



PROFESSOR MIRKA MILLER

SCHOOL OF EE&CS, THE UNIVERSITY OF NEWCASTLE
UNIVERSITY DRIVE, CALLAGHAN NSW 2308
AUSTRALIA

PHONE +61 2 4921 6182

FAX +61 2 4921 6929

ROOM ES230

EMAIL: mirka.miller@newcastle.edu.au

Formal Qualifications:

PhD	University of New South Wales	1990
Master of Arts	University of New England	1986
Master of Letters	University of New England	1983
Bachelor of Arts	University of Sydney	1976

Academic Positions:

Research Professor	School of EE&CS	University of Newcastle	2008-present
Professor of Computer Science	School of ITMS	University of Ballarat	2004-2008
Associate Professor	School of EE&CS	University of Newcastle	1999-2004
Senior Lecturer	Department of CS&SE	University of Newcastle	1992-1998
Lecturer	Dept. Stats,CS&Maths.	University of New England	1986-1991
Tutor	Dept. Stats,CS&Maths	University of New England	1982-1985

Industrial Experience:

Contract Programmer	NSW National Parks and Wildlife Service, Sydney	1978-1980
Programmer	George Patterson and Son, Sydney	1977-1978
Programmer	Programmer, Sydney Morning Herald, Sydney	1975-1976

Other Appointments and Awards:

Vice-President	Institute of Combinatorics and its Applications	Winnipeg, Canada	since 2009
Council Member	Institute of Combinatorics and its Applications	Winnipeg, Canada	2008
Reserve	College of Experts MIC panel	ARC	since 2009
Member	Steering Committee	IWOCA conference series	since 2006
Visiting Professor	Algorithms Research Group	Kings College London, UK	2009-2012
Visiting Professor	Leverhulme Trust	Kings College London, UK	2007
Alternate Director	Company Board	VPAC Melbourne, Victoria	2005-2007
Deputy Director	CIAO Research Centre	University of Ballarat	2006-2008
Leader	INSECT Research Group	University of Ballarat	2006-2008
Leader	CGANT Research Group	University of Ballarat	2004-2008
Assistant Dean	FEBE	University of Newcastle	2003

Visiting Scientist	UNESCO TWAS	Indonesia	2003-2005
Raybould Fellowship	Centre for Combinatorics	University of Queensland	2004
Founding Director	CITA (Centre for IT Applications)	University of Newcastle	2003-2005
Conjoint Professor	University of West Bohemia	Czech Republic	since 2002
Visiting Scientist	ITB Bandung	Indonesia	2001

TEACHING:

Courses taught at the University of Ballarat 2004-2008:

- Information Security
- Research Communications

Courses taught at The University of Newcastle 1992-2003:

- Theory of Algorithms
- Data Security
- Database Systems
- Introduction to Computer Science
- Software Engineering
- Computer Networks

Taught the following Honours courses, both at UNE and The University of Newcastle:

Advanced Theory of Databases, Data Security, Cryptographic Techniques, Graph Algorithms, Optimal Networks.

Courses taught at the University of New England 1983-1991:

- Discrete Mathematics
- Unix Operating System and C Language
- Databases
- Pascal
- COBOL and File Organisation

Undergraduate Course Development:

Introduced and developed many courses, at UNE, Armidale, in Newcastle, and in Ballarat. Additionally, while at the University of Ballarat, developed 5 Master coursework courses, including lecture material and powerpoint presentations, tests, sample exams with answers, weekly labs and tutorials with worked out solutions. While in University of Ballarat, also introduced and developed a new degree, the Master of IT and Communications (MICT).

RESEARCH:

Main areas of research are

- (i) graph theory, graph algorithms, and applications; and
- (ii) databases and data security.

Published one book, several book chapters, edited many special issues of journals and conference proceedings. Published over 200 refereed journal papers and refereed conference papers.

Member of Editorial Boards:

- Australasian Journal of Combinatorics – current
- MIHMI (Indonesian Journal of the Mathematics Society) – current
- AKCE International Journal of Graphs and Combinatorics – current
- Acta Mechanica Slovaca – current
- Advances and Applications in Discrete Mathematics – current
- JRPIT (Journal on Research and Practice in IT) 2003-2008

Member of Conference Programme Committees:

Member of numerous programme committees for conferences and workshops in Indonesia, Spain, Slovakia, Korea, Japan and Australia, including the AWOCA (now IWOCA – International Workshop on Combinatorial Algorithms) series, now in its 20th year – was one of the original inventors and organisers of these workshops/conferences.

Additionally, member of the Programme Committee or Organising Committee for many international conferences and workshop, including most recently ACSC 2007, IEEE International Conference on Computer and Information Science (ICIS 2007) and AISC 2008, IMST 2009 (International Conference on Interdisciplinary Mathematical and Statistical Techniques), CATS 2010.

Initiated the successful workshop series, IWOGL, the International Workshop on Graph Labelling. This series began in Newcastle, Australia (under the title AWOGL) in 2003 and has since been held in Indonesia, Slovakia and China. It is next held in January 2009 in India.

In 2005 also launched a new series, IWONT, the International Workshop on Optimal Network Topologies which had its initial meeting in Ballarat in 2005. IWONT 2007 was held in Plzen, Czech Republic. IWONT 2009 is planned to be held in UK. Member of the programme and/or organising committees of these workshops each time they have been held.

Refereeing:

Refereed many journal and conference papers, PhD, Master and Honours theses. Member of PhD defense jury panel on six occasions (three at UPC Barcelona, Spain; two at Technical University, Ostrava, Czech Republic; one at P.J. Safarik University, Kosice, Slovakia).

Assessing Grants:

ARC Discovery Projects, NSF grants, CUNY Research Projects (USA), GACR (Czech Science Foundation), e-VEGA (Slovak Science Grant Agency).

Invited Speaker:

At many conferences and workshops in USA, Czech Republic, Spain, China, Slovakia, Indonesia, India, Pakistan and Australia. Most recently:

ACSC 2007 (AISW Keynote Speaker), Invited Speaker at Graphs'07, Czech Republic, Keynote Speaker at VIJMDA (Spanish National Conference on Discrete Mathematics and Algorithms) in 2008, Keynote Speaker at IWOGL 2008 in China, Invited Speaker at the 4th World Mathematics Conference of the 21st Century, Pakistan in 2009, Keynote Speaker at the ICMCS 2009, India, Invited Speaker at Cycles & Coloring 2010, Slovakia.

In 2007 the Guest of Honour in Indonesia at ICGTIS, International Conference on Graph Theory and Information Security.

Member of Professional Organisations:

- The Institute of Combinatorics and its Applications (ICA), life member
- Combinatorial Mathematics Society of Australasia (CMSA)
- Australian Computer Society (ACS)
- Czech-Slovak Mathematics Association
- Indonesian Mathematics Association

Research Grants since 2000:

Years	Grant	Project	Amount
2009-2011	Royal Society (with Costas Iliopoulos, Kings College London)	Graph Labeling	\$36,000
2008-2010	University of Newcastle	FEBE Research Grant	\$60,000
2008-2010	University of Newcastle	FEBE PhD stipends (3)	\$180,000
2008	International Research Grant ITB, Indonesia (with Edy Baskoro)	Ramsey-minimal Graphs Involving Paths	\$13,000
2008	ISL FAST (with Evelyne Flandryn, University Paris Sud)	Networks, Graphs and Communications	\$43,000
2007	International Research Grant ITB, Indonesia (with Edy Baskoro)	Ramsey Numbers for Union of Graphs	\$13,000
2007	Leverhulme Foundation (with Costas Iliopoulos, Kings College London)	Graph Labeling and Security of Statistical Databases	\$14,000
2006	Royal Society (with Costas Iliopoulos, Kings College London, and Joe Ryan)	Algorithms for Pattern Analysis in Bioinformatics	\$7,000
2005	Royal Society (with Costas Iliopoulos and Joe Ryan)	External Memory Algorithms	\$7,200
2004-2007	University of Ballarat	ITMS Research Grant	\$205,000
2004-2006	ARC DP0450294 (with Brendan McKay, ANU)	Improving Upper and Lower Bounds on the Order of Large Graphs under Degree and Distance Constraints	\$252,000
2003-2006	ARC LP0349100 (with Liz Chang and Janet Aisbett)	Palladium Based Mobile Agent System for Collaborative Environments	\$152,198
2003	University of Newcastle (with Jim MacDougall)	RGC Cross-Faculty Grant	\$10,000
2000-2003	University of Newcastle	RGC Grants for Conference Travel and Visitors	\$28,000
2003	University of Newcastle (with Janet Aisbett)	Strategic Incentives Grant (for the CITA University Research Centre)	\$14,000
2003	University of Newcastle	RGC Grant - Broadcasting in Resilient Communication Networks	\$8,769
2002	University of Newcastle	RMC Grant - Graph Labelling	\$6,700
2002	Kersley Group Ltd., Hong Kong (with Liz Chang and Janet Aisbett)	Prototype of Global e-Tracking Systems	\$175,000
2001-2003	University of Newcastle	RMC Grant - : Towards Improved Network Design through the Study of Graphs	\$52,818
2001	University of Newcastle	RMC Project Grant - Graph Labellings and their Applications	\$5,000
2001	University of Newcastle (with L. Brankovic)	RMC Project Grant - Towards Secure Computerised Systems through the Study of Latin Squares	\$5,000
2001	ITB Bandung, Indonesia	Projekt QUE - Cryptography	\$10,000
2000	University of Newcastle	ARC Small Grant - New Algorithms for the Design of Large Networks	\$10,000

Prior to 2000 received funding in excess of \$250,000 from various sources within the University of Newcastle. Additionally, overseas postgraduate research students obtained in excess of \$650,000 from various sources (AIDAB, AusAid, China Bank, Projekt QUE Bandung, Projekt QUE Jakarta).

Service to the University since 2000

Years	Function	University
2008-present	Member of FEBE Promotions Committee	University of Newcastle
2005-2007	Supervisor of 10 academic and general staff, ITMS	University of Ballarat
2005-2007	Member of the University Research Committee	University of Ballarat
2005-2007	Member of the University Research Training Sub-committee	University of Ballarat
2005-2007	Postgraduate Co-ordinator, ITMS	University of Ballarat
2004	Honours Co-ordinator, ITMS	University of Ballarat
2004	Member of the University Promotions Committee	University of Ballarat
2003	Assistant Dean (Research Postgraduates), FEBE	University of Newcastle
2003	Member of the University Research Training Committee	University of Newcastle
2003	Chair of the Faculty Research Training Committee	University of Newcastle
2003	Member of the Faculty Research Committee	University of Newcastle
2000-2004	Faculty Representative on the Economics Faculty Board	University of Newcastle
2001	Performed Departmental Review of Applied Mathematics	ITB Bandung, Indonesia
2002	Member of the Departmental Teaching QAssurance Committee	University of Newcastle
2000-2002	Departmental Research Officer	University of Newcastle
2000-2004	Member of the Promotions Committee in the Faculty of Engineering	University of Newcastle
2002	Member of the University OSPRO Committee	University of Newcastle
2001	Member of the OSPRO Appeals Committee	University of Newcastle
2000-2001	Member of the Academic Senate	University of Newcastle
2000	Member of the Senate's Working Party on Graduate Skills	University of Newcastle
2000	Member of the Senate's Response Committee to the External Review of the Economic Faculty	University of Newcastle