization, stochastic integer programming, multiobjective programming.

Please visit the ECCO 2012 conference website on for more information:

www.eccoxxv.org

SMTDA 2012

International conference on Stochastic modeling techniques and Data Analysis

Chania Crete, Greece

June 5-8, 2012

The main goal of the Stochastic Modelling Techniques and Data Analysis International Conference (SMTDA2012) is to promote new methods and techniques for analyzing data, in fields like stochastic modelling, optimization techniques, statistical methods and inference, data mining and knowledge systems, computing-aided decision supports, neural networks and chaotic data analysis.

SMTDA aims at bringing together people from both stochastic and data analysis areas. Special attention is given to applications or to new theoretical results having potential of solving real life problems.

Please visit the ECCO 2012 conference website on for more information:

www.smta.net



ORSSA: Category I Recognition Award Presented to Hans Ittmann on 20 September 2011

Citation by Jan van Vuuren on behalf of the executive committee (vuuren@sun.ac.za)

Hans Willem Ittmann was born in Vrede (in the then Orange Free State) on June 9th, 1949. After matriculating with two distinctions from Salomon Senekal High School in 1966, he enrolled for the degree BMil (BSc) at Stellenbosch University – a qualification he obtained in 1970, whilst simultaneously qualifying as a pilot in the South African Air Force in 1968. He also obtained the degrees BSc(Hons) and MSc (both majoring in Operations Research) from the University of South Africa in 1977 and 1981, respectively. His MSc thesis topic was on a linear programming model for the South African Purse-Seine fishing industry. Finally, he obtained an MBA from the University of Pretoria in 1985 with a thesis on the scope and impact of decision support systems on organizations, for which he received the *Old Mutual Gold Medal for the Best MBA Student*.

From 1970 to 1973 Hans Ittmann was a lieutenant in the South African Air Force, serving as pilot at the Waterkloof and Swartkop Air Force Bases in 1972 and 1973. In 1973 he joined the National Research Institute for Mathematical Sciences at the CSIR, as Chief Specialist Researcher. He was promoted to Head of the Operations Research and Statistics Division of the CSIR in 1986. Thereafter he was manager and programme manager in various capacities at a number of divisions of the CSIR, most notably the Centre for Advanced Computing and Decision Support (1987-1991), Decision Support Services (1991-1997) and the Centre for Logistics and Decision Support (2003-2005). Since 2006 he has held the positions of acting executive director and later executive director of the Built Environment division of the CSIR. He will be retiring from the CSIR at the end of November 2011 after an illustrious career at that organisation, spanning 38 years, during which time he has done much to promote the profession of operations research at the CSIR.

Hans has been a member of ORSSA since 1973 and has served on the Executive of ORSSA on a near-continual basis for the last 32 years – first as Pretoria Chapter

Chair (1979-81), then two stints as National Treasurer of ORSSA (1982-85 and 1987-88), as Business Manager of ORiON (1985-93), twice as President of ORSSA (1987 and 2002-03) and since 2004 as IFORS Representative. He has twice received the prestigious Tom Rozwadowski Medal (first with TJ Stewart in 1978 and later with DC Currin in 1985). Hans has also been a member of INFORMS (since 1980), a member of the Statistical Association of South Africa (since 1991), a member of the Operational Research Society of the United Kingdom (since 1993), and a member of the Council of Logistics Management of America (since 1995). In addition he has served on the editorial and advisory boards of a number of journals, has edited the IFORS Newsletter and has organised a large number of national and international operations research conferences, including the 18th Triennial Conference of IFORS which took place in Sandton in 2008. He has published 22 peer-reviewed papers, a large number of technical reports and popular articles in various newsletters and newspapers, and has delivered more than 70 conference papers. He has acted as external examiner for theses at a number of universities, both locally and abroad, and has also done a sterling job in publicising the potential power of operational research prediction models in his regular appearances on national television as analyst of early election results since 1999. His contribution to operations research in South Africa has been invaluable – indeed too great to quantify.

During a closed electronic ballot in August 2011, the Executive Committee of ORSSA duly and unanimously decided to recognize the significant contributions by Hans Ittmann in his capacities of model builder, promoter, facilitator and protector of the profession of operations research over a period of nearly 40 years, both at the CSIR and within ORSSA, by presenting him with a Recognition Award (Category I: To a retired member of ORSSA for outstanding contributions over a long period of time). I call on the President to present the award to Hans Willem Ittmann.

ORSSA: Category II Recognition Award Presented to Marlize Meyer on 20 September 2011

Citation by Hans Iltmann on behalf of the executive committee (hittmann@csir.co.za)



Born in Vanderbijlpark, Marlize Meyer received a Sasol bursary for studies in chemistry after matriculating at age 17 in 1987. After obtaining her BSc from the University of the North-West at 20, she started working at Sasol and continued her studies to obtain an Honours degree in computer science at the same university. She then transferred to an area more suited to her passion, namely decision support in the R&D group at Sasol. While the group name has changed over the years, OR and simulation remained priorities at Sasol. She continued her studies, receiving an MSc in OR in 2004 and is currently enrolled for a PhD, titled "Stochastic Operations Modelling (SOM) at Sasol." She is considered to be the person who will grow OR and simulation in Sasol and is passionate about her work. She believes that *stochastic operations modelling (SOM)* will always have an integral role to play in Sasol projects locally and internationally.

Marlize was one of the founding members of Sasol's OR group, and was instrumental in establishing stochastic simulation modelling in the company. She has played a key role in building OR capacity and capability at Sasol. When she joined the R&D decision support team, responsible for programming and supply chain modelling, she discovered her passion for simulation. "The simulation projects yielded reliable results and I realised that simulation could potentially be used to make a difference in many projects dealing with operations and processes," she says.

Meyer started the first stochastic operations model for Synfuels in petrol blending and distribution. This single flame yielded positive results and was fanned to a fire by each modeller who developed and nurtured a model used at Sasol's Secunda plant (Synfuels). As a new technique, not historically part of engineering, it required some convincing to prove the value of this modelling approach. As the team grew and new models were developed and used effectively, the work started to be seen as a technique with a future. To sustain this work over 10 years required a team of modellers and

good management. The current team comprises some 35 highly-qualified modellers and stochastic modelling is now used in most of the capital projects in Synfuels and Sasol.

The Sasol's OR group has won recognition from the International OR community. In 2010, the team was nominated for the Franz Edelman award, arguably the most prestigious international award for the practice of OR and awarded annually by the *Institute for Operations Research and Management Science (INFORMS)* in the United States. The team was more than a worthy finalist and continued to receive the INFORMS prize in 2011. This Prize is awarded for effective integration of *operations research/management sciences (OR/MS)* in an organisation. The award is made to an organisation that has repeatedly applied the principles of OR/MS in pioneering, varied, novel and lasting ways. In receiving this prize, the team at Sasol has demonstrated the creative use of OR to improved decision making. Sasol is the first African company to have won this award.

Their accolades have led to the team winning the 'team of the year award' from the Sasol MD in 2010. Their efforts have led to over \$230 million value-add to Sasol over the past 10 years. In this regard Marlize has played a pivotal role; she was also one of the successful Sasol women showcased this year at Sasol's women's day. "Just do what you believe in, and stick to it with determination... and success will follow," she advises.

The Executive Committee of ORSSA decided to recognise the significant contribution Marlize has made and the role she has played in the international recognition that the stochastic operations modelling team of Sasol has received over the past few years. As a current member of ORSSA, she is receiving this recognition for her single, outstanding achievement with respect to the practice of OR on a national level. I call on the President to present the award to Marlize Meyer.

ORSSA: Category III Recognition Award Presented to Santosh Kumar on 20 September 2011

Citation by Ozias Ncube on behalf of the executive committee (ncubeo@unisa.ac.za)



Santosh Kumar was born in India but emigrated and settled in Australia. While in Australia, he was affiliated to the Royal Melbourne Institute of Technology (RMIT), serving in various roles, starting as Lecturer in 1970, Senior Lecturer in 1973, Principal Lecturer in 1989, Foundation Associate Professor of Operations Research in 1991, and Acting Head of the Mathematics Department, July – December 1992.

Santosh Kumar holds a PhD in Operations Research from the University of Delhi, MSc *cum laude* from Vikram University. He is a FIMA Life Fellow of the Institute of Mathematics and its Applications in UK, and Life member of the OR society of India.

Santosh Kumar was appointed Professor and Chair of the Applied Mathematics Department at the National University of Science and Technology (NUST) in Zimbabwe from 1995 to 2001. While at NUST, he served on various boards, including, but not limited, to the following; the Faculty Higher Degrees Committee, the University Research Board and the University Publications Committee.

However, it is the sterling pioneering work that he did in introducing Operations Research to the Applied Mathematics curriculum at NUST, aligning its application to then “current” industrial problems, and ensuring that members of the Department of Applied Mathematics affiliate to the Johannesburg Chapter of the Operations Research Society of South Africa, ORSSA. Furthermore, he nurtured the growth of the discipline to the extent that it was the most sought after the Master’s qualification in the Faculty of Applied Sciences. He also laid the foundation for the inception of an independent Department of Operations Research and Statistics at NUST. This is yet to be realized. However, through the Department of Applied Mathematics both undergraduate and postgraduate studies in Operations Research and Statistics are now being offered independently to the degree of Applied Mathematics. During his tenure, he was able to champion the up-

skilling of various members of the Department of Applied Mathematics in the sense of either obtaining PhDs and/or MSc degrees in Operations Research under his guidance. Some of them are in the audience today.

While at the moment Santosh Kumar is not a member of ORSSA, his work in fostering Operations Research in Zimbabwe in particular, and in Southern Africa in general has been recognized by the ORSSA executive. In a secret ballot in August 2011, the Executive Committee of ORSSA, in recognition of these efforts and contributions, unanimously voted to grant him a Recognition Award (Category III: To a non-ORSSA member for outstanding contributions over a long period of time).

I call on the President of ORSSA to present the award to Professor Santosh Kumar.



Vilnius, Lithuania, 8-11 July, 2012

SECOND ANNOUNCEMENT AND CALL FOR PAPERS

We invite all researchers, academicians, practitioners, as well as students interested in any branch of operational research, mathematical modelling or economic analysis to participate at the Conference and to present their papers.

We are convinced that the EURO XXV Conference will be an excellent opportunity for the OR community to get together again in a pleasant atmosphere, and, thus, we are looking forward to meeting you in Vilnius, the historical capital of Lithuania, in 2012!

Please visit the EURO XXV Conference website on

www.euro-2012.lt

Tom Rozwadowski Award 2011

by Dave Evans on behalf of the executive committee (davee@dbsa.org)

ORSSA President

The Tom Rozwadowski medal is the Society's premier award and has been awarded on an almost annual basis since 1971. The medal is awarded for the best written contribution to Operations Research made by one or more members of the Society during the previous year. It is awarded to the author(s) of a paper published in a peer reviewed journal who are members of the Society.

The winning paper is *Innovative Decision Support in a Petrochemical Production Environment*, by Meyer, Robinson, Fisher, van der Merwe, Streicher, Janse van Rensburg, van den Berg, Dreyer, Joubert, Bonthuys, Rossouw, Louw.

This Sasol team were shortlisted for the Frans Edelman Award in 2010; one of the world's most prestigious OR awards, and received the INFORMS prize in 2011. This is some of the most outstanding OR work by any members of ORSSA in recent years. The paper in

question, published in the Interfaces journal, covers that same work.

The team have used OR, particularly stochastic simulation, to improve decision making over a wide range of business levels and issues in the operation of the coal-to-liquids value chain. The models have repeatedly proven their value by enhancing insights, enabling collaboration, ensuring efficient and effective production, and substantially improving Sasol's bottom line over several years. The use of these models is now entrenched in Sasol's decision making processes.

ORSSA is pleased to award the Tom Rozwadowski medal to Marlize Meyer, Anette van der Merwe, Gerrit Streicher, Johan Janse van Rensburg, Jaco Joubert, Ruan Rossouw, Michele Fisher and Hentie van den Berg; the authors of the paper who are members of ORSSA.



The Sasol Edelman team. In the back row, from left to right is, Johan Janse van Rensburg, Gerrit Streicher, Marlize Meyer and Ruan Rossouw. In the front row, from left to right is, Jaco Joubert, Ebert Cawood, Anette van der Merwe, Esmi Dreyer, Hylton Robinson and Michele Fisher. (Only the authors who are members of ORSSA are Tom Rozwadowski medalists.)

