

Jacqui Ramagge

CURRENT POSITION

Professor of Mathematics at the University of Wollongong, Australia

CONTACT DETAILS

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PERSONAL DETAILS

Born 1967 in London, UK. Children: Adrian born 1998, Daniel born 2002.
Bilingual English/Spanish.

QUALIFICATIONS

2015	Alumna	Business	Harvard University
1993	PhD	Mathematics	University of Warwick, UK
1990	MSc	Mathematics	University of Warwick, UK
1988	BA (First Class)	Mathematics	University of Warwick, UK

PROFESSIONAL DEVELOPMENT

2015	General Management Program	Harvard Business School
2014	Foundations of Directorship	Aust. Inst. of Company Directors
2008	Resolving conflict using emotional intelligence	AVCC workshop

EMPLOYMENT HISTORY

2015–	Academic	University of Sydney (USyd)
2007–2015	Academic	University of Wollongong (UOW)
1993–2007	Academic	University of Newcastle (UoN)
1992	Casual Tutor	University of New South Wales (UNSW)

LEADERSHIP POSITIONS HELD

2014	Chair	Australian Research Council (ARC) Laureate Fellowship Selection Advisory Committee
2009–2013	Head	School of Mathematics and Applied Statistics, UOW
2012	Dep. Chair	ARC Discovery Early Career Researcher Award Committee
2008–2009	Director	AMSI Summer School, held at UOW
2006	Director	Women@UoN Program, UoN
2005	Assist. Dean	Marketing and Recruitment, Faculty of Science and IT, UoN
2002	Organizer	AustMS Annual Meeting, held at UoN
1995–2005	Chair	Committee for the BH Neumann Prize of the AustMS 7 times

NATIONAL MEMBERSHIPS

2015	ARC Excellence for Research in Australia, Member of Mathematics, Information and Computing Sciences Research Evaluation Committee
2012–2014	ARC Australian Laureate Fellowships Selection Advisory Committee
2012	Australian Curriculum, Assessment and Reporting Authority (ACARA): Senior Secondary Mathematics Curriculum Advisory Panel
2011– 2014	Australian Academy of Science: National Committee for the Mathematical Sciences
2010–2012	ARC College: Engineering, Mathematics and Informatics Panel
2009–	Australian Mathematical Sciences Institute Educational Advisory Committee

MEDIA EXPERIENCE

2014	730 Report on <i>Crisis in Maths</i>, Friday January 24 2014
2011	Life Matters Radio National <i>Is maths a foreign language?</i>, 30 May 2011
1999 – 2005	ABC Radio Newcastle <i>Maths Talkback</i> with Paul Bevan and others

EXECUTIVE SUMMARY

I have a significant profile in Leadership, Research, Teaching, and Service.

Leadership

I lead by example; my performance makes me a credible leader of both research and teaching endeavours in complex environments. I have strong communication skills that enable me to effectively communicate a vision to both academic and professional staff at all levels.

I was Head of the School of Mathematics and Applied Statistics (SMAS) at UOW from 2009 to 2013. During that time we: appointed 25 new academic staff; increased our annual competitive income by 48%; increased our consultancy income by 560%; increased our ERA score in the 01 FOR code; increased our undergraduate EFTSL by 24%; increased average entry scores of mathematics undergraduate students; supervised the third-largest cohort of research students in mathematical sciences in Australia; received two national teaching citations; and were part of a successful \$2M national project funded by the OLT. My interpersonal and leadership skills were reflected in the *Your Voice* survey, with *Engagement* in the School increasing from 87% in 2007 (the last survey prior to my appointment) to 91% in 2012 (the last survey during my tenure).

I was Deputy Chair of the ARC DECRA Selection Committee in 2012 and Chair of the Australian Laureate Fellowships Selection Advisory Committee in 2014. I will be Head of the School of Mathematics and Statistics at USyd from 1 January 2016.

Research

Research is a central and critical component of my academic career.

I have focused on research across mathematical boundaries, bringing insight and innovation to core areas of interest. For example, I used a combination of algebra, geometry and functional analysis to progress the Baum-Connes conjecture and I have worked with electrical engineers. My major projects are on: the structure of totally disconnected, locally compact groups; self-similar actions; and the classification of equilibrium states on C^* -algebras.

I have given plenary talks at international conferences and regularly earn external competitive research funding. Given a choice, I work as part of a team.

Teaching

I enjoy teaching, take it very seriously, and received a teaching award from the University of Newcastle Faculty of Science and IT. In my latest Student Evaluation of Teaching, the average of the first eight questions was 5.8 out of a possible 6. I am on the Educational Advisory Committee for the Australian Mathematical Sciences Institute, and I served on the national ACARA Advisory Panel for the Australian Senior Secondary Mathematics Curriculum.

Service

I believe that contributions to the immediate and broader community are of paramount importance to the success of individual academics, as well as the discipline and the institutions they serve. As a sample of my contributions, I have served on: the Australian Mathematics Trust Primary Problems Committee since 2003; the UOW Academic Senate 2009–2015; the ARC College of Experts 2010–2012; the Australian Academy of Sciences National Committee for the Mathematical Sciences since 2011; the ARC Australian Laureate Fellowships Selection Advisory Committee 2012–2014; the UOW Council 2013–2015; the UOW Central Professorial Promotion Committee 2014; and the ARC Excellence in Research Australia Mathematics, Information and Computing Sciences Research Evaluation Committee 2015.

Leadership, Governance and Service

HEAD, SCHOOL OF MATHEMATICS AND STATISTICS AT THE UNIVERSITY OF SYDNEY

I will be Head of the School of Mathematics and Statistics at USyd from 1 January 2016.

HEAD, SCHOOL OF MATHEMATICS AND APPLIED STATISTICS AT UOW

I was Head of the [School of Mathematics and Applied Statistics](#) at UOW from August 2009 to December 2013. During that time I was responsible for: leading both teaching and research in the School; operationalising the UOW strategic plan; and performance management of staff. Initially I was the direct manager of all staff including all postdoctoral researchers and all four professional staff. Over time I developed a more sophisticated managerial structure with more appropriate reporting lines for staff. Throughout my time as Head, I remained responsible for the management of all [Professors](#) in the School despite being an Associate Professor at the time of my appointment.

The School thrived under my leadership. We appointed 25 new academic staff, many funded from external sources, and supervised the third-largest cohort of research students in the mathematical sciences in Australia. We increased our performance and enhanced our reputation in both research and teaching.

In research we

- increased our annual income from national competitive grants by over 48% (from \$725k to \$1.08M per annum), including a [Future Fellow](#) and a [DECRA](#);
- increased our annual income from consultancy by over 560% (from \$449k to \$2.53M per annum);
- increased our Excellence in Research in Australia ([ERA](#)) score in 01 Mathematical Sciences from world class (3) to above world class (4).

In teaching and learning we

- increased our annual undergraduate EFTSL by over 24% (463 to 575);
- increased the average entry score of undergraduates in mathematics from a UAI of 79 to an ATAR of 87;
- received two national teaching citations for [Rodney Nillsen](#) and [Caz Sandison](#);
- were part of a successful \$2M project, *Inspiring mathematics and science in teacher education*, funded by the Office of Learning and Teaching.

This success was due to the hard work of the staff in the School. However, as Head my job was to provide the environment in which activities that led to these successes were valued, encouraged, and supported.

There were also some challenges. Some were managerial, such as an academic whose appointment was not confirmed at the end of his probationary period. Some were critical incidents: the sudden unexpected death of a young member of staff; the suicide of a student; and the deaths of two other students in separate accidents. Although traumatic, the School emerged stronger and more united after each of these incidents.

My leadership is also reflected in the results of the *Your Voice* survey; the School's overall Engagement score increased from 85% in 2007 (the last survey prior to my appointment) to 89% in 2010 and to 91% in 2012 (the last survey during my tenure).

AUSTRALIAN RESEARCH COUNCIL

As a member of the Engineering, Mathematics and Informatics panel of the [ARC College](#), 2010–2012 I helped award: Discovery Projects, Linkage Projects, Future Fellowships, Discovery Early Career Researcher Awards (DECRA), and Discovery Outstanding Researcher Awards (DORAs). During 2012–2014 I served on the [Australian Laureate Fellowship](#) Selection Advisory Committee. I was Deputy Chair of the DECRA panel in 2012 and Chair of the Australian Laureate Fellowship Selection Advisory Committee in 2014. In 2015 I served on the ERA Research Evaluation Committee for Mathematics, Information and Computation Sciences.

RELOCATING A RESEARCH TEAM

I negotiated the relocation of a team of four mathematicians from the University of Newcastle, Australia, to the University of Wollongong, Australia, in 2007. At the time this was a complete novelty in mathematics. I was not the most senior member of the team and am still awed by the trust placed in me by my colleagues during that process.

MENTORING AND PROFESSIONAL DEVELOPMENT

I have a long-standing interest in professional development at all levels. As well as directing [Women@UoN](#) I have: been a mentor for the UOW [Early Career Development Program](#) since its inception four years ago; mentored a Head of School from another Faculty; mentored UOW [Laureate Fellowship](#) applicants; presented at the AustMS Early Career Workshops in 2012 and 2013; mentored postgraduate students in the mathematical sciences via the [BH Neumann Prize](#) both personally and in writing; and presented at the UOW Heads Leadership program. My role as Head of School necessarily involved mentoring, both informally and formally within the Career Development Interview process at UOW. This included career planning with outcomes ranging from promotions to successful DECRA and Future Fellowship applications.

Research

RESEARCHER PROFILES

In my mathematical papers, authors are listed alphabetically.

ResearcherID profile: <http://www.researcherid.com/rid/D-4449-2012>

ORCID profile: <http://orcid.org/0000-0001-9376-5712>

Google Scholar profile: <http://scholar.google.com.au/citations?user=JFfZfpAAAAAJ&hl=en>

My MathSciNet author ID is 352868. From UOW this can be accessed via

<http://www.ams.org.ezproxy.uow.edu.au/mathscinet/search/author.html?mrauthid=352868>

AUSTRALIAN RESEARCH COUNCIL GRANTS

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|-----------|---|
| 2015–2017 | Willis and Ramagge, DP150100060, \$443,000
<i>Scale-Multiplicative Semigroups and Geometry</i> |
| 2013–2015 | Ramagge and Raeburn, DP130100490, \$390,000
<i>States and structure of operator algebras from self-similar actions</i> |
| 2010–2013 | Ramagge, Raeburn, and Laca, DP1096001, \$420,000
<i>Structure and states of operator-algebraic dynamical systems</i> |
| 2009–2014 | Willis and Ramagge, DP0984342, \$376,868
<i>Totally disconnected groups in algebra and geometry</i> |
| 2005–2007 | Willis and Ramagge, DP0556017, \$234,000
<i>Geometric representation of small-rank totally disconnected groups</i> |
| 2003–2005 | Raeburn, Ramagge, Laca, and Larsen, LX0348081, \$50,600
<i>Hecke Algebras in Algebra and Analysis</i> |
| 2002–2004 | Willis and Ramagge, DP0208137, \$185,000
<i>Totally disconnected groups and their algebras</i> |

Teaching

TEACHING EXPERIENCE AND EVALUATIONS

I have taught classes from primary school level to postgraduate coursework level varying in size from 5 to over 500. The delivery style has included workshops, tutorials, lectures, electronic delivery, multi-campus video-conference, and multimedia presentations.

At UOW the benchmark for student evaluations is the average of the first 8 questions on a standard questionnaire. My three most recent evaluations have had averages of 5.8 out of 6.

EDUCATIONAL DEVELOPMENT

I was a driving force in the development of the *Bachelor of Medical Mathematics* at UOW. It is particularly popular with females, who now constitute 33% of the UOW maths/stats cohort.

I initiated and coordinated the development of a new major in the Bachelor of Mathematics and Finance in *Quantitative and Computational Trading*. This involved extensive consultation with industry partners *Tibra Capital* who are world leaders in computational trading. Tribra Capital now provides over \$110,000 per year in scholarships and prizes at UOW.

I developed and implemented a suite of mathematics content subjects for prospective primary school teachers. My efforts in this area are global and include teaching into the *Vermont Mathematics Initiative*. I received an individual mention in the Go8 *Review of Education in Mathematics, Data Science and Quantitative Disciplines* in 2009 for my work in this area.

EDUCATIONAL FUNDING

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|-----------|--|
| 2009-2010 | DEEWR: AMSI (Ramagge a module writing team member), \$2,000,000
<i>The Improving Mathematics Education in Schools project</i> |
| 2008–2011 | ALTC: Porter <i>et al</i> (Ramagge a Unit Leader), LE8-783, \$220,000
<i>Building leadership capacity for the development and sharing of mathematics learning resources across disciplines and universities</i> |