



# News

## MathMedia

*“Google Labs Aptitude Test”*

### Cracking the formula for a job @ Google

**Peter Howe, D.C. Denison**  
Boston

You won't find Google's name anywhere, but the Web search engine's new help-wanted ad reads: “(First 10-digit prime found in consecutive digits of e).com”.

Here's what it would take to get to an application:

First, you have to know that “e” is an important number in calculus, an “irrational” number, like pi or the square root of two that starts 2.718281828 and keeps going forever. (It's equal to  $1 + \frac{1}{X}$ , raised to the Xth power, where X equals infinity.)

Now, identify the first string of 10 digits after the decimal that is a number evenly divisible only by itself and 1. Here's a little hint if you don't have a supercomputer handy: The answer is 7427466391.

The website that is at [www.7427466391.com](http://www.7427466391.com) leads to another with a string of solutions to four variables and a blank after the fifth. You have to realise you are looking for strings of 10 digits in e that add up to 49. You're supposed to find the fifth.

If you can figure out the 10-digit answer, you are instructed to go to [Linux.com](http://Linux.com) and log in as “Bobsyouruncle” and use the 10-digit answer as the password.

(Another little hint: try 5966290435.)

This will lead you to a Google Labs help-wanted page that begins: “Nice work. Well done. Mazel tov. You've made it to Google Labs and we're glad you're here. One thing we learned while building Google is that it's easier to find what you're looking for if it comes looking for you. What we're looking for are the best engineers in the world. And here you are.”

Or, if you're in a hurry, just go to [www.google.com/labjobs](http://www.google.com/labjobs).

*New York Times*



In search for more, the editors were disappointed that the first prime 10-digits string in  $\pi$  (hint: try 5926535897) did not lead them anywhere. For more information on the GLAT see <http://www.google.com/googleblog/2004/09/pencils-down-people.html>  
*The Age 10 Sep 2004 (Contributed by John Miller)*

## Appointments

### Griffith University:

- Dr Scott McCue has been appointed to a five-year Lectureship (Level B) in Applied Mathematics in the School of Science.
- Dr Roger Cropp and Dr Gurudeo Anand Tularam have been appointed Lecturers (Level B, continuing) in the Australian School of Environmental Studies.

### Monash University:

- Dr Burkard Polster has been appointed Senior Lecturer in Pure Mathematics.

### Queensland University of Technology:

- Associate Professor Helen MacGillivray has been promoted to Professor.
- Associate Professor Vo Anh has been promoted to Professor.
- Dr Ian Turner has been promoted to Associate Professor.

### University of Melbourne:

- Dr Renata Sotirov has been appointed as a Research Fellow.
- Dr Michael Evans has been appointed as Schools Project Officer for ICE-EM.
- Dr Frank Barrington will be retiring as of 31 December 2004.

### University of New England:

- Dr Gerd Schmalz (University of Bonn) and Dr Shusen Yan (University of Sydney) have accepted level B positions at the University of New England. They will commence duties early February.

### University of New South Wales:

- Dr Wolfgang Schief and Dr Matthew England have been promoted to Associate Professor.

### University of Queensland:

- Dr Martin O'Hely has been appointed as MASCOS Research Fellow.
- Dr Hanjun Zhang has been appointed ARC Centre Fellow within MASCOS.

### University of Western Australia:

- Dr Dorothy Anderson has resigned from the end of 2004, to return to England.

### University of Western Sydney:

- Dr Kenan Matawie, School of Quantitative Methods and Mathematical Sciences, has been promoted to Senior Lecturer.

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## New Books

G.J. McLachlan, K.-A. Do, and C. Ambrose, *Analyzing Microarray Gene Expression Data*, (Wiley Hoboken, New Jersey 2004), 320 pages, ISBN 0-471-22616-5.

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## Completed PhDs

### Monash University:

- Dr Elizabeth Stark, *Gravitoelectromagnetism and the Question of Stability in Numerical General Relativity*, supervisor: Dr Tony Lun.

### University of Ballarat:

- Dr Nadejda Soukhoroukova, *Data classification through nonsmooth optimisation*, principal supervisor: Alex Rubinov, associate supervisor: Adil Bagirov.

### University of South Australia:

- Dr Julia Piantadosi, *Optimal policies for storage of urban stormwater*, supervisors: Phil Howlett and John Boland.
- Dr Kathrine Rosenberg, *Stochastic modelling of rainfall and generation of synthetic rainfall data at Mawson Lakes*, supervisors: John Boland and Phil Howlett.

### University of Western Australia:

- Dr Sandra Pereira, *Analysis of Spatial Point Patterns Using Hierarchical Clustering Algorithms*, supervisor: Prof Adrian Baddeley.
- Dr Jahar Choudhury, *Competing Risks Models for the Analysis of Multivariate Failure-Time Data: Applications to Biomedicine and Criminology*, supervisors: Prof Ross Maller and Dr Mike Thornett.
- Dr Ronald Monson, *The Computer-Aided Verification of Mathematical Reasoning in Education and the counting of satisfiable Instances of  $k$ -SAT*, supervisor: Dr Kevin Judd.
- Dr Tarn Duong, *Bandwidth Selectors for Multivariate Kernel Density Estimation*, supervisor: Dr Martin Hazelton.

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## Mathematics-in-Industry Study Group 2005

The 21st Mathematics-in-Industry Study Group (MISG) is on track and is scheduled to be at Massey University, Auckland, New Zealand on 24–28 th January, 2005.

A list of problems to be presented, along with registration details can be found on <http://misg2005.massey.ac.nz>.

Early registration is recommended. The annual ANZIAM conference is the following week at Napier; about 6 hours drive south of Auckland.

At the time of writing (early October 2004), there are seven problems to be presented. These cover engineering, biological, and logistical areas. There is only one problem from Australia (on an aerodynamics feasibility) though strong efforts are being made to obtain more. As the problem list is augmented, details will be added to the website.

We are fortunate that recognition of MISG has been given by New Zealand Government agencies. Tech NZ (a Government agency which fosters scientific developments in liaison with Industry) has expressed strong support and the Deputy Prime Minister of New Zealand is giving the opening address on 24th January.

We welcome the strong involvement from all of the ANZ applied mathematician fraternity. Further, links formed with us in South Korea and Thailand. These countries which currently

desire to emulate MISG-style operations, are likely to be represented. We (Mark McGuinness, John Donaldson, Robert McKibbin and Graeme Wake) have visited these countries in various roles during 2003–4 and strong interactions are being forged.

As reported in the AustMS Gazette **31** (2004), 218 in the article by Cheryl Praeger, the Mathematics-in-Industry Study Group, now under the auspices of ANZIAM is one of the more visible and successful initiatives in the ANZ mathematics scene, dating back to its inception in 1984. Currently it is scheduled to be in Eastern Australasia (=NZ) for 2004 – 2006, and then will move back to Australia in 2007. The enlargement of this activity beyond its present annual event is under discussion and input to this debate is welcome. Clearly both countries need expansion in this area.

Meanwhile we look forward to high involvement in January 2005 in a unique first: both the MISG and the ANZIAM Conference in New Zealand. Be assured the problems are challenging and need your input, but a raft of opportunities will emerge.

Graeme Wake Centre for Mathematics in Industry, Massey University, Auckland, New Zealand  
*E-mail:* [G.C.Wake@massey.ac.nz](mailto:G.C.Wake@massey.ac.nz)

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### Awards and other achievements

Professor Adrian Baddeley was presented the Pitman Medal for 2004 by the Statistical Society of Australia (SSA). The Pitman Medal is the highest honour that can be bestowed by the SSA, and it is awarded for achieving high distinction in Statistics which enhances the international standing of Australia in this discipline.

Professor Cheryl Praeger has been chosen as a highly cited research author by the ISI. <http://www.ISIHighlyCited.com/> is the most recent in a series of projects at ISI and Thomson-ISI to identify and honour researchers whose collected publications have received the highest number of citations across the past two decades. Being acknowledged by Thomson-ISI as a Highly Cited Researcher means that an individual is among the 250 most cited researchers for their published articles within a specific time-period.

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### Our local Primary Schools Mathematics Competition

Results are now in for the 24th Newcastle Permanent Building Society Primary Mathematics Competition (see AustMS Gazettes **28** (2001), 269; **30** (2003), 49; **31** (2004), 29). This year a record 16,314 students from years 5 and 6 competed from 244 local schools.

The winner is Malathi Siritharan from year 6, New Lambton Public School so that school will again hold the “Our Town Shield” for the next year. Closely following is Cameron Darragh from Year 5, Kanwal Public School.

Fred Bishop the founding Director of the Competition has seen participation grow from 2,337 students in 1981 to what is today. Fred is retiring as Director and is to be succeeded by Bob Aus in 2005.

John Giles  
University of Newcastle, Callaghan NSW 2308

## Conferences

### **International Conference on Mathematical Inequalities and their Applications**

6 – 8 December 2004, Victoria University, Melbourne

Web: <http://rgmia.vu.edu.au/conference>

### **BioInfoSummer, AMSI Summer Symposium in Bioinformatics**

6 – 10 December 2004, Australian National University, Canberra

Web: <http://www.maths.anu.edu.au/events/BioInfoSummer04/>

### **6th International Conference on Optimization: Techniques and Applications**

9 – 11 December 2004, University of Ballarat

Web: <http://www.ballarat.edu.au/icota>

### **2004 World Conference in Natural Resource Modelling**

12 – 15 December 2004, RMIT, Melbourne

Web: <http://www.ma.rmit.edu.au/2004RMAconference>

### **The First International Workshop on Intelligent Finance (IWIF 1)**

13 – 14 December 2004, Crown Promenade Hotel, Melbourne

Web: <http://www.iwif.org>

### **The 2004 NZIMA Conference in Combinatorics and its Applications and The 29th Australasian Conference in Combinatorial Mathematics and Combinatorial Computing (29ACCMCC) (Joint Conference)**

13 – 18 December 2004, Lake Taupo, New Zealand

Web: <http://www.nzima.auckland.ac.nz/combinatorics/conference.html>

### **CMA National Research Symposium - A Celebration of Modelling and Applied Probability (in honour of Professor Joe Gani's 80th Birthday)**

14 – 15 December 2004, Australian National University, Canberra

Web: <http://www.maths.anu.edu.au/events/sy2004/gani.html>

### **APAC Summer School**

10 – 21 January 2005, Australian National University, Canberra

Web: <http://www.maths.anu.edu.au/events/apacss05/>

### **ICE-EM/AMSI Summer School**

10 January – 4 February 2005, Australian National University, Canberra

Web: <http://www.maths.anu.edu.au/events/amsiss05/>

### **Geometry: Interactions with Algebra and Analysis**

January – June 2005, Auckland

Web: <http://www.math.auckland.ac.nz/Conferences/2005/geometry-program>

**Mathematics-in-Industry Study Group 2005**

24 – 28 January 2005, Massey University at Albany, Auckland, New Zealand

*Web:* <http://misg2005.massey.ac.nz>

**ANZIAM 2005: The annual ANZIAM Applied Mathematics Conference**

30 January – 3 February 2005, Napier, New Zealand

*Web:* <http://www.math.waikato.ac.nz/anziam05>

**CMA National Research Symposium: Levy Process Theory and its Applications in Finance**

4 – 5 March 2005, Australian National University, Canberra

Organiser: Professor Ross Maller

*E-mail:* [Ross.Maller@anu.edu.au](mailto:Ross.Maller@anu.edu.au)

**16th Australasian Workshop on Combinatorial Algorithms (AWOCA)**

21 – 24 September 2005, University of Ballarat

Organiser: Professor Mirka Miller

*E-mail:* [pmanyem@linus.levels.unisa.edu.au](mailto:pmanyem@linus.levels.unisa.edu.au) or [m.miller@ballarat.edu.au](mailto:m.miller@ballarat.edu.au)

Topics include: Algorithms and Data Structures, Complexity Theory, Graph Theory and Combinatorics, Cryptography, Algorithms on Strings, Graph Algorithms, Graph Drawing, Computational Algebra and Geometry, Computational Biology, Communications Networks, Probabilistic and Randomized Algorithms, New Paradigms of Computation, and other topics in theoretical Computer Science.

Authors who would like to submit papers can contact Dr Prabhu Manyem or Prof. Mirka Miller at the above email addresses.

**49th Annual Meeting of the Australian Mathematical Society**

26 – 30 September 2005, The University of Western Australia

Director: Lyle Noakes

*E-mail:* [lyle@maths.uwa.edu.au](mailto:lyle@maths.uwa.edu.au)

*Web:* <http://www.maths.uwa.edu.au/~austms05/index.html>

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### Visiting mathematicians

Visitors are listed in the order of the last date of their visit and details of each visitor are presented in the following format: name of visitor; home institution; dates of visit; principal field of interest; principal host institution; contact for enquiries.

- Prof. Denis White; University of Toledo; 3 to 24 November; Analysis and Geometry; ANU; Prof. Alan Carey
- Dr Emmanuel Russ; Universit dUAix-Marseille III; 22 to 29 November; harmonic analysis, partial differential, equations and operator theory; MQU; Dr Xuan Duong
- Mike Thorne; British Columbia Cancer Research Centre; July to November 2004; Combinatorics of Finite Sets, Bioinformatics; CDU; Dr Ian Roberts
- Prof. Lincheng Zhao; University of Science & Technology of China; October to November; –; UWA, Dr Jiti Gao
- Prof. Z.M. Guo; Donghua U; September to November 2004; –; UNE; –
- Prof. Bill Lampe; University of Hawaii; 7 November to 11 December; Universal algebra, lattice theory; LTU; Dr Brian Davey
- Prof. David Pike; Memorial University of Newfoundland; 15 October to 11 December; combinatorial designs and graph theory; UQL; Elizabeth Billington
- Dr Miroslav Haviar; M. Bel University, Slovakia; 18 October to 18 December; Universal algebra, duality theory; LTU; Dr Brian Davey
- Prof. Carlo Casolo; University of Firenze; 6 November to 18 December; Algebra and Topology; ANU; Dr Laci Kovacs
- Dr Emmanuel Russ; Techniques de Saint-Jerome; 22 November to 18 December; Analysis and Geometry; ANU; Prof. Alan McIntosh
- Prof. Chaiho Rim; Chonbuk National University; 1 December to 22 December; –; UMB; Paul Pearce
- Prof. Pascal Auscher; University de Paris XI-Orsay; 10 December to 23 December; Analysis and Geometry; ANU; Prof. Alan McIntosh
- Prof Charles Leedham-Green; Queen Mary College, University of London; 14 November to 23 December; –; UWA; Cheryl Praeger and Alice Niemeyer
- Dr Eamonn O'Brien; University of Auckland; 12 to 24 December; –; UWA; Cheryl Praeger and Alice Niemeyer
- Dr Rachel Camina; DPMMS Centre for Mathematical Sciences, Cambridge; 17 August to 27 December 2004; –; UWA; Prof. Cheryl Praeger and Dr Alice Niemeyer
- Prof. Chengxiu Gao; Wuhan University; 9 October to 31 December; –; UMB; Dr Sanming Zhou
- Dr Michael Levitan; USA; January to December 2004; –; UWA
- Prof. Dongsheng Tu; Queen's U; 1 February to 31 December; Statistical science; ANU; Profs. Peter Hall and Sue Wilson
- Mr Bard Stove; University of Bergen; 4 October to 31 December; –; UWA; Dr Jiti Gao
- Dr Segiv Sagitov; Chalmers University; 12 December 2004 to 10 January 2005; Branching Processes; MNU; Professor Fima Klebanar
- Prof. Giuseppe Mussardo; SISSA, Trieste; 1 November 2004 to 11 January 2005; –; UMB; Paul Pearce
- Prof. Gi-Sang Cheon; Daejin U, South Korea; 15 January 2004 to 15 January 2005; linear algebra and combinatorics; ANU; Dr Ian Wanless
- Prof John Miller; Trinity College; 13 December 2004 to 23 January 2005; –; UWA; Song Wang

- Prof. Ralph Stohr; UMIST; 26 August 2004 to 25 January 2005; Algebra and Topology; ANU; Dr Laci Kovacs
- Prof. Chaohua Dong; China; 1 February 2004 to 31 January 2005; –; UWA
- Prof. Karl Hofmann; Technische Universitat Darmstadt; 1 October 2004 to 31 January 2005; topological groups and semigroups; UB; Sidney A. Morris
- Prof. Dale Rolfsen; University of British Columbia; 1 November 2004 to 31 January 2005; –; UMB; Prof. Hyam Rubinstein
- Prof. Stefano Kasangian; University of Milan; 1 November 2004 to 31 January 2005; Category Theory; UNE; Dr I. Bokor
- Prof. R.A. Bailey; Queen Mary University of London; 4 January to 4 February 2005; Design of experiments; USA; Dr Chris Brien
- Prof. Anthony Krzesinski; University of Stellenbosch; 14 January to 7 February 2005; –; UMB; Dr Peter Taylor
- Prof. Nick Wormald; University of Waterloo, Canada; 10 to 24 February 2005; –; UMB; Prof. Hyam Rubinstein
- Prof. Vladimir Rittenberg; Bonn University, Germany; 4 December 2004 to 28 February 2005; –; UMB; Dr Jan DeGier
- Prof. Jean Bertoin; University Pierre et Marie Curie; 1 March to 21 March 2005; Stochastic Analysis; ANU; Prof. Ross Maller
- Wahib Arroum; University of Southampton; 13 October 2004 to 31 March 2005; –; UMB; Owen Jones
- Prof. Alexander Alekseevich Borovkov; Sobolev Institute of Mathematics, Novosibirsk; 10 January to 10 April 2005; –; UMB; Dr Kostya Borovkov
- Dr Alex Lindner; Technischen University Munchen; 16 January to 12 April 2005; Stochastic Analysis; ANU; Prof. Ross Maller
- Prof. Akos Seress; Ohio State University; July 2004 to July 2005; –; UWA; Prof. Cheryl Praeger
- Prof. Wen-Han Hwang; Feng Chia University; February to August 2005; Statistical Science; ANU; Prof. Richard Huggins
- Kim Levy; Universite de Montreal; 11 August 2004 to 1 August 2005; –; UMB; Felisa Vazquez-Abad
- Dr Ruth Kantorovitz; University of Illinois; 20 September 2004 to 20 September 2005; Algebra and Topology; ANU; Prof. Amnon Neeman
- Prof. Robert Lipster; Tel Aviv University; 1 October 2004 to 30 September 2005; Stochastic Processes; MNU; Prof. Fima Klebanar
- Dr Alik Muradova; Tblisi State University; 17 September 2003 to 17 September 2005; Advanced Computation and Modelling; ANU; Dr Markus Hegland
- Eloim Gutierrez; Universite de Montreal; 10 September 2004 to 1 December 2005; –; UMB; Felisa Vazquez-Abad
- Prof. Kazem Mosaleheh; Shiraz University; 1 January to 31 December 2005; Analysis of PDEs; MNU; Dr Alan Pryde
- Prof. John Ryan; University of Arkansas; August 2005 to December 2005; Analysis and Geometry; ANU; Prof. Alan McIntosh
- Dr Shenglin Zhou; Shantou University; October 2004 to October 2006; –; UWA; Prof. Cheryl Praeger
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