



## 45th Annual Conference of the ORSNZ 2010

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Operations Research Society of New Zealand (Inc.)  
P.O. Box 6544, Wellesley Street, Auckland, New Zealand  
<http://www.orsnz.org.nz>

## Programme

### Sunday 28 November

#### 18:00–20:00 Informal Welcome and Registration

*Old Government House, Corner of Princes St and Waterloo Quadrant, University of Auckland. All welcome.*

#### **Old Government House**

*Old Government House (1856), corner of Princes Street and Waterloo Quadrant, was the first mansion of its kind built in New Zealand. Classical in style with much of the timber façade cut to resemble stone, it was the seat of government until 1865 when the capital was moved to Wellington. For the next century it was Auckland's vice-regal residence. Royalty stayed there six times and the present Queen broadcast her Christmas speech to the Commonwealth from upstairs in 1953. Since being transferred to the University in 1969, the house has been the Staff Common Room Club. It contains a Council reception suite, flats for visiting academics, rooms for the Federation of Graduate Women and a lecture theatre.*

*Some of the trees in the grounds match Old Government House for antiquity. Two oaks at the north western corner were probably grown from acorns brought from the Great Forest at Windsor and the Royal Oak at Boscobel, Shropshire, where Charles II hid after the battle of Worcester in 1651. The big coral tree and the Norfolk pine at the southern edge of the lawn are said to have been planted by Sir George Grey during his second term as governor (1861-1867).*

<http://www.auckland.ac.nz/uoa/home/for/business-employers-and-community/be-old-government-house>

### Monday 29 November

#### 08:15 Registration Opens

*Clock Tower Colonnade, University of Auckland, 22 Princes St (see maps below)*

#### 08:45–10:30 Welcome and Young Practitioner Prize 1 (YPP1)

*Session Chairs: Andrew Mason & Mike O'Sullivan*

*15 minute presentations*

*ClockTower 039*

Dominic Fok

*Maintenance Operation Centre Rostering Problem..... 1*

Eduard Bulog

*A Generic Nurse Rostering Algorithm for the INRC2010 Instances..... 8*

Harriet Priddey<sup>†</sup> and Kane Harton

*Comparing the Efficiency of Stores at New Zealand Post..... 18*

Siamak Moradi

*The Bi-Objective Multi-Commodity Minimum Cost Flow Problem..... 28*

Anthony Downward

*Risk Aversion and Retail Electricity Markets..... 39*

Timothy Harton

*Virtual Smelter Modelling for Metal Flow Management..... 50*

#### 11:00–12:30 Plenary Session

*Session Chair: Andrew Mason*

*ClockTower 039*

Tava Olsen (50 minutes)

*Demand Management: Effective, Evil, or Just Everyday?..... 60*

Chun Zhi Wu (40 minutes)	
<i>Achieve Smarter Decision Outcomes with Optimisation</i> .....	61
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<i>15 minute presentations</i>	
<i>ClockTower 039</i>	
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Uttara Nataraj	
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<i>15 minute presentations</i>	
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<b>17:30 ORSNZ AGM and Council Meeting</b>	
<i>All Welcome</i>	
<i>ClockTower 039</i>	
<b>19:30 Conference Banquet</b>	
<i>Harbourside Restaurant: The Ferry Building, 99 Quay Street</i>	

## Tuesday 30 November

### 08:50–10:10 Parallel Session 1A

*Session Chair: Alastair McNaughton*

*20 minute presentations*

*ClockTower 039*

Geoff Leyland

*Rima: Building Math Models for Reuse ..... 170*

Andrew Mason<sup>†</sup> and Iain Dunning

*OpenSolver -- Open Source Optimisation for Excel..... 181*

Michael O’Sullivan,<sup>†</sup> Qi-Shan Lim, Cameron Walker and Stu Mitchell

*Dippy -- A Simplified Interface to Advanced Integer Programming Techniques.. 191*

Alastair McNaughton<sup>†</sup> and David Ryan

*Constraint Branching Techniques ..... 201*

### 08:50–10:10 Parallel Session 1B

*Session Chair: John Buchanan*

*ClockTower 029, 20 minute presentations*

Christopher Arasanmi

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*Analyzing the Brazilian Higher Education System Using System Dynamics ..... 210*

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Stuart Dillon, John Buchanan,<sup>†</sup> Jim Corner

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*20 minute presentations*

*ClockTower 039*

David Ryan

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*20 minute presentations*

*ClockTower 029*

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*Session Chair: David Ryan*

*ClockTower 039*

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*Session Chair: Hamish Waterer*

*20 minute presentations*

*ClockTower 039*

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*20 minute presentations*

*ClockTower 029*

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*Session Chair: John F Raffensperger*

*20 minute presentations*

*ClockTower 029*

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<sup>†</sup> Presenting author