AI2013

and

PRIMA2013

26th Australasian Joint Conference on Artificial Intelligence

16th Int. Conference on Principles and Practice of Multi-Agent Systems

UNIVERSITY *of* OTAGO

Te Whare Wānanga o Otāgo

NEW ZEALAND

Programme of Events – Overview

Sunday 1 December	Monday 2 December	Tuesday 3 December	Wednesday 4 December	Thursday 5 December	Friday 6 December
Agent School	**Doctoral Consortium**	**Workshops and Tutorial**	AI2013 and PRIMA2013 Main Conferences		
Commerce Building Rooms C02.04 and C02.07	Commerce Building Room C02.07	Commerce Building Room C02.19 AIH & CARE Room C02.07 MLSDA Room C02.04 COIN Room C02.18 Tutorial	Conference Welcome & Keynote Archway 4 **AI Sessions** Archway 4 **PRIMA Sessions** Archway 2	**Keynotes** Archway 4 **AI Sessions** Archway 4 **PRIMA Sessions** Archway 2	**Keynote** Archway 4 **AI Sessions** Archway 4 **PRIMA Sessions** Archway 2
			Welcome Reception St Margaret's College **6.00pm**	**Conference Dinner** Larnach's Castle **6.10pm** Coaches Depart	**Closing Session 6.00pm** in Archway 4

Programme of Events – Session Details

Sunday 1 December

Agent School
Commerce Building
Rooms C02.04 and C02.07

Session 1
8.30-10.00am

Track A: Agent and services

Track B: Self-Organising Multi-Agent Systems

Refreshment Break – **10.00-10.30am**

Session 2
10.30am-12.00noon

Track A: Game-theory

Track B: Computational Justice

Lunch Break – **12:00-1:00pm**

Session 3
1.00-3.00pm

Track A: Normative Systems

Track B: Automated Negotiation

Refreshment Break – **3.00-3.30pm**

Session 4
3.30-5.30pm

Track A: Agent-based Social Simulation

Monday 2 December

Doctoral Consortium
Commerce Building
Room C02.07

Welcome
9.30-9.35am
Dr John Thangarajah

What is a PhD?
9.35-10.25am
Professor Albert Yeap

Refreshment Break – **10.25-10.40am**

Student Presentations
10.40-11.20am
Group 1

The (Dog's) Life of a Modern Academic
11.20-12.00noon
Dr Jeremy Pitt

Lunch Break – **12.00-1.30pm**
With mentors

Student Presentations
1.30-2.40pm
Group 2

Poster Session
2.30-3.15pm
Group 1

Refreshment Break – **3.15-3.30pm**

Poster Session
3.30-4.15pm
Group 2

Panel Discussion
4.15-5.00pm
Associate Professor Michael Winikoff,
Dr Jeremy Pitt, Professor Aditya Ghose
and Professor Albert Yeap

Tuesday 3 December

Workshops and Tutorial
Commerce Building
Room C02.19 AIH & CARE; Room C02.07 MLSDA; Room C02.04 COIN; Room C02.18 Tutorial

AIH 2013

The Third Australasian Workshop on Artificial Intelligence in Health

   jointly with

CARE 2013

The Fourth International Workshop on Collaborative Agents – Research and Development

Workshop Programme available at

www.csse.monash.edu.au/~xtg/CARE2013/

Room C02.19
8.30-8.45am Registration

IMPORTANT: Please refer to website for confirmed start time

8.45am-5.30pm Technical Sessions

MLSDA 2013 Workshop on Machine Learning for Sensory Data Analysis

Workshop Programme available at

www.covic.otago.ac.nz/MLSDA13/program.html

Room C02.07
8.30-8.45am Registration

8.45am-5.30pm Technical Sessions
Including invited presentations

COIN@PRIMA2013 Workshop on Co-ordination, Organizations, Institutions and Norms in Agent Systems, including a special track on Agent-Based Modelling for Policy Engineering

Workshop Programme available at

http://coin2013-prima.tudelft.nl/WorkshopProgram.html

Room C02.04
8.30-9.00am Registration

9.00am-5.00pm Technical Sessions
Including invited presentations by Stephen Cranefield and Jeremy Pitt

Tutorial
Theory and Applications of State Space Models for Time Series Data
Presented by Peter Tino

Room C02.18
8.30-9.00am Registration

9.00am-5.00pm Tutorial

AI2013

PRIMA2013

Conference Welcome
8.30-9.00am, Archway 4

Keynote One
Pascal Van Hentenryck
9.00-10.00am, Archway 4

Refreshment Break
10.00-10.30am, Commerce Atrium

Session 1
Machine Learning
10.30am-12.30pm, Archway 4

Session 1
Agent Architectures and Simulation
10.30am-12.30pm, Archway 2

Lunch
12.30-1.30pm, Commerce Atrium

Session 2
Machine Learning & Evolutionary
Computation
1.30-3.30pm, Archway 4

Session 2
Logics of Agency & Agent Communication
1.30-3.30pm, Archway 2

Refreshment Break
3.30-4.00pm, Commerce Atrium

Session 3
Cognitive Modelling & Knowledge
Representation
4.00-6.00pm, Archway 4

Session 3
Robotic Systems and Agent Applications
4.00-6.00pm, Archway 2

Reception
6.00pm onwards
refer to "Social Events"

AI2013

Keynote Two
Nigel Gilbert
9.00-10.00am, Archway 4

Refreshment Break
10.00-10.30am, Commerce Atrium

PRIMA2013

Session 4
Knowledge Representation & Natural
Language Processing
10.30am-12.30pm, Archway 4

Lunch
12.30-1.30pm, Commerce Atrium

Session 4
Normative Multi-Agent Systems
10.30am-12.30pm, Archway 2

KeynoteThree
Fangzhen Lin
1.30-2.30pm, Archway 4

Session 5
Agents
2.30-3.30pm, Archway 4

Session 5
Learning and Emergence
2.30-3.30pm, Archway 2

Refreshment Break
3.30-4.00pm, Commerce Atrium

Session 6
6A: Planning and Scheduling
4.00-5.00pm, Archway 4
6B: Panel Discussion
5.00-6.00pm, Archway 4
AINZAC - AI New Zealand Australia
Collaboration

Session 6
Institutions, Norms and Applications
4.00-6.00pm, Archway 2

Conference Dinner
6.10pm - Coaches depart
refer to "Social Events"

AI2013

Keynote Four
Aditya Ghose
9.00-10.00am, Archway 4

PRIMA2013

Refreshment Break
10.00-10.30am, Commerce Atrium

Session 7
Search & Game Playing
10.30am-12.30pm, Archway 4

Session 7
Negotiation and Argumentation
10.30am-12.30pm, Archway 2

Lunch
12.30-1.30pm, Commerce Atrium

Session 8
Computer Vision & Optimisation
1.30-3.30pm, Archway 4

Session 8
Distributed Problem Solving
1.30-3.30pm, Archway 2

Refreshment Break
3.30-4.00pm, Commerce Atrium

Session 9
AI Applications
4.00-6.00pm, Archway 4

Session 9
Mechanism Design and Agent Applications
4.00-6.00pm, Archway 2

Closing Session
6.00pm, Archway 4

Keynotes and Paper Details

KEYNOTE ONE

Professor Pascal Van Hentenryck

9.00-10.00am
Archway 4

Pascal leads the Optimization Research Group at NICTA, whose research focuses on optimization, algorithmic decision theory, logistics and supply chains, energy systems, and disaster management. He is also a professor at the University of Melbourne.

He is the recipient of two Honorary degrees, the 2002 Informs ICS Award for research excellence at the intersection of operations research and computer, the 2006 ACP Award for research excellence in constraint programming, the 2010-2011 Philip J. Bray Award for Excellence in Undergraduate Teaching at Brown University. He is a 2013 IFORS distinguished lecturer and a fellow of the Association for the Advancement of Artificial Intelligence. He is the author of five MIT Press books and has developed a number of innovative optimization systems that are widely used in academia and industry. His research on disaster management has been deployed to help federal agencies in the United States mitigate the effects of hurricanes on coastal areas.

Title: Computational Disaster Management

Abstract: The frequency and intensity of natural disasters has significantly increased over the past decades and this trend is predicted to continue. Natural disasters have dramatic impacts on human lives and on the socio-economic welfare of entire regions; they are identified as one of the major risks of the East Asia and Pacific region. Dramatic events such as Hurricane Katrina and the Tohoku tsunami have also highlighted the need for decision-support tools in preparing, mitigating, responding, and recovering from disasters.

In this talk, I will present an overview of some recent progress in using optimization for disaster management and, in particular, in relief distribution, power system restoration, and evacuation planning and scheduling. I will argue that optimization has a significant role to play in all aspects of disaster management, from policy formulation to mitigation, operational response, and recovery, using examples of systems deployed during hurricanes Irene and Sandy. Moreover, I will indicate that disaster management raises significant computational challenges for AI technologies which must optimize over complex infrastructures in uncertain environments. Finally, I will conclude by identifying a number of fundamental research issues for AI in this space.

AI2013

Machine Learning

10.30am-12.30pm

Archway 4

Chair – Jeremiah Deng

- Propositionalisation of Multi-instance Data using Random Forests *(Eibe Frank and Bernhard Pfahringer)*

- An Effective Method for Imbalanced Time Serial Classification: Hybrid Sampling *(Guohua Liang)*

- Computer Aided Diagnosis of ADHD using Brain Magnetic Resonance Images *(B.S. Mahanand, R. Savitha, and S. Suresh)*

- Evaluating Sparse Codes on Handwritten Digits *(Linda Main, Benjamin Cowley, Adam Kneller, and John Thornton)*

- A New Paradigm for Pattern Classification: Nearest Border Techniques *(Yifeng Li, B. John Oommen, Alioune Ngom, and Luis Rueda)*

- Learning Polytrees With Constant Number of Roots From Data *(Javad Safaei, Ján Maňuch, and Ladislav Stacho)*

PRIMA2013

Session 1
Agent Architectures and Simulation
10.30am-12.30pm

Archway 2

Chair – Martin Purvis

- Incorporating PGMs into a BDI architecture *(Yingke Chen, Jun Hong, Weiru Liu, Lluís Godo, Carles Sierra and Michael Loughlin)*

- Improving the reactivity of BDI agent programs *(Hoa Khanh Dam, Tiancheng Zhang and Aditya Ghose)*

- The Impact of Exchanging Opinions in Political Decision-making on Voting by Using Multi-agent Simulation *(Yuichiro Sudo, Shohei Kato and Atsuko Mutoh)*

- GAMA v. 1.6: Advancing the art of complex agent-based modeling and simulation *(Arnaud Grignard, Patrick Taillandier, Benoit Gaudou, Nghi Quang Huynh, Duc-An Vo and Alexis Drogoul)*

- Towards semantic merging of versions of BDI agent system *(Yingzhi Gou, Hoa Khanh Dam and Aditya Ghose) (Short paper)*

AI2013

Session 2
Machine Learning & Evolutionary Computation
1.30-3.30pm
Archway 4

Chair – Grant Dick

- MML Ridge Regression for Generalised Linear Models
  (Daniel F. Schmidt and Enes Makalic)

- Ultimate Order Statistics-based Prototype Reduction Schemes *(A. Thomas and B. John Oommen)*

- Learning Risky Driver Behaviours from Multi-Channel Data Streams using Genetic Programming *(Feng Xie, Andy Song, Flora Salim, Athman Bouguettaya, Timos Sellis, and Doug Bradbrook)*

- Particle Swarm Optimisation and Statistical Clustering for Feature Selection *(Mitchell C. Lane, Bing Xue, Ivy Liu, and Mengjie Zhang)*

- Evaluating the Seeding Genetic Algorithm *(Ben Meadows, Patricia J. Riddle, Cameron Skinner, and Michael W. Barley)*

- A Constructive Artificial Chemistry To Explore Open-Ended Evolution *(Thomas J. Young and Kourosh Neshatian)*

PRIMA2013

Session 2
Logics of Agency & Agent Communication
1.30-3.30pm
Archway 2

Chair – Guido Governatori

- Reaching your goals without spilling the beans: Boolean secrecy games *(Nils Bulling, Sujata Ghosh and Rineke Verbrugge)*

- Agents homogeneous: A procedurally anonymous semantics characterizing the homogeneous fragment of ATL *(Sjur Kristoffer Dyrkolbotn and Truls Pedersen)*

- Defendable Security in Interaction Protocols *(Wojtek Jamroga, Matthijs Melissen and Henning Schnoor)*

- SAT-based Bounded Model Checking for Weighted Interpreted Systems and Weighted Linear Temporal Logic *(Bozena Wozna-Szczesniak, Andrzej Zbrzezny and Agnieszka Zbrzezny)*

- Information Dependencies in MCS: Conviviality-Based Model and Metrics *(Patrice Caire and Antonis Bikakis) (Short paper)*

AI2013

Session 3
Cognitive Modelling & Knowledge Representation
4.00-6.00pm
Archway 4

Chair – Michael Maher

- Evidence for response consistency supports polychronous neural groups as an underlying mechanism for representation and memory *(Mira Guise, Alistair Knott, and Lubica Benuskova)*

- Affect Detection from Virtual Drama *(Li Zhang, John Barnden, and Alamgir Hossain)*

- Updates and Uncertainty in CP-nets *(Cristina Cornelio, Judy Goldsmith, Nicholas Mattei, Francesca Rossi, and K. Brent Venable)*

- Some Complexity Results for Distance-Based Judgment Aggregation *(Wojciech Jamroga and Marija Slavkovik)*

- Conjunctive Query Answering in CFDnc: A PTIME Description Logic with Functional Constraints and Disjointness *(David Toman and Grant Weddell)*

PRIMA2013

Session 3
Robotic Systems and Agent Applications
4.00-6.00pm
Archway 2

Chair – Frank Dignum

- A Human-Inspired Collision Avoidance Method for Multi-robot and Mobile Autonomous Robots *(Fan Liu and Ajit Narayanan)*

- A Reliability Analysis Technique for Estimating Sequentially Coordinated Multirobot Mission Performance *(John Porter, Kawa Cheung, Joseph Giampapa and John Dolan)*

- Designing a Multiagent System for Course-Offering Determination *(Fuhua Lin and Wu Chen)*

- Using Agent Technology for Ambient Assisted Living *(Nikolaos Spanoudakis and Pavlos Moraitis) (Short paper)*

- Computational Model of Affective Moral Decision Making that predicts Human Criminal Choices *(Matthijs Pontier, Jean-Louis van Gelder and Reinout de Vries) (Short paper)*

KEYNOTE TWO

Professor Nigel Gilbert

Nigel Gilbert is Director of the Centre for Research in Social Simulation (CRESS) and Professor of Sociology at the University of Surrey, UK. He has been involved in the agent-based modelling of social phenomena since the early 1990s. He helped to establish the European Social Simulation Association (ESSA) and is founding editor of the Journal of Artificial Societies and Social Simulation (JASSS). In addition to the methodology of agent-based modelling in the social sciences, his research interests cover the processes of scientific discovery and innovation, sociological aspects of environmental management, and the sociology of the internet. His publications include Simulation for the Social Scientist (with Klaus G. Troitzsch, Open University Press, 2005) and Agent-Based Models (Sage, 2008). See www.surrey.ac.uk/sociology/people/nigel_gilbert/

Title: Agents might not be people

Abstract: In most agent-based systems, the agents are intended to represent individual people. This is not surprising as we tend to think of the social world as being driven by the actions of individuals (so-called 'methodological individualism'). On occasion, however, we develop models in which the agents represent firms, nation states or other collectivities, without considering deeply the implications of doing so.

In this talk, I shall discuss the opportunities for agent-based models that are based on non-human agents, using several examples. First, I outline the defining features of an 'agent'. I then consider a model, the Simulating Knowledge dynamics of Innovation Networks (SKIN) model, in which the agents are firms, considering the ways in which the firms are similar to and different from human actors. Then I describe a simulation of academic science in which scientific papers, normally considered to be objects rather than actors, can usefully be represented as agents, and interpret this model in terms of actor-network theory. Finally, I describe recent work on modelling social practices for which theory sees people as being the substrate on which social practices are carried, and discuss the perennial issue of the extent to which it is useful to see the macro level emerge from the micro, and the micro being affected by the macro. I conclude by recommending that we should be readier to consider non-human agents when modelling the social world.

AI2013

Session 4
Knowledge Representation & Natural Language Processing
10.30am-12.30pm
Archway 4

Chair – Ji Ruan

- Bisimulation for single-agent plausibility models *(Mikkel Birkegaard Andersen, Thomas Bolander, Hans van Ditmarsch, and Martin Holm Jensen)*

- An Efficient Tableau for Linear Time Temporal Logic *(Ji Bian, Tim French, and Mark Reynolds)*

- Relative Expressiveness of Well-Founded Defeasible Logics *(Michael J. Maher)*

- Supraclassical Consequence Relations: Tolerating Rare Counterexamples *(Willem Labuschagne, Johannes Heidema, and Katarina Britz)*

- Enhanced N-gram Extraction Using Relevance Feature Discovery *(Mubarak Albathan, Yuefeng Li, and Abdulmohsen Algarni)*

- A neural network model of visual attention and group classification, and its performance in a visual search task *(Hayden Walles, Anthony Robins, and Alistair Knott)*

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Session 4
Normative Multi-Agent Systems
10.30am-12.30pm
Archway 2

Chair – Jeremy Pitt

- Evaluating the Cost of Enforcement by Agent-based Simulation: A Wireless Mobile Grid Example *(Tina Balke, Julian Padget and Marina De Vos)*

- Compliant business process design by declarative specifications *(Francesco Olivieri, Guido Governatori, Simone Scannapieco and Matteo Cristani)*

- Social Norm Recommendation in Virtual Agent Societies *(Bastin Tony Roy Savarimuthu, Julian Padget and Maryam A. Purvis)*

- Norm Representation and Reasoning: a Formalization in Event Calculus *(Wagdi Alrawagfeh)*

- nADICO: A Nested Grammar of Institutions *(Christopher Frantz, Martin Purvis, Mariusz Nowostawski and Bastin Tony Roy Savarimuthu) (Short paper)*

KEYNOTE THREE

Professor Fangzhen Lin

1.30-2.30pm
Archway 4

Fangzhen Lin is Professor of Computer Science and Engineering at the Hong Kong University of Science and Technology. He received his Ph.D. in computer science from Stanford University, and before coming to Hong Kong, spent several years as a post-doctoral researcher at the University of Toronto. His main research area is Knowledge Representation and Reasoning.

He received the Croucher Foundation Senior Research Fellowship award in 2006, a Distinguished Paper Award at IJCAI-1997, a Best Paper Award at KR-2000, an Outstanding Paper Honorable Mention at AAAI-2004, the Ray Reiter Best Paper award at KR-2006, and an Honorable Mention for his planner R at the AIPS-2000 planning competition. He is currently an Associate Editor and Chair of the Awards Committee of Artificial Intelligence journal, and had been on the Advisory Board of Journal of Artificial Intelligence Research. He was program co-chairs of KR 2010 and LPNMR 2009, and has served on the program committees of numerous international conferences in AI. More information about him can be found on his web page. www.cs.ust.hk/~flin

Title: Satisfiability to Linear Algebra

Abstract: Satisfiability of boolean formulas (SAT) is an interesting problem for many reason. It was the first problem proved to be NP-complete by Cook. Efficient SAT solvers have many applications. In fact, there is a huge literature on SAT, and its connections with other optimization problems have been explored. In this talk, I discuss a way to map clauses to linear combinations, and sets of clauses to matrices. Through this mapping, satisfiability is related to linear programming, and resolution to matrix operations.

AI2013

Session 5
Agents
2.30-3.30pm
Archway 4

Chair – John Thangarajah

- A Logic Framework of Bargaining with Integrity Constraints *(Xiaoxin Jing, Dongmo Zhang, and Xudong Luo)*

- Security Games with Ambiguous Information about Attacker Types *(Youzhi Zhang, Xudong Luo, and Wenjun Ma)*

- A mechanism to improve efficiency for negotiations with incomplete information *(Quoc Bao Vo)*

PRIMA2013

Session 5
Learning and Emergence
2.40-3.30pm
Archway 2

Chair – Tina Balke

- Emotional Multiagent Reinforcement Learning in Social Dilemmas *(Chao Yu, Minjie Zhang and Fenghui Ren)*

- A Multi-agent Based Migration Model for Evolving Cooperation in the Spatial N-Player Snowdrift Game *(Raymond Chiong and Michael Kirley)*

AI2013

Session 6A
Planning and Scheduling
4.00-5.00pm
Archway 4

Chair – Michael Thielscher

- Evolving Stochastic Dispatching Rules for Order Acceptance and Scheduling via Genetic Programming *(John Park, Su Nguyen, Mark Johnston, and Mengjie Zhang)*

- Detecting Mutex Pairs in State Spaces by Sampling *(Mehdi Sadeqi, Robert C. Holte, and Sandra Zilles)*

- Scheduling for Optimal Response Times in Queues of Stochastic Workflows *(Michal Wosko, Irene Moser, and Khalid Mansour)*

Session 6B
Panel Discussion
5.00-6.00pm
Archway 4

Chair – Michael Thielscher

- AINZAC – AI New Zealand Australia Collaboration

PRIMA2013

Session 6
Institutions, Norms and Applications
4.00-6.00pm
Archway 2

Chair – Virginia Dignum

- Procedural Justice and `Fitness for Purpose' of Self-Organising Electronic Institutions *(Jeremy Pitt, Dídac Busquets and Regis Riveret)*

- A methodology for plan revision under norm and outcome compliance *(Simone Scannapieco, Guido Governatori, Francesco Olivieri and Matteo Cristani)*

- On the Development of an MAS Based Evacuation Simulation System: Autonomous Navigation & Collision Avoidance *(Leonel Enrique Aguilar Melgar, Wijerathne Maddegedara Lalith Lakshman, Muneo Hori, Tsuyoshi Ichimura and Seizo Tanaka) (Short paper)*

- A Computational Agent Model of Physical Activity Based on Social Cognitive Theory *(Julienka Mollee and Natalie Van Der Wal) (Short paper)*

- Evaluating the Impact of Human-Agent Teamwork Communication Model (HAT-CoM) on the Development of Shared Mental Model *(Nader Hanna, Deborah Richards and Michael Hitchens) (Short paper)*

KEYNOTE THREE

Professor Aditya Ghose

Aditya Ghose is Professor of Computer Science at the University of Wollongong. He leads a team conducting research into knowledge representation, agent systems, services, business process management, software engineering and optimization and draws inspiration from the cross-fertilization of ideas from this spread of research areas. He works closely with some of the leading global IT firms. Ghose is President of the Service Science Society of Australia and Vice-President of CORE, Australia's apex body for computing academics. He holds PhD and MSc degrees in Computing Science from the University of Alberta, Canada (he also spent parts of his PhD candidature at the Beckman Institute, University of Illinois at Urbana Champaign and the University of Tokyo) and a Bachelor of Engineering degree in Computer Science and Engineering from Jadavpur University, Kolkata, India. In his spare time, Ghose explores how computer science can contribute to a better understanding of the history of civilization.

Title: Agents in the era of big data: What the "end of theory" might mean for agent systems

Abstract: Our ability to collect, manage and analyze vast amounts of data has led some to predict the demise of theory. This has important implications for research in agent systems. It can mean that specifications of agent intent, or of agent behaviour, or the norms that constrain agent behaviour can be learnt from data and maintained in the face of continuous data streams. I will offer some examples of how the agents community is beginning to leverage data in this fashion, and what the challenges might be in the future.

AI2013

Session 7
Search & Game Playing
10.30am-12.30pm
Archway 4

Chair – Abhaya Nayak

- Diversify intensification phases in local search for SAT with a new probability distribution *(Thach-Thao Duong, Duc-Nghia Pham, and Abdul Sattar)*

- A New Efficient In Situ Sampling Model for Heuristic Selection in Optimal Search *(Santiago Franco, Michael W. Barley, and Patricia J. Riddle)*

- Model Checking for Reasoning about Incomplete Information Games *(Xiaowei Huang, Ji Ruan, and Michael Thielscher)*

- Game Description Language Compiler Construction *(Jakub Kowalski and Marek Szykuła)*

- Neuroevolution for Micromanagement in the Real-Time Strategy Game Starcraft: Brood War *(Jacky Shunjie Zhen and Ian Watson)*

- Towards General Game-Playing Robots: Models, Architecture and Game Controller *(David Rajaratnam and Michael Thielscher)*

PRIMA2013

Session 7
Negotiation and Argumentation
10.30am-12.30pm
Archway 2

Chair – Makoto Yokoo

- An Efficient Route Minimization Algorithm for the Vehicle Routing Problem with Time Windows based on Agent Negotiation *(Petr Kalina, Jirí Vokrínek and Vladimír Marík)*

- Higher-order theory of mind in negotiations under incomplete information *(Harmen De Weerd, Rineke Verbrugge and Bart Verheij)*

- Non-Standard Uses of PIRIKA: Pilot of the Right Knowledge and Argument *(Yutaka Oomidou, Hajime Sawamura, Takeshi Hagiwara and Jacques Riche)*

- Agent's Strategy in Multiple-Issue Negotiation Competition and Analysis of Result *(Shota Morii and Takayuki Ito) (Short paper)*

- A Framework for Analyzing Simultaneous Negotiations *(Yoshinori Tsuruhashi and Naoki Fukuta) (Short paper)*

AI2013

Session 8
Computer Vision & Optimisation
1.30-3.30pm
Archway 4

Chair – Brendan McCane

- A One-shot Learning Approach to Image Classification using Genetic Programming *(Harith Al-Sahaf, Mengjie Zhang, and Mark Johnston)*

- Event Detection using Quantized Binary Code and Spatial-Temporal Locality Preserving Projections *(Hanhe Lin, Jeremiah D. Deng, and Brendon J. Woodford)*

- Growing neural gas video background model (GNG-BM) *(Munir Shah, Jeremiah D. Deng, and Brendon J. Woodford)*

- Image Segmentation with Adaptive Sparse Grids *(Benjamin Peherstorfer, Julius Adorf, Dirk Pflüger, and Hans-Joachim Bungartz)*

- A Framework for the Evaluation of Methods for Road Traffic Assignment *(Syed Galib and Irene Moser)*

- Constraint Optimization for Timetabling Problems using a Constraint Driven Solution Model *(Anurag Sharma and Dharmendra Sharma)*

PRIMA2013

Session 8
Distributed Problem Solving
1.30-3.30pm
Archway 2

Chair – Aditya Ghose

- Embedding Preference Ordering for Single-phase Self-stabilizing DCOP Solvers *(Toshihiro Matsui, Marius Silaghi, Katsutoshi Hirayama, Makoto Yokoo and Hiroshi Matsuo)*

- Decentralized Area Partitioning for a Cooperative Cleaning Task *(Chihiro Kato and Toshiharu Sugawara) (Short paper)*

- Modeling and Algorithm for Dynamic Multi-Objective Distributed Optimization *(Maxime Clement, Tenda Okimoto, Tony Ribeiro and Katsumi Inoue) (Short paper)*

- Lightweight Distributed Adaptive Algorithm for Voting Procedures by using Network Average Consensus *(Clement Duhart, Michel Cotsaftis and Cyrille Bertelle) (Short paper)*

- A New Ant Colony Optimization Method Considering Intensification and Diversification *(Mitsuru Haga and Shohei Kato) (Short paper)*

AI2013

Session 9
AI Applications
4.00-6.00pm
Archway 4

Chair – Alistair Knott

- Protein Fold Recognition Using an Overlapping Segmentation Approach and a Mixture of Feature Extraction Models *(Abdollah Dehzangi, Kuldip Paliwal, Alok Sharma, James Lyons, and Abdul Sattar)*

- Neighborhood Selection in Constraint-Based Local Search for Protein Structure Prediction *(Swakkhar Shatabda, M.A. Hakim Newton, and Abdul Sattar)*

- On Caching for Local Graph Clustering Algorithms *(René Speck and Axel-Cyrille Ngonga Ngomo)*

- Provenance-Based Trust Estimation for Service Composition *(Jing Jiang and Quan Bai)*

- 3D EEG Source Localisation: A preliminary investigation using MML *(Thi H. Kyaw and David L. Dowe)*

- DEPTH: A Novel Algorithm for Feature Ranking with Application to Genome-wide Association Studies *(Enes Makalic, Daniel F. Schmidt, and John L. Hopper)*

PRIMA2013

Session 9
Mechanism Design and Agent Applications
4.00-6.00pm
Archway 2

Chair – Toshihiro Matsui

- Strategy-proof mechanisms for the k-winner selection problem *(Yuko Sakurai, Tenda Okimoto, Masaaki Oka and Makoto Yokoo)*

- Repeated Auctions for Reallocation of Tasks with Pickup and Delivery upon Robot Failure *(Bradford Heap and Maurice Pagnucco (Short paper)*

- Prosperity and decline of online communities *(Kimitaka Asatani, Fujio Toriumi, Hirotada Ohashi, Mitsuteru Tashiro and Ryuichi Suzuki) (Short paper)*

- Context-Aware Mobile Augmented Reality for Library Management *(Adrian Shatte, Jason Holdsworth and Ickjai Lee) (Short paper)*

- Estimating Arrival Time of Pedestrian Using Walking Logs *(Yui Okuda and Yasuhiko Kitamura) (Short paper)*

Social Events

Wednesday 4 December

The Conference Reception will be held at St Margaret's College commencing at 6.00pm. The College is located in the heart of the campus and is a peaceful setting for you to take the opportunity to meet other delegates. Light food and refreshments will be available.

Thursday 5 December

The Conference Dinner will be held at Larnach Castle. Coaches will leave at 6.10pm from the Union Street entrance to the Commerce Building to take you to the venue. The journey to the Castle will take approximately 30 minutes and you will travel around the Dunedin Harbour and up Highcliff Road on the Peninsula Hills to the Castle. You will have the opportunity to explore New Zealand's only Castle and its beautiful gardens before the Haggis Ceremony and dinner commences. Coaches will leave the Castle at approximately 9.15pm for the return journey to the city. The coaches will make stops in the central city and the Commerce Building.

Committees

AI2013

General Chairs
Michael Winikoff, University of Otago
Abdul Sattar, Griffith University

Programme Chairs
Stephen Cranefield, University of Otago
Abhaya Nayak, Macquarie University

Finance Chair
Stephen Hall-Jones, University of Otago

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Autonomous Agents and Multiagent Systems

Useful Information

University of Otago Campus

If you need after hours assistance, the Campus Watch operator is available 24 hours on phone +64 3 479 5000.

There is a small map of the campus on the back page of this Programme Booklet.

A full Campus Map is available at:
www.otago.ac.nz/about/otago042558.pdf

Dunedin Dining

Dunedin has a large number of restaurants and cafes offering a variety of menus.
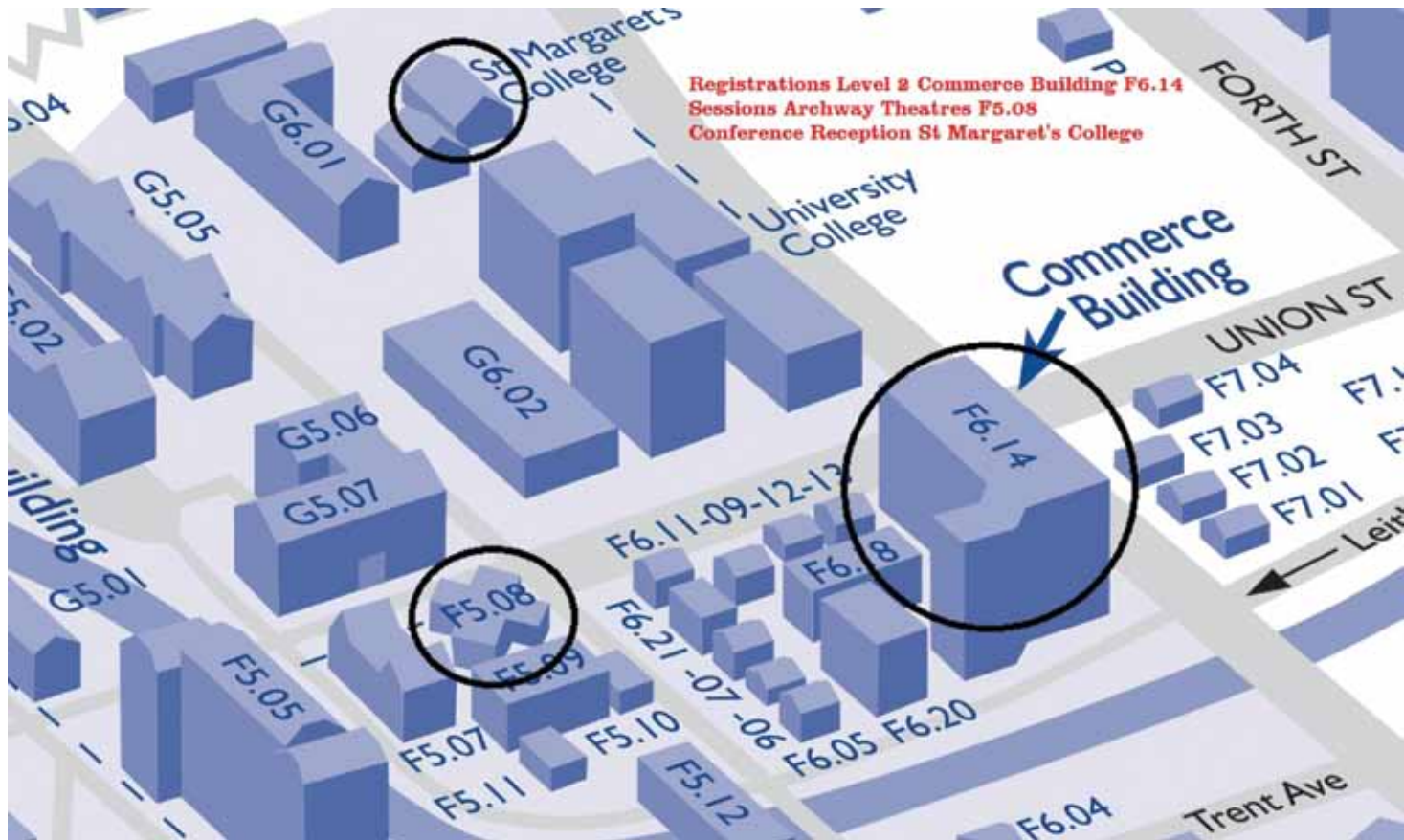
www.menumania.co.nz/restaurants/browse/dunedin-city

www.menus.co.nz/restaurants/dunedin-city-centre/

Weather

Dunedin weather can be changeable with variations in temperature from a cool 10degrees to a warm 25degrees Celsius at this time of year.

Dunedin Weather forecast available at

Notes

Registrations Level 2 Commerce Building F6.14
Sessions Archway Theatres F5.08
Conference Reception St Margaret's College

St Margaret's College

University College

Commerce Building

FORTH ST

UNION ST

G6.01

G5.05

G5.04

G5.02

G6.02

G5.06

G5.07

G5.01

uilding

Building

F5.05

F5.07

F5.11

F5.12

F5.10

F5.08

F5.09

F6.11-09-12-13

F6.21 -07 -06

F6.08

F6.18

F6.14

F6.05

F6.20

F6.04

F7.04

F7.03

F7.02

F7.01

Leith

Trent Ave