

# Newsletter ORAHS

November 2008



## Introduction

Dear colleagues/friends! Please find here the Autumn 2008 edition of our ORAHS Working Group Newsletter. With this newsletter we intend to give information on activities of the Working Group to its members and others who are interested in the Working Group.

If you have any relevant information, or if you are willing to write a short contribution for the next newsletter you can send it to Sally Brailsford ([s.c.brailsford@soton.ac.uk](mailto:s.c.brailsford@soton.ac.uk)). In particular we would welcome short contributions from PhD students on their research: we're going to have a feature slot for this in future Newsletters. Dileep de Silva from the School of Management University of Southampton is featuring in this Newsletter.

## Agenda of coming meetings

July 5-8, 2009  
EURO XXIII Bonn Germany  
[www. Euro-2009.de/](http://www.Euro-2009.de/)

July 13-17, 2009  
ORAHS35 Leuven Belgium  
Organizer Erik Demeulemeester ([Erik.Demeulemeester@econ.kuleuven.be](mailto:Erik.Demeulemeester@econ.kuleuven.be))

February 18-20, 2010  
IEEE Workshop on Health Care Management (WHCM 2010)  
Organizers Maria Pia Fanti, MengChu Zhou, Walter Ukovich  
[www.deei.units.it/WHCM2010/](http://www.deei.units.it/WHCM2010/)

**ORAHS 2008** (report by John Blake [john.blake@dal.ca](mailto:john.blake@dal.ca) and Mike Carter [Carter@mie.utoronto.ca](mailto:Carter@mie.utoronto.ca))

The 34<sup>th</sup> annual ORAHS was held in Toronto, Ontario from July 24-August 1, 2008. Features of the Toronto meeting included a trip to Niagara Falls, a visit to a local winery, a doctoral student colloquium, and the regular ORAHS meeting. More than 160 persons, from 16 countries attended the conference. A total of 110 talks were presented, including the CORS 50<sup>th</sup> Anniversary Lecture, which was presented by Professor Bill Pierskalla from UCLA. Keynote talks were presented by Professor Jeff Griffiths from the University of Cardiff, and Dr. Michael Rachlis of the University of Toronto.

The Toronto meeting marks the first time an ORAHS meeting has been held in North America and only the second time that a meeting has been held outside of Europe. From the attendees list it is clear that ORAHS is becoming a global organization with the ability to improve health care throughout the world.

We will publish a set of proceedings for the conference. The deadline for paper submission has been extended to November 30, 2008. A copy of the format for papers can be found at the conference website <http://orahs2008.mie.utoronto.ca>. We will also publish a selection of papers in INFOR, the journal of the Canadian Operational Research Society.

We would like to thank CORS for sponsoring the CORS 50<sup>th</sup> Anniversary Lecture at the Toronto meeting. We would also like to thank all those people who attended the conference, the plenary speakers, our industry partners (Cancer Care Ontario, Courtyard Group, Hay Group, ILOG, SAS, Siemens and Canada Health Infoway) and the Centre for Healthcare Research at the University of Toronto for hosting the meeting. We are indebted to the Fields Institute, MITACS and EURO for providing funding for doctoral students.

We look forward to seeing everyone again next year in Leuven. Erik Demeulemeester has told us that it is occasionally possible to find interesting beer in Belgium if one is diligent and applies an appropriate search algorithm. We're looking forward to carrying out an experiment to confirm this hypothesis.

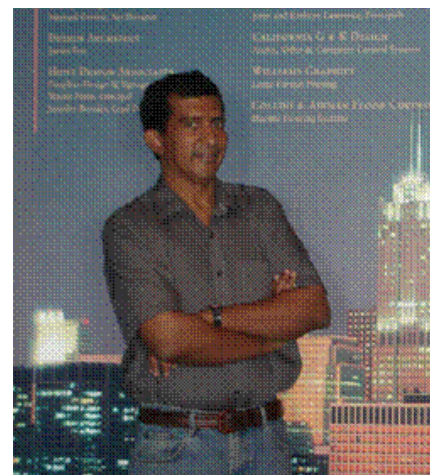
### **ORAHS 2009** (report by Erik Demeulemeester, [Erik.Demeulemeester@econ.kuleuven.be](mailto:Erik.Demeulemeester@econ.kuleuven.be))

The 35th Annual Conference of ORAHS will take place in the buildings of the Faculty of Business and Economics of the Catholic University Leuven (Belgium) and this between Sunday, July 12, 2009 and Friday, July 17, 2009. The general theme of the workshop is "Rethinking Health Services Management". ORAHS35 will follow the usual format of the ORAHS conferences with a welcome reception on Sunday, a hospital visit on Tuesday, a touristic trip to the beautiful medieval city of Bruges on Wednesday and a conference diner in the Faculty Club on Thursday as well as interesting presentations on Monday, Tuesday, Thursday and Friday. The website of the conference will be up and running by the end of January.

### **PhD researchers tell their story** (report by Dileep De Silva, [dileep.denta@yahoo.com](mailto:dileep.denta@yahoo.com))

My name is Dileep De Silva and I am a PhD student from the School of Management, University of Southampton, UK. Before I embarked on my PhD, I held quite a high post in the Government of Sri Lanka, in health care management. I am a qualified dentist by profession, with specialist qualifications in public health and oral surgery. In addition I have a MBA and professional qualifications in finance and banking.

Coming to the UK to study for a PhD was a dream come true for me. My aim is to apply System Dynamics to address a burning health policy issue, namely why so many dentists are unemployed in Sri Lanka, while there is



unmet need for dental and oral care in our country. My basic research question is: how many dentists should Sri Lanka train in future? Sri Lanka's current dentist-to-population ratio is 1:13500.

System Dynamics (SD) deals with "dynamic complexity". The underlying principle of SD is that over time, "structure determines behaviour". SD enables stakeholders to understand why the system behaves the way it does. Problematic and puzzling situations are investigated by first identifying feedback loops and then re-designing policies to change this feedback structure in order to improve performance. SD can be purely qualitative, but quantitative models can be developed which include stocks and flows of material, people or information. The models I am developing include realistic detail about the institutions they represent and are populated with real world data. My "dental workforce model" is composed of three independent sub-models, namely population, supply and demand. It draws its terminology, parameters and structure from my personal mental database which is enriched by my professional knowledge about dental diseases and my health administrative experience at national level for over 10 years. I hope my model will be a "powerful transitional object" for better understanding of the complex oral health policy issues in my country. These are connected with economic growth, peoples' perception on oral health and training, and employment of the dental workforce. One interesting question is to decide where to draw the line on realism, particularly in models of complex and poorly understood systems, and where data are scarce.

The annual ORAHS conference is a platform for OR professionals as well as research students in this field to meet and share their unique experiences. The ORAHS 34<sup>th</sup> annual conference and the PhD workshop which preceded it, in Toronto in July 2008, was a real success in this sense. The application of OR methodologies in many health care settings were discussed at this conference. The medley of social events held throughout the conference were very well planned and organized. The trip to Niagara Falls was the best of all. This conference in Canada really helped me to widen my knowledge in "applications of OR in health care" while broadening my international outlook.

## **EURO- info**

EURO has an extensive website with information on EURO conferences and EURO Working Groups. The website contains also an annual report of ORAHS. The EURO vice-president 2 in charge of the Working Groups is Professor Marc Sevaux, University of South Brittany, Lester France, who is *ex officio* a member of our working group. For more information about EURO, see [www.euro-online.org](http://www.euro-online.org)

## **Web-site news** (*report by Sally Brailsford*)

The ORAHS website can be found at <http://www.management.soton.ac.uk/orahs/>. It has recently been updated, which severely tested my IT skills in figuring out how to turn Belgium yellow. However I finally managed this and the website will shortly contain a link to the 2009 conference. It contains two lists of members, the "link members" for each country and the "national members" from that country. This is still not the full membership list as it contains fewer names than the mailing list. We are planning to develop a system to allow people to add their names and amend their details online. In addition to this, we welcome ideas and suggestions for the website.

## Short communications

### *Post conference publications of ORAHS2007 (report from Xiaolan Xie)*

The post-conference proceedings of ORAHS'2007 is now in press and will soon be distributed to participants of ORAHS2007. The proceedings, entitled "Operations Research for Health Care Delivery Engineering" and edited by Xiaolan Xie, Françoise Lorca and Eric Marcon and of nearly 600 pages, contains 43 contributed papers and 3 invited papers. We would like to thank all reviewers for their precious time.

Three special issues come out of the ORAHS2007 conference. The IJHISI (Int. J. Health Information Syst. And Informatics) special issue, edited by F. Laforest and P. Harper, is now in press and contains 5 papers. The AOR (Annals of Operations Research) special volume and the HCMS (Health Care Management Science) are in their second or third review rounds and are expected to finish before the end of the year.

### *CORU's silver anniversary (report by Martin Utley)*

On snowy Tuesday in October 2008, the Clinical Operational Research Unit (CORU) celebrated its 25th birthday. Current and former staff were joined by friends and collaborators from the worlds of academia, OR, the UK Government Department of Health and the UK national Health Service (NHS), including several from ORAHS including Sally Brailsford and Jan Vissers. We apologise that not all our friends from ORAHS could be invited but the desire to remain solvent for at least another year precluded this.

Guests heard Professor Sir Bruce Keogh, Medical Director of the NHS, talk passionately about the drive for improving quality in the health service and how this will be underpinned by innovative methods such as those developed by CORU. Also speaking at the event were current Director of CORU, Martin Utley, UCL Provost Professor Malcolm Grant and Dr William Maton-Howarth, CORU's liaison officer with Department of Health over the last 18 years.



**From left,  
former Directors of CORU  
Professor Ray Jackson  
and Professor Steve Gallivan,  
current Director Dr Martin Utley,  
Dr William Maton-Howarth from the  
Department of Health Policy Research  
Programme,  
UCL Provost Professor Malcolm Grant  
and Professor Sir Bruce Keogh.**

CORU was established in the wake of Ray Jackson's work in the early 80s with Phil Aspden building analytical models of how patients progress through distinct health states during the course of an illness. Now, such Markov modelling is commonplace (economists no doubt think they invented it), but at the time its use was novel, particularly as a method for analysing clinical trial data in relation to cancer. The UK Department of Health decided to establish a research centre to exploit this successful linkage between OR and health care and, after twenty five years of successfully retaining their support (no mean feat), CORU continues to thrive.

Initially CORU focussed on evaluating new treatments for cancer but projects have since been undertaken in a wide range of clinical specialties and have included work on patient safety, service delivery and the monitoring of clinical outcomes. It is probably CORU's work in this last area has been most influential to date. Working with cardiothoracic surgeon Tom Treasure (who has since joined the unit), CORU developed a graphical method for risk-adjusted monitoring of outcomes following cardiac surgery called the Variable Life Adjusted Display (or VLAD as it has become known). This approach is now used in every cardiac surgery unit in the UK and in 15 countries worldwide.

The current programme of research at CORU includes developing tools for the monitoring of surgical wound infection rates and of outcomes following paediatric heart surgery; assisting the restructuring of treatment services for anxiety and depression, challenging the evidence for some cancer surgery and informing policy concerning how best to reduce maternal mortality in the developing world.

One of the advantages of working in health related OR, familiar to ORAHS members, is that there is never a shortage of difficult and important problems to solve. In his address to the celebratory reception, Sir Bruce outlined a number of forthcoming policy initiatives related to the NHS that would each, in one way or another, benefit from some OR. For the UK membership of ORAHS, the future looks busy.

### ***Proceedings ORAHS32 Wroclaw (report by Marek Lubicz)***

Marek has made considerable progress with the proceedings of the Wroclaw meeting in 2006. He is planning to make a book, based on the presentations but also with viewpoints. *He reports .....*

The idea of the book is twofold. Firstly - to present a number of approaches and applications of general and specific OR modelling, some of which have been discussed during 32<sup>nd</sup> Annual Conference of the EURO Working Group Operational Research Applied to Health Services (ORAHS) in 2006. The chapters deal with OR contribution for health care and health policy decision making (Part 1), mental health care (Part 2), emergency health care (Part 3), clinical and health care management (Part 4).

There is an intention to enrich these parts with viewpoints by leading Polish and international health and healthcare specialists on specific topics, presently of great epidemiological importance (OR for lung / breast cancer management; OR for cardiovascular topics) or crucial for health systems reform (reorganization of mental health care, creating functional emergency medicine systems).

The last part of the book (Part 5) constitutes a selection of viewpoints on the importance and determinants of successful applications of classical and modern quantitative approaches for

solving health care problems in Poland. The viewpoints are formulated from complementing perspectives:

- academic (Operational Research methodology, Health Policy, Health Economics, Applied Computer Science, Medical Decision Making)
- public payer (at national and regional level)
- healthcare system (Parliamentary, Ministerial and Regional Health Policy Decision Maker, Hospital Director or Regional E-Health System Administrator)
- international (as seen from European perspectives of Council of Europe or European Commission as well as seen by EURO ORAHS Working Group members)

The intention for each short viewpoint (1-2 pages) is to specify and discuss:

- what are the main decision problems in a particular field (e.g. in restructuring mental health care or interventional cardiology; in making health policy decisions at national or regional level)
- what quantitative approaches are reported to be used in a particular field (a list of sample recent articles in international journals is enclosed for convenience) or could be seen as suitable for potential application

It is anticipated that a retrospective discussion on changes in determinants, decision problems and possibly types of approaches, in the period since the 16<sup>th</sup> Annual Conference of the EURO ORAHS Working Group had been held at Wroclaw in 1990, is also performed.

The book is assumed to be ready in late Spring, enabling presenting it in the Leuven meeting. Marek will contact some of us to prepare some of the viewpoints.

### ***Call for papers EURO XXIII Bonn***

EURO XXIII will take place from July 5 to July 8 2009 in Bonn.

There is a Stream for Health Care Management defined, which is organized by Marion Rauner, Stephan Nickel, Teresa Melo and Jan Vissers. Given the fact that the ORAHS meeting in Leuven and the EURO meeting in Bonn are very near in time and place, we hope that many members of ORAHS will be able to attend also the meeting in Bonn.