The Australian Society for Operations Research, Inc. Melbourne Chapter

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June Meeting

Date: Wednesday, 20 June 2012 Time: 6:00pm Place: RMIT Access Grid Room 8.9.66, Swanston St Melbourne

Optimal Placement of Passing Bays in Underground Mines

Dr Hamideh Anjomshoa from IBM

Underground mines often use a single decline for loaded and unloaded vehicles. Strategically placed passing bays allow opposing vehicles to pass. The number and locations of bays influences the flow of vehicles, and hence mine productivity. The optimal spacing of bays is a function of the length of decline, number of vehicles, up speeds, down speeds, loading and unloading times. We present the results obtained from an MIP model which determines the spacing of bays that minimises the makespan of a fixed number of trips. The MIP also generates the corresponding vehicle schedule.

Meet the new committee members

Simon Dunstall: Simon is deputy theme leader and senior researcher within the CSIRO Government and Commercial Services theme. He is an Operations Research practitioner, joined CSIRO in 2000, and oversees CSIRO activity in finance and insurance analytics, quantitative risk management, transport and infrastructure. In addition to his role in CSIRO, he a committee member for the Logistics Association of Australia and the Victorian branch of the Australian Society for Operations Research. Simon's applied research focuses on mathematical modelling and decision-making in various domains including decentralised energy, supply chain optimisation and transport infrastructure planning. Simon has been the lead researcher in a number of recent and successful CSIRO projects: а GIS-based infrastructure planning tool for Transport and Main Roads in Queensland; simulation of the Illawarra port and rail

system for a consortium headed by Port Kembla Port Corporation; and the estimation for insurance purposes of the maximum foreseeable loss attributable to bushfires ignited by electricity distribution networks.

Henry Burley Henry has worked at the University of Adelaide, the Australian Bureau of Census, and the University of Cambridge Department of Applied Economics, before coming to La Trobe University. At Cambridge he earned MA and PhD supervised by Nobel Laureate, the late Sir Richard Stone. Dr Burley retired from, the then, School of Business in 2003 and has continued as honorary fellow and honorary associate of the university. Earlier he has worked at the IFO Institute in Munich, and at Economic Models Limited in St James. London. Dr Burley is a Fellow of the Royal Statistical Society, a life member of the Royal Economic Society, is Vice-President of the Operations Research Society of Australia, (Vic. Chapter) and is a reviewer for a few international journals including Journal of Operational Research Society, Health Systems, and for various operations research conference prizes. He was one of the pioneers of Data Envelopment Analysis (DEA), enabling the empirical measurement of multi-factor productive efficiency, and of Australian and US production function estimation.

Kaye Marion Kaye Marion's industrial experience was gained at APM (now Amcor), the Gas and Fuel, BP (Aust) and BHP followed by 39 years teaching an extensive range of Operations Research, Statistics, Economics and Computing subjects at RMIT University. Her consulting has included analyses of survey data in the health industry, mathematical optimisation in energy markets, statistical design of experiments and analyses of pharmaceutical products, in applied biology and biotechnology applications, the communications industry, regression models for performance bench marking for service organisations, and many time series analysis and forecasting projects. She has served as a committee member at Chapter level since 1980 and is currently ASOR's Honorary National Treasurer and Secretary of the Melbourne Chapter.

Paul Lochert Paul Lochert now enjoys retirement devoting his time to travel, grand children and golf. He retired from Monash as an Associate Professor after a long period of lecturing in Applied Statistics and Operations Research. His major interests were in Applied Statistics and Multivariate Data Analysis. First joined ASOR in 1971 and has served on the committee of the Melbourne Chapter and National Executive in various capacities since the mid 1970's.

Moshe Sniedovich Moshe is a Principal Fellow (Associate) in the Department of Mathematics and Statistics at the University of Melbourne. He obtained his BSc in Engineering at the Technion, Israel, 1968) and

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then worked as a Planning Engineer in the Ministry of Agriculture (Israel, 1968-1972) before commencing his PhD at the University of Arizona, (USA, 1972-1976). He then spent three years as a post doc -- one year in Princeton University (1976/7) and two years at IBM Thomas J Watson Research Centre (1977-9) -- before joining the National Research Institute for Mathematical Sciences (NRIMS) in South Africa (1979-89). In 1989 he joined the Department of Mathematics and Statistics, University of Melbourne, and retired in 2008. Moshe has served as IFORS VP (representing APORS) for six years (1998 - 2003) and was in charge of the IFORS tutORial project. His research and teaching interests are in the areas of sequential decision making, interactive computing and modeling composite optimisation and decision-making under severe uncertainty. Moshe published the second edition of his book on dynamic programming in 2011 and is now completing a book on robust optimisation. At the end of 2006 he launched a campaign to contain the spread of voodoo decision theories in Australia. More details on his current activities can be found at http://www.mosheonline.com.

Andrzej (Red) Ceglowski Andrzej is a Senior Lecturer in the Department of Accounting and Finance at Monash University. He holds a BSc from the University of KwaZulu-Natal and an MBSys (res) and PhD from Monash University. His primary expertise is in Emergency Department management. He works particularly with simulation and data mining techniques. Dr Ceglowski has published in outlets including the Journal of the Operational Research Society, Decision Support Systems, and the International Journal of Healthcare Information Systems and Informatics.

Gaurav Singh: Gaurav is currently a Senior Research Scientist in Mathematics, Informatics and Statistics division of CSIRO, Australian federal government's premier research agency. He holds a PhD in Scheduling Theory and joined CSIRO in 2004 as an operations research specialist. He has extensive experience in developing capacity planning and scheduling models in bulk material supply chains. As a project leader, Gaurav also leads CSIRO's optimisation projects in logistics and supply chain. This includes development of rail scheduling algorithms and long-term capacity planning modules in the Hunter Valley coal chain and mediumterm planning modules for Rio Tinto Iron Ore's operations in Pilbara region. One of his current interests is in supply chain optimisation with a focus on collaborative and adaptive strategies for improving efficiency in supply chains with multiple, and often competing, players. Other research interests also include scheduling theory, combinatorial optimisation and Integer Programming.

Patrick Tobin: Patrick currently teaches mathematics to students in Arts and Education courses at Australian Catholic University, Melbourne campus. Previously he has lectured engineering mathematics, statistics and

operations research at Swinburne University of Technology. He originally obtained an honours degree in science in mathematics and physics from Melbourne University and holds masters degrees in mathematics education and operations research as well as a PhD in mathematics. He first joined ASOR and its committee in Victoria in 1990 and have held posts of secretary treasurer and chairman of the Melbourne chapter of ASOR and national Vice president (Administration) until this year. He was treasurer of the APORS conference organising committee in 1997, chairman of the organising committee of the National ASOR conference in 2007 and also chairman of the organising committee for IFORS2011, the triennial conference of the International Federation of Operational Research Societies which was held in Melbourne in 2011. His research interests in OR include maintenance and scheduling problems, interior point algorithms and general applications which call on heuristic or combination approaches.

Mohsen Jafari Songhori Mohsen is currently final year PhD student at the University of Melbourne. His area of research is Operations Management and Operations Research, particularly Complex Supply Networks and Complex Product Developments. He holds BSc and MSc in Industrial Engineering from the Sharif University of Technology and the University of Tehran in Iran. Before starting PhD, Mohsen was working in Project Management and Operations Management areas for 4 years. During that time period, he was collaborating with several research teams that resulted in international journal publications.

Job Opportunity

Lecturer/Senior Lecturer in Operations Research at University of Technology, Sydney. More Details here: <u>http://www.jobs.uts.edu.au/job/job_details.cfm?i</u> d=736922&from=direct

Senior Research Officer, University of New South Wales. More details here: <u>http://www.hr.unsw.edu.au/services/recruitment/j</u> <u>obs/18051202.html</u>

Web Pages of Interest

We are affiliated with FASTS through AMSC To keep abreast of FASTS activities consult : <u>www.usyd.edu.au/fasts</u>

ASOR National: <u>www.asor.org.au</u> Melbourne Chapter <u>http://www.asor.ms.unimelb.edu.au/melbourne</u>

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The new website for ASOR - Sydney is: <u>http://www.asor-sydney.asn.au/</u>

NZ OR Society <u>http://www.orsnz.org.nz/</u> ORS (UK): <u>http://www.orsoc.org.uk/</u> INFORMS (US): <u>http://www.informs.org/</u> IFORS: <u>http://www.ifors.org</u>

For the latest International news, conference and jobs details see: http://www.ifors.org/panorama/index.html

tutOR: http://www.tutor.ms.unimelb.edu.au CSIRO's Double Helix Club http://www.csiro.au/

The electronic version of the ASOR Bulletin is now available for download at the following URL: <u>http://groups.google.com.au/group/melbourne-asor-chapter</u>

What Else is On Victorian Statisticians

The Statistics Society of Australia (in Victoria), typically has meetings on every 3rd Tuesday of the Month starting March 22, 2011.

For latest information check at: <u>http://www.statsoc.org.au/vic-branch-meetings.htm</u>

The AOQ (Vic)

The Australian Organisation for Quality typically has forums on the 3^{rd} Thursday of each month. For the latest information – <u>http://www.aoqvic.org.au</u>

Melbourne Users of R Network

Sister to the Sydney Users of R Forum (SURF) and organised by Dr. Eugene Dubossarsky, the R User Groups bring together the R community and provide an opportunity for sharing of ideas. Monthly meetings are available remotely via dimdim. Check out the Melbourne Meetup group: <u>http://www.meetup.com/MelbURN-Melbourne-</u> <u>Users-of-R-Network/</u>; links to the Sydney, Brisbane and Canberra groups are provided

Some upcoming conferences

- 25th European Conference on Operational Research; Jul 8, 2012 Jul 11, 2012.
- OR54 Annual Conference, UK, 4 6 SEPTEMBER 2012, link: <u>http://www.theorsociety.com/Pages/Conferences/OR54/OR54.aspx</u>
- INFORMS annual meeting, 14-17 Oct 2012, Phonix, link:

http://www.informs.org/Attend-a-Conference/Conference-Calendar/INFORMS-Annual-Meeting-2012-Phoenix

Committee Membership for 20011/12

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Committee meetings are generally held the third Wednesday of each month, immediately prior to the general meeting.

Where:	RMIT Access Grid Room.	Building 8, Level
	9, Room 66	-
	(Google maps)	
Time:	4pm – 6pm	

Meeting Schedule and Location

In general, meetings are held the third Wednesday of each month.

RMIT Access Grid Room. Building 8, Level Where: 9, Room 66 (Google maps) 6pm – 7pm

Time:

Meetings: TBA

The AUSTRALIAN SOCIETY for **OPERATIONS RESEARCH Inc. MELBOURNE CHAPTER**

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