



# CIAO Newsletter

Centre for Informatics & Applied Optimization

School of Information Technology & Mathematical Sciences

Edition 10, August 2005

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## News

### Two New Research Clusters

Two new Research Clusters were approved by those present at the August 2005 CIAO Meeting.

Their subject areas expand our expertise in two important research areas:

### **CERMITS: Cluster for Educational Research in Mathematics, IT and Statistics**

This new Cluster will focus on educational research in mathematics, information technology and statistics, and will be led by Dr Robyn Pierce.

Cluster members will include Ms Sandra Herbert, Ms Marijke Heywood, Mr Scott Hebbard, Dr Charlynn Miller, Dr Chris Turville, Dr David Stratton and Dr Phil Smith.

### **INSECT: Information Security Cluster**

This new Cluster will focus on information security and will be led by Professor Mirka Miller and Professor Sid Morris.

Cluster members will include Dr Joe Ryan, several Post-Graduate students and several Honours students.

The Cluster would be supported by Prof Miller's ARC Linkage Grant until mid-2006. The Cluster would also have links with Deakin University and with industry, and is keen to develop links with Telstra. Prof Miller will present a paper at a conference in Spain for INSECT.

### **AWOCA 2005**

ITMS will host the Sixteenth Australasian Workshop on Combinatorial Algorithms, on 18-21 September 2005 in Ballarat.

Professor Mirka Miller is the Workshop Chairperson. Professor Miller and the Organising Committee have received a large number of submissions; 44 papers have been accepted including 15 from ITMS.

There are eight invited speakers, and plans for this Workshop are proceeding well.

### **IWOON 2005**

The International Workshop on Optimal Networks will also be held in Ballarat later this year, on 4-5 December 2005.

Speakers are currently being invited, and attendance will be by invitation only. This will be a true workshop, with a maximum of approximately 20 people attending.

The workshop topic is "Construction of Large Graphs", and funding is being provided from Prof Miller's Discovery Grant.

It is proposed to include selected papers from the Workshop in a special issue of a journal.

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## CIAO Projects

An updated list of CIAO projects has now been placed on the CIAO website, with annual updates taking place in February each year.

The Chief Investigator of each project will submit a short report about project progress for the previous year. Then a decision will be made about each project continuing. New projects should also be included in the list.

## CIAO Reports

### Collaborative Centre for e-Health (CCeH)

CCeH is involved with the following projects:

#### Pharmacy Guild of Australia

CCeH is continuing work on its project with the Pharmacy Guild of Australia.

This project involves the development of a best practice model for the dispensing and monitoring of Schedule 4 and Schedule 8 drugs with dependency properties.

Several trials in pharmacies throughout Australia are currently under way, to collect data and assist in developing the best practice model.

#### Australian Healthcare Messaging Laboratory

The Australian Healthcare Messaging Laboratory (AHML) has recently completed its first message certification for Medical Objects Pty Ltd, with several more certifications currently being orchestrated for other software vendors.



### Combinatorics, Graphs & Network Topology (CGANT)

The CGANT Study Group met on Friday 5 August 2005.

ITMS PhD student Guillermo Pineda-Villavicencio presented the first half of Chapter Nine – Measurements of Closeness to Planarity – from the book Pearls in Graph Theory.

The third meeting of the CGANT Research Group for 2005 was also held on Friday 5 August 2005, at the University of Ballarat.

The meeting was very well attended and speakers included:

- Professor Gary Bloom, CUNY, USA: Difference Labellings of Complete Graphs and some of their Applications.
- Dr Ljiljana Brankovic, University of Newcastle: Open Problems in Data Security.
- Professor Pip Pattison, University of Melbourne: Social Networks.
- Dr Garry Robins, University of Melbourne: Small World Networks.
- Mrs Kiki Sugeng, ITMS PhD Student: Consecutive Edge Magic Total Labelling.
- Mr JianMin Tang: ITMS PhD Student: Hybrid Simulated Annealing and Genetic Algorithm for Degree/Diameter Problems.



### Data Mining & Informatics Research Group (DMIRG)

#### ADRAC Project

This project, focusing on discovering new approaches for detecting drugs responsible for adverse reactions and decision support, is nearing completion.

#### ARC Network Health Data Mining Workshop

Dr Musa Mammadov, Dr Adil Bagirov and Associate Professor John Yearwood travelled to Adelaide recently to attend the ARC Network Health Data Mining Workshop.

#### Computational Intelligence & Artificial Neural Networks

Work on the development of new neural learning algorithms, based on CIAO-developed optimisation techniques, has produced good results. A large number of papers have now been published, and much interest in being shown.

Techniques in modular neural networks are being developed, and there is potential for these to be applied to areas such as water and environmental modelling.

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## Text Categorization

There are now four doctoral students working in the area of text. They will present a combined workshop on their projects during September 2005, to initiate some dialogue in the area.

The new four processor 8GB (RAM) server is being used for these projects, and other computationally demanding requirements can also be supported.



## Distributed Simulation Laboratory (DSL)

### HLA Focus Group Meeting

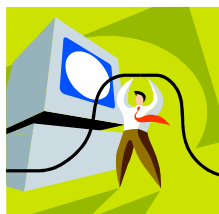
The first High Level Architecture Focus Group Meeting for 2005 was held on 22 June, and was attended by new and existing members.

HLA is a framework for allowing distributed simulation (ie: across many computers).

### TCL Bindings for High Level Architecture

Michael Fraser and Sina Pezeshk are currently doing some work for DSL, in providing TCL Bindings for High Level Architecture.

When completed, this work will enable DSL to incorporate TCL simulations into larger HLA federations. This work has attracted interest from the Defence Science & Training Organisation (DSTO), the Australian Institute of Sport (AIS), and the University of South Australia.



## Mathematical & Statistical Analysis Research Group (MASARG)

A major achievement has been the recent completion by Professor Sid Morris, and his co-author Professor Karl Hofmann, of their book on the Lie Theory of Pro-Lie Groups.

The book comprises about 700 pages, and is to be published in 2006 by the publishing arm of the European Mathematical Society. This publisher has an excellent reputation and produces books at reasonable prices.

Professor Morris has also recently completed a second edition of his 1998 book with Professor Hofmann, which will be published in either printed or electronic form.

Both books were completed in July 2005, during Professor Morris' visit to Israel and Germany.



## Intelligent Finance Cluster (IFC)

### International Institute of Financial Prediction (IIFP)

Dr Heping Pan has been instrumental in setting up a new body known as the International Institute of Financial Prediction (IIFP).

The concept for IIFP resulted from new material presented at last year's highly successful First International Workshop on Intelligent Finance (IWIF1), held in Melbourne and attended by leading international experts.

IIFP is currently in the start-up phase, is already building links with China, with the view to ultimately gaining broad international exposure.

### Financial Market Intelligence (FMI) Project Team

This new project team has been formed with the following objectives:

1. Building and maintaining a complete picture of the global financial markets on a real-time basis.
2. Finding and capturing opportunities for profitable investing and trading in the tradeable markets.
3. Assessing and managing market risks.

The FMI Project Team consists of two staff members, Dr Heping Pan and Dr Cameron Hurst, two Masters students, and two Honours students.

The project aims to create the basic platform of a completed FMI system, involving:

- o Web-based appearance and integration.
- o Dynamical database and data warehousing.
- o Market data visualization and technical analysis.

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- Dynamical market monitoring and opportunity detection (market and stock selection).
- Risk assessment and forecasting.
- Market index and price prediction on multiple time frames.
- Construction and dynamical optimization of international asset portfolios.



## Conferences & Seminars

### **Contemporary Ramifications of Banach Space Theory Conference, Jerusalem, 20-24 June 2005**

Dr David Yost attended this conference as an invited speaker, where he presented a paper titled *Quasilinear mappings and polyhedra*.

### **HL7 Asia-Pacific Meeting, Taiwan**

Chris Lynton-Moll presented a paper titled *Supporting eHealth Messaging Standards: Meeting the Challenge of Conformance Testing* at this meeting in Taiwan, and it was very well received.

### **SCP 2005, Stability and Control Processes Conference, St Petersburg, Russia, 29 June-2 July 2005**

Dr Nadejda Soukhoroukova attended this conference and presented a paper titled *A generalisation of V-P theorem and basis exchange in the case of polynomial splines*.

### **Eighth International Symposium on Generalised Convexity/Monotonicity, Varese, Italy, 4-8 July 2005**

Dr Eldar Hajilarov attended this conference and presented a paper titled *Degrees of Maximums of Differentiable Mappings*.

### **Third International Conference on Information Technology and Applications, ICITA 2005, Sydney, 4-7 July 2005**

Dr Sagarmay Deb attended this conference and presented a paper titled *Experiments on Emergence Index in Content-Based Image Retrieval*.

### **Algorithms and Complexity in Durham Workshop, University of Durham, UK, 8-10 July 2005**

Dr Prabhu Manyem presented a talk on *Syntactic Characterisations of Polynomial Time Optimisation Classes* at this Workshop.

### **International Conference on Delegated Portfolio Management and Investor Behaviour, Sichuan University, Chandu, China, 9-10 July 2005**

Dr Heping Pan attended this conference and presented a paper titled *A Swingtum Framework for Intelligent Swing and Momentum Trading*.

### **MLDM 2005: IAPR International Conference on Machine Learning & Datamining, Leipzig, Germany, 9-11 Jul 2005**

Associate Professor John Yearwood attended this conference and presented two papers:

1. Comparative Analysis of Genetic Algorithms Simulated Annealing and Cutting Angle Method for Artificial Neural Networks.
2. Determining Regularization Parameters for Derivative Free Neural Learning.

### **The Twenty-Second IFIP TC7 Conference on System Modeling and Optimization, Turin, Italy, 18-22 July 2005**

Dr Alex Kruger attended this conference and presented a paper titled *Stationarity and Regularity of Set Systems*.

### **CISTM 2005, Gurgaon, India, 24-26 July 2005**

Dr Rana Ghosh attended this conference and presented a paper titled *On some special properties of a neural hybrid learning method*.

Mrs Moumita Ghosh & Dr Rana Ghosh also presented the paper titled *A CAD system using clustering and novel feature extraction technique* (co-author: J Yearwood).

### **8th HL7 Conference, Melbourne, 28-29 July 2005**

Chris Lynton-Moll, Jane Darby and Evan Dekker attended this Melbourne conference.

### **IFSA 2005 World Congress, Tsinghua University, Beijing, China, 28-31 July 2005**

Dr Rana Ghosh & Mrs Moumita Ghosh attended this conference and presented two papers:

1. Comparative analysis of genetic algorithm vs evolutionary algorithm for hybrid models with discrete gradient method for artificial neural network (co-authors: J Yearwood, A Bagirov)
2. A hybrid clustering algorithm using two level of abstraction (co-authors: M Mammadov, J Yearwood)

### **Health Informatics Conference (HIC), Melbourne, 31 July to 2 August 2005**

Chris Lynton-Moll and Jane Darby attended this annual conference in Melbourne. Jane presented a paper titled *Electronic Submission of Suspected Adverse Drug Reactions to Drugs and Vaccines*, which reported on a project recently completed by CCEH.

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Dr Andrew Stranieri also attended this conference, and presented a paper titled *A Scenario-based Learning Environment for Critical Care Nursing*.

## **Seminar at La Trobe University Bendigo, 26 August 2005**

Dr Joe Ryan gave a seminar titled *Combinatorics of Train Marshalling*.

## **Seminar at University of Leicester & Kings College, London**

Dr Prabhu Manyem gave a seminar titled *Syntactic Characterisations of Polynomial Time Optimisation Classes*.

## **The 49<sup>th</sup> Annual Meeting of the Australian Mathematical Society, AMS 2005, Perth, 27-30 September 2005**

Dr Prabhu Manyem and Dr Andrei Kelarev, (University of Tasmania) are organising a Special Session on *Mathematics of Computer Science* for AMS 2005. For more details see:

<http://www.maths.uwa.edu.au/%7Eaustms05>

## **Information Security, Communications and Computers, ISCOCO 2005, Tenerife, Spain, 16-18 December 2005**

Professor Mirka Miller has been invited to organise a Special Session at this conference, which will be held in Tenerife, Spain. For more details see:

<http://worldses.org/conferences/2005/tenerife/iscoco/>

## *Tenders / Consultancies / Grants*

### **Australian Defence Force Academy Grant**

The Grant will provide \$74,947 over 12 months from the ADFA University College Strategic Research Initiative Scheme, for a joint project titled 'Discovery Network Formations with Applications to Intelligence'.

Congratulations to Professor Alexander Rubinov from the University of Ballarat, along with Dr Hussein Abbass, Dr Spike Barlow, Mr Mark Collins and Dr Daryl Essam from the Information Technology Electrical Engineering School (ITEE), Australian Defence Force Academy (ADFA) for successfully securing the Grant.



### **Transfer of ARC Discovery Grant**

ARC Discovery Grant DP0556685 "Constrained and Stable Solutions of Nonlinear and Semismooth Equations" has been successfully transferred from the University of New South Wales to University of Ballarat.

The Chief Investigator for this project, Prof. Liqun Qi, recently became an Adjunct Senior Research Fellow in CIAO. The additional Chief Investigator, Dr. M. Mammadov, was appointed by ARC.

### **Decision Support Tender**

CIAO, CceH, Permian and JustSys are tendering for a project to develop a real time decision support system, to be trialled in the Emergency Room at the Alfred Hospital in Melbourne.

## *ITMS Colloquia & Seminars*

### **ITMS Colloquia Series 2005**

The 2005 Colloquia Series continues to attract an interesting diversity of speakers and professional expertise.

Recent visiting speakers have included:

Professor Justin Zobel, RMIT  
Cache-Aware Algorithms for Efficient Sorting and Storage of Strings

Dr Charlynn Miller, Lecturer at ITMS, University of Ballarat  
A Study of Mature-aged Undergraduates' Perceptions of Student Services at an Urban Public University

Professor Gerard Milburn, University of Queensland  
Three paths to quantum computing

Dr Jon McCormack, Monash University  
Generative Systems: an introduction with applications

Professor Michael Cortie, University of Technology, Sydney  
Element 79 of the Nanoscale





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## ITMS Seminar Series 2005

Recent Seminar speakers have included:

Dr Bhuvan Unhelkar, University of Western Sydney  
Modeling Emerging Web Services Technologies using  
UML 2.0

Professor Reinhard Wolf  
Institute of Mathematics, University of Salzburg, Austria  
Average Distances in Metric Spaces

Ms Shahnaz Kouhbor, ITMS Post-Graduate Student  
Optimal placement of access points in wireless LANs  
considering the movement of users



## Learning & Teaching Workshop

This Workshop was presented by Kevin Jewell, Copyright Officer at the University of Ballarat, and provided critical information about copyright in the electronic environment.

## Publications

### Accepted Books, Chapters & Papers

Chris Lynton-Moll's paper *Supporting eHealth Messaging Standards: Meeting the Challenge of Conformance Testing* will be published in the Journal on Information Technology in Healthcare, Volume 3, Issue 4.

M. Bača, E.T. Baskoro, Y.M. Cholily, S. Jendrol', Y. Lin, M. Miller, J. Ryan, R. Simanjuntak, Slamun, K.A. Sugeng, "Conjectures and Open Problems on Face Antimagic Evaluations of Graphs", accepted by MIHMI, Journal of the Indonesian Math. Society.

M. Baca, S. Jendrol, M. Miller, J. Ryan, "On irregular total labelings", accepted by Discrete Mathematics.

M.Baca, Y.Lin and M.Miller, "Antimagic labelings of grids", accepted for publication in Utilitas Math.

M. Bača, Y. Lin, M. Miller, J. Ryan, "Antimagic labelings of Möbius grids", accepted by Ars Combin.

M. Baca, Y. Lin, M. Miller, M.Z. Youssef, "Edge-antimagic graphs", accepted by Discrete Mathematics.

E. Dahlhaus, P. Manuel and M. Miller, "Parallel algorithms for generalized clique transversal problem", Australasian Journal of Combinatorics.

L. Finlay and P. Manyem, "Online LIB Problems: Heuristics for Bin Covering and Lower Bounds for Bin Packing", RAIRO (Operations Research), EDP Science publishers, Les Ulis, France.

J. Gimbert, M. Miller, F. Ruskey, J. Ryan, "Iterations of eccentric digraphs", accepted by Bulletin of ICA.

Y.Lin, M. Miller and C. Balbuena, "Improved lower bound for vertex-connectivity of  $(\delta;g)$ -cages", accepted for publication in Discrete Mathematics.

Y. Lin, M. Miller, C. Balbuena, X. Marcote, "All  $(k;g)$ -cages are superconnected", accepted for publication in Networks.

M. Miller, M. Bača, J.A. MacDougall, "Vertex-magic total labeling of generalized Petersen graphs and convex polytopes", accepted by JCMCC.

M. Miller, D. Patel, J. Ryan, K.A. Sugeng, Slamun, M. Tuga "Exclusive sum labeling of graphs", JCMCC.

M. Miller, R. Simanjuntak, "Graphs of order two less than the Moore bound", accepted for publication by Discrete Mathematics.

M.H. Nguyen, M. Miller, J. Gimbert, "On mixed Moore graphs", accepted by Discrete Mathematics.

K.A. Sugeng, M. Miller, "Relationship between adjacency matrices and super  $(a,d)$ -edge-antimagic total labeling", JCMCC.

K.A. Sugeng, M. Miller, J. Ryan, Y.M. Cholily, E.T. Baskoro, "Expanding super  $(a,d)$ -edge-antimagic total labelings", JCMCC.

K.A. Sugeng, M. Miller, Y. Lin, M. Bača, "Super  $(a,d)$ -vertex-antimagic labelings", accepted by JCMCC.

K.A. Sugeng, M. Miller, Y. Lin, M. Bača, "Face antimagic labelings of prisms", accepted by Utilitas Math.

K.A. Sugeng, M. Miller, M. Bača, "Super edge-antimagic total labelings", accepted by Utilitas Math.

M. Tuga, M. Miller, J. Ryan, Z. Ryjacek, "Exclusive sum labelings of trees", JCMCC.

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## Published Books, Chapters & Papers

The book "Continuous Optimization: Current Trends and Modern Applications" edited by V.Jeyakumar and A. Rubinov has been published by Springer. The book contains sixteen chapters, among them:

- Supervised Data Classification via Max-min Separability by A. Bagirov and J. Ugon.
- Topical Functions and their Properties in a class of Ordered Banach Spaces by H. Mohebi (University of Kerman and CIAO).
- Dynamical Systems Described by Relational Elasticities with Applications by M. Mammadov, A. Rubinov and J. Yearwood,
- Minimization of the sum of minima of convex functions and its application to clustering by A. Rubinov, N. Soukhoroukova and J. Ugon.

A Special Issue of the international journal *Optimization* in celebration of Professor Demyanov's 65<sup>th</sup> birthday has been published. One of the three guest editors is Prof Alex Rubinov. This issue contains twelve papers, including:

- An algorithm for minimizing clustering functions by A. Bagirov and J. Ugon
- Multipliers and generalized Lagrangians by J.P. Penot and A. Rubinov.

A Special Issue of the Journal of Combinatorial Mathematics and Combinatorial Computing (JCMCC), edited by Dr Edy Baskoro and Professor Mirka Miller, is currently in press.

## Conference Papers

Jane Darby's paper "Electronic Submission of Suspected Adverse Drug Reactions to Drugs and Vaccines" will be published in The Journal on Information Technology in Healthcare.



## Post-Graduate News

### Welcome to New Arrivals

We welcome the following new student to ITMS:

- ✓ Mrs Yuliya Lenard  
PhD topic: The Security of Statistical Databases  
Principal Supervisor: Prof Mirka Miller  
Associate Supervisor: Prof Sid Morris

### PG Seminar Series 2005

These seminars are proving to be a good way for ITMS staff and Post-Graduate students to get to know each other better. They are also an excellent opportunity for knowledge sharing.

Recent speakers have included:

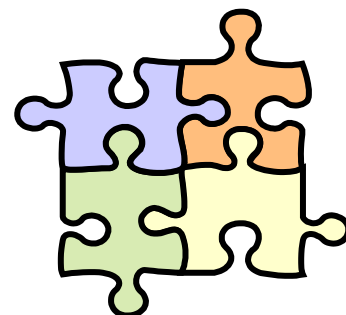
Mr Julien Ugon, ITMS PhD Student  
How to write a thesis & how to use LaTeX for your thesis

Mr Arun Banerjee, ITMS PhD Student  
Boosting Algorithms

Mr Gary Saunders, ITMS PhD Student  
Drug Reaction Relationships in Australian Drug Safety Data

Mr Karim Mardaneh, ITMS PhD Student  
Optimization Based Clustering and Classification Algorithm in Analysis of Microarray Gene Expression Data

Ms Alyx Macfadyen, ITMS Masters Student  
3D Game Design using Structured Argumentation



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## Post-Graduate Thesis Report

Ms Chandima Tilakaratne has provided the following snapshot of her PhD thesis project.

### Intermarket Influence Analysis

Intermarket analysis refers to the analysis of the relationships between financial markets.

Discovering intermarket influential patterns is useful in many applications, such as:

- Market prediction
- Portfolio optimization and management
- Option pricing
- Risk management

Recently intermarket technical analysis has become popular among professional analysts.

Recent studies have shown that knowledge of intermarket influences can improve prediction accuracy to a variable extent. However, many of the intermarket influence patterns are yet to be adequately quantified.

This potentially provides a great opportunity for academic research in finance.

The main goal of this study is to identify the intermarket influences among the world's major stock markets from different perspectives. In particular, price and derivatives of price; volatility, and trend, will be considered.

The focus in this study will be on prediction. Different investors are interested in the behaviour of stock markets on different time scales.

This study considers analysing intermarket influences on different time scales.

The relationship between stock markets vary according to different regimes, so this study will perform intermarket influence analysis for different market regimes separately.

In order to achieve the main goal of this research the following steps needed to be taken.

1. Identify/develop suitable mathematical and statistical techniques to discover intermarket influential patterns with a view to uncover influential patterns among global financial markets.
2. Investigate how different properties of market price such as trend (linear and non-linear) and volatility play a part in intermarket influence.
3. Determine approaches for using the intermarket patterns to model and predict a given target market.

## Post-Graduate Conference Presentations

### *International Conference on Information Technology and Applications 2005, Sydney, 4-7 July 2005*

Mr John Avery attended this conference and presented a paper titled *A Formal Description of Ontology Change in OWL*.

### *ICMB 2005, Fourth International Conference on Mobile Business, Sydney, 11-13 July 2005*

Ms Shahnaz Kouhbor attended this conference and presented a paper titled *Optimal Placement of Access Point in WLAN Based on a New Algorithm*.

## Visitors to CIAO

### Professor Juan-Enrique Martinez Legaz

Professor Martinez Legaz visited CIAO for two weeks in July 2005. This visit was supported by Prof Rubinov's Discovery Grant.

The purpose of the visit was to undertake joint research with Prof A. Rubinov, and to prepare the paper: "Monotonic Analysis over cones III" by J.Dutta, J.E.Martinez Legaz and A.Rubinov.

The papers "Monotonic Analysis over cones I" and "Monotonic Analysis over cones II" have previously been published in *Optimization*.

### CGANT Visitors

The following academics visited Ballarat during August 2005 and spent time with CGANT Group Members:

- Dr Ljiljana Brankovic, The University of Newcastle.
- Professor Gary Bloom, Computer Science Department, CUNY, USA.
- Professor Pip Pattison, School of Behavioural Science, University of Melbourne.
- Dr Garry Robins, School of Behavioural Science, University of Melbourne.





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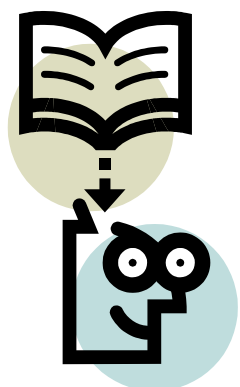
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## Research Reports : 2005

- 05/01 An Optimization Approach to the study of drug-reaction relationships on the basis of ADRAC dataset: Neurological class of reactions, Musa Mammadov, Evan Dekker and Gary Saunders, February 2005.
- 05/02 Decomposability of Polytopes, Krzysztof Przeslawski and David Yost, February 2005.
- 05/03 About Regularity of Set Systems, Alexander Kruger, May 2005.
- 05/04 Generalized Fenchel's Conjugation Formulas and Duality for Abstract Convex Functions, V Jeyakumar, A M Rubinov and Z Y Wu, May 2005.
- 05/05 Sufficient Global Optimality Conditions for Non-convex Quadratic Minimization Problems with Box Constraints, V Jeyakumar, A M Rubinov and Z Y Wu, April 2005.
- 05/06 Non-convex Quadratic Minimization Problems with Quadratic Constraints: Global Optimality Conditions, V Jeyakumar, A M Rubinov and Z Y Wu, May 2005.
- 05/07 A Syntactic Characterisation of Polynomial-Time Optimisation Classes, P Manyem, June 2005.
- 05/08 An optimization approach identifying drugs responsible for adverse drug reactions, M A Mammadov and A Banerjee, June 2005.
- 05/09 An optimization approach to the study of drug-drug interactions, M A Mammadov and A Banerjee, June 2005.



All ITMS staff members and postgraduate students are encouraged to contribute to the next edition of the CIAO Newsletter

Examples of newsletter items are: projects in progress, papers accepted, research in process, publications, grants, seminars, visitors to ITMS, visits, scholarships, reports from school research groups / centres, events, conferences, new discoveries, and general items of interest

All items should be sent to Elizabeth Matuschka ([ematuschka@staff.ballarat.edu.au](mailto:ematuschka@staff.ballarat.edu.au)) by Friday 28 October 2005