

# 30ACCMCC

5 to 9 December 2005

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## TIMETABLE AND SCHEDULE OF TALKS

### SUNDAY 4 DECEMBER

17:00–19:30 Registration *Priestley (Maths) Bldg, room 704: Maths Common Room* and welcome refreshments.

### Rooms

All *lectures* (apart from the public lecture on Monday evening) are in the Steele Building (number 3), in either 3-309 or 3-329.

A *PC room* is available for delegates: 3-221. See separate sheet for login information. Room 3-232 is also available for delegates to meet and work in.

*Morning tea/coffee* will be available on level 2 of the Steele Building, near room 3-210.

### MONDAY 5 DECEMBER morning

- 08:30–09:15 Registration, Foyer of Steele Building (bldg. 3) outside 3-210
- 09:15–09:30 3-309 Opening session, and welcome from  
**Professor John Eccleston**  
Executive Dean,  
Faculty of Engineering, Physical Sciences and Architecture
- 09:30–10:25 3-309 **Curt Lindner**  
The triangle intersection problem for all subgraphs of  $K_4$
- 10:30–11:00 TEA / COFFEE
- 11:00–11:25 3-309 **Robert Brier**  
Equationally defined  $K$ -perfect  $m$ -cycle systems
- 11:00–11:25 3-329 **Jianmin Tang**  
Hybrid simulated annealing and genetic algorithm for  
degree/diameter problem
- 11:30–11:55 3-309 **Daniel Horsley**  
Equitable partial cycle systems and 2-regular decompositions
- 11:30–11:55 3-329 **Radomir Perzina**  
A parallel self-adaptive genetic algorithm applied to the university  
timetabling problem with optimized enrolment of students
- 12:00–12:25 3-309 **Matt Dean**  
Hamilton cycles in a family of graphs which includes the  
generalized Petersen graphs
- 12:00–12:25 3-329 **Dafik**  
Open problems in the construction of large directed graphs

**MONDAY 5 DECEMBER    afternoon**

- 12:30–14:00                    LUNCH BREAK  
[CMSA *Council* Meeting at 12:30 in 3-329]
- 14:00–14:55    3-309    **Mike Grannell**  
Topological aspects of combinatorial designs
- 15:00–15:25    3-309    **Melinda Buchanan**  
Embedding partial totally-symmetric quasigroups
- 15:00–15:25    3-329    **M. D. Atkinson**  
The longest increasing circular subsequence
- 15:30–16:00                    TEA / COFFEE
- 16:00–16:25    3-309    **Sanpei Kageyama**  
On non-existence of affine resolvable triangular designs
- 16:00–16:25    3-329    **Christopher W. Monteith**  
Cyclically closed pattern classes of permutations
- 16:30–16:55    3-309    **Masakazu Jimbo**  
BIB designs with non prime power blocksizes derived  
from affine geometry
- 16:30–16:55    3-329    **M. H. Albert**  
On the Stanley-Wilf limit of 4231-avoiding permutations
- 18:00–19:00    50-3    **Public Lecture**  
  
**Brendan McKay**  
Judgement day for the Bible Codes

<b>TUESDAY 6 DECEMBER</b> <b>morning</b>
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- 09:00–09:55    3-309    **Wal Wallis**  
Latin squares with and without orthogonal mates
- 10:00–10:25    3-309    **F. E. Bennett**  
The existence of  $(v, 6, \lambda)$ -perfect Mendelsohn designs with  $\lambda > 1$
- 10:00–10:25    3-329    **Miwako Mishima**  
On conflict-avoiding codes of length  $n = 4m$  for three active users
- 10:30–11:00                    TEA / COFFEE
- 11:00–11:25    3-309    **James Lefevre**  
On the spectrum of critical sets in latin squares of order  $2^n$
- 11:00–11:25    3-329    **K. Jantarakhajorn**  
On vertex critical  $k$ -edge connected graphs
- 11:30–11:55    3-309    **N. Cavenagh**  
Latin trades via groups
- 11:30–11:55    3-329    **Alison Thomson**  
Routing in interconnection networks
- 12:00–12:25    3-309    **I.M. Wanless**  
Generalised transversals of latin squares
- 12:00–12:25    3-329    **Wei-Chang Yeh**  
New UGF method for estimating multistate-node networks  
reliability with cycles
- 12:30–14:00                    LUNCH BREAK

**TUESDAY 6 DECEMBER    afternoon**

- 14:00–14:55    3-309    **Simon Blackburn**  
Sets of permutations that generate the symmetric group pairwise
- 15:00–15:25    3-309    **Anne Penfold Street**  
Defining sets of full balanced incomplete block designs
- 15:00–15:25    3-329    **J. C. McLeod**  
The number of sets of  $k$  disjoint perfect matchings in  $K_{2n}$
- 15:30–16:00                    TEA / COFFEE
- 16:00–16:25    3-309    **Ken Gray**  
Bounds on the numbers of  $(v, k, \lambda)$  BIBDs
- 16:00–16:25    3-329    **S. Sotaro**  
On almost-regular-graphs without 1-factors
- 16:30                    3-309    **CMSA AGM**  
followed (at approx. 17:15) by an **ICA Meeting**

<b>WEDNESDAY 7 DECEMBER</b> <b>morning</b>
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09:00–09:55    *3-309*    **Matt Brown**  
Ovoids in finite projective spaces

10:00–10:25    *3-309*    **J. W. P. Hirschfeld**  
Non-isomorphic maximal curves over a finite field

10:00–10:25    *3-329*    **Ian T. Roberts**  
Maximal flat antichains

10:30–11:00                    TEA / COFFEE

11:00–11:55    *3-309*    **Lily Khadjavi**  
Dessins d'enfants on the Riemann sphere

**WEDNESDAY 7 DECEMBER    lunchtime/afternoon**

### **Excursion**

For those who have registered and paid for the excursion: please meet at the Dutton Park Ferry terminal (map reference N7) (and NOT the CityCat terminal) by 12.20pm for a 12:30 sharp departure time.

This is a good 5+ minute walk from the lecture venue; there will not be time to return to Emmanuel College after the last morning lecture, so please ensure you take your cameras, umbrellas etc. with you first thing this morning to the lectures!

LUNCH is included on board the boat upstream to Lone Pine Koala Sanctuary. We shall be at Lone Pine from about 13:30 until about 16:15, when coach transport to Southbank will be provided, followed (weather permitting) by a barbecue there. Your excursion envelope should contain both your excursion ticket and the fare for your return CityCat ferry from SouthBank to the University (a 20 minute public catamaran ferry service). So you can choose what time to leave Southbank; a CityCat ferry timetable is included in your conference bag.

<b>THURSDAY 8 DECEMBER</b> <b>morning</b>
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- 09:00–09:55    *3-309*    **Charles Semple**  
Combinatorics, graphs and computational complexity  
in phylogenetics
- 10:00–10:25    *3-309*    **Peter Humphries**  
Identifying phylogenetic trees
- 10:00–10:25    *3-329*    **Jamie Sneddon**  
Modifying minors for clustered planarity
- 10:30–11:00                    TEA / COFFEE
- 11:00–11:25    *3-309*    **Rohan Cattell**  
Ringel’s conjecture and the graceful tree conjecture
- 11:00–11:25    *3-329*    **Jakub Teska**  
Generalized Hamiltonian cycles
- 11:30–11:55    *3-309*    **D. Combe**  
Edge-magic  $\mathbb{Z}$ -labellings of countable graphs
- 11:30–11:55    *3-329*    **Michel Lavrauw**  
A new approach to finite semifields
- 12:00–12:25    *3-309*    **Kim Marshall**  
On eccentric sequences of graphs
- 12:00–12:25    *3-329*    **Kenneth K. Nwabueze**  
A combinatorial embedding of the Burnside ring into  
its ghost ring
- 12:30–14:00                    LUNCH BREAK

<b>THURSDAY 8 DECEMBER</b> <b>afternoon</b>
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- 14:00–14:55    *3-309*    **Nicholas Hamilton**  
Applications of geometry and combinatorics to  
biology and bioinformatics
- 15:00–15:25    *3-309*    **Dean Crnković**  
A new series of regular Hadamard matrices
- 15:00–15:25    *3-329*    **C. Paul Bonnington**  
Induced non-separating cycles in 4-connected graphs
- 15:30–16:00                    TEA / COFFEE
- 16:00–16:25    *3-309*    **Sanja Rukavina**  
Block designs and strongly regular graphs  
constructed from some linear and unitary groups
- 16:00–16:25    *3-329*    **Chris Charnes**  
Strongly regular graphs and mutually unbiased bases
- 16:30–16:55    *3-309*    **Kazuhiko Ushio**  
Balanced quatrefoil designs
- 16:30–16:55    *3-329*    **Sanming Zhou**  
Trivalent 2-arc transitive graphs of type  $G_2^1$  are near polygonal

### Conference Dinner

A bus will depart from Emmanuel College at about 18:20 (time to be confirmed) for Mt. Coot-tha (a 15 minute ride to the nearby hill which has the TV aerials on top).

There we shall enjoy the view from the Lookout at the summit as the sun goes down, and at 19:00 we move into the **Fountain View Room** at the Mt. Coot-tha Restaurant for dinner. The bus will return to Emmanuel College on campus at about 22:00.

## FRIDAY 9 DECEMBER

*Note the later start!*

- 09:30–10:25 3-309 **Brendan McKay**  
The switching method for combinatorial estimation
- 10:30–11:00 TEA / COFFEE
- 11:00–11:25 3-309 **Darryn Bryant**  
2-factorizations of graphs
- 11:00–11:25 3-329 **Shenglin Zhou**  
Imprimitive flag-transitive symmetric  $2-(v, k, \lambda)$  designs
- 11:30–11:55 3-309 **Catherine Greenhill**  
Asymptotic enumeration of dense 0–1 matrices with specified line sums
- 11:30–11:55 3-329 **S. Arumugam**  
Simple path covers in a graph
- 12:00–12:25 3-309 **Rod Downey**  
Self-embeddings of computable linear orderings
- 12:00–12:25 3-329 **Medhat A. Rakha**  
An  $Sl(7)$   $q$ -beta integral and multivariate basic hypergeometric series
- 12:30–14:00 LUNCH BREAK
- 14:00–14:25 3-309 **Peter Pleasants**  
Almost disjoint families of 3-term arithmetic progressions
- 14:00–14:25 3-329 **Chris Charnes**  
An application of orthogonal arrays and linear graphs to software testing
- 14:30–14:55 3-309 **M. H. Albert**  
Touring Hanoi
- 14:30–14:55 3-329 *spare*
- 15:00–15:30 TEA / COFFEE / CLOSE of conference

*Probable survivors' party: 19:00 to 22:00; venue announced later.*