

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

APPOINTMENTS

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

MEMBERSHIPS

2015	ARC Excellence for Research in Australia, Member of Mathematics, Information and Computing Sciences Research Evaluation Committee
2014	Member of the UOW Central Professorial Promotion Committee
2014–2015	Member of the UOW Strategic Course Development Committee
2014–2015	Member of the UOW Academic Staff Professional Development Committee
2013–2015	Member of UOW Council elected by academic staff
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
2011–	Editor of Lecture Series of Australian Mathematical Society (AustMS)
2010–2012	ARC College: Engineering, Mathematics and Informatics Panel
2009–	Australian Mathematical Sciences Institute (AMSI): Educational Advisory Committee
2009–2015	UOW Academic Senate
2009–2013	AustMS Nominations and Publications Committee
2009–2011	Council of the AustMS
2003–	Australian Mathematics Trust Primary Problems Committee
2002–2007	Board of the Hunter Valley Grammar School

MEDIA EXPERIENCE

2014	730 Report on <i>Crisis in Maths</i> , Friday January 24 2014
2011	<i>Life Matters</i> 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

AWARDS

- 2014 Vice-Chancellor's Award for [Excellence in Research Culture](#)
- 2014 [Fellow](#) of the Australian Mathematical Society
- 2013 [BH Neumann Award](#) of the Australian Mathematics Trust
- 2006 Teaching and Learning Excellence Award, Faculty of Science and IT, UoN
- 1992 [BH Neumann Prize](#) of the Australian Mathematical Society

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

I consider research to be 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 [10]. My mathematical activities have resulted in invitations to give plenary talks at international conferences and the awarding of over \$1.7M in external competitive research funding since 2002.

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.

Research

RESEARCH INTERESTS

I have broad interests across mathematics and its applications. I have published in group theory, functional analysis, operator algebras, and control theory. My current major projects are on: the general structure theory of totally disconnected, locally compact groups; the study of self-similar actions; and the classification of KMS states on C^* -algebras.

AUSTRALIAN RESEARCH COUNCIL GRANTS

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

OTHER SIGNIFICANT FUNDING

- 2008–2009 Australian Mathematical Sciences Institute:
[AMSI Summer School](#) (Ramagge as Director), \$220,000
- 2007 VolkswagenStiftung: Willis *et al* (Ramagge 1 of 4), €44,000
[Totally disconnected Groups, Graphs and Geometry](#)

SELECTED INVITED PRESENTATIONS AND LIMITED-ATTENDANCE EVENTS

I have given talks in over 12 countries across four continents at notable institutions including: Oxford, Warwick, Dartmouth, La Universidad Autonoma de Madrid, and Neuchâtel.

- 2012, 2013 AustMS Early Career Workshops
- 2012 [Baumfest](#), Australian National University
- 2012 [Combinatorics, representations, and structure of Lie type](#), University of Melbourne
- 2012 [Distinguished lecturer](#), University of South Australia
- 2010 Keynote speaker, [New Zealand Mathematics Colloquium](#)
- 2009 [Plenary speaker](#) at Australian Mathematical Society Annual Meeting
- 2007 [Totally disconnected groups, graphs and geometry](#)
in Blaubeuren, Germany, fully funded by VolkswagenStiftung
- 2007 UK lecture tour funded by the London Mathematical Society
- 2007 [Buildings and combinatorial representation theory](#) at AIM
- 2006 [The property of rapid decay](#), American Institute of Mathematics
- 2001 [Random walks and geometry](#), Erwin Schrödinger Institute, Vienna
- 2001 [Operator Algebras](#), New Zealand Mathematics Research Institute
- 1999 National Conference on Algebra, Beijing Normal University
- 1995 [Séminaire Claude Chevalley](#)
- 1993 [Séminaire Claude Chevalley](#)

PUBLICATIONS

In all but [17], authors are listed alphabetically in line with tradition in mathematics. My contribution to each paper is equal with that of the other authors with two exceptions. In [17] I did not significantly contribute to the engineering applications discussed. In [14] five of the authors were undergraduate students being guided through a research project. Coauthors who are students or postdoctoral researchers are emphasised. Publications are followed by the pair

(journal rank in the 2010 ERA exercise, SCImago journal ranking 2012).

- [23] U. Baumgartner, J. Ramagge and G.A. Willis, Scale-multiplicative semigroups and geometry: automorphism groups of trees, Submitted (20 pages).
- [22] B. Armstrong, M. Fielding, S. Kirk, and J. Ramagge, Factors affecting success in CHEM101 at UOW, *Austral. Math. Soc. Gaz.* **41** (2014) 91–98. (C,–)
- [21] M. Laca, I. Raeburn, J. Ramagge, and M.F. Whittaker, Equilibrium states on the Cuntz-Pimsner algebras of self-similar actions, *J. Funct. Anal.* **266** (2014) 6619–6661. (A*, 7/93)
- [20] N. Brownlowe, J. Ramagge, D. Robertson, and M.F. Whittaker, Zappa-Szép products of semigroups and their C^* -algebras, *J. Funct. Anal.* **266** (2014) 3937–3967. (A*, 7/93)
- [19] M. Laca, I. Raeburn and J. Ramagge, Phase transition on Exel crossed products associated to dilation matrices, *J. Funct. Anal.* **261** (2011) 3633–3664. (A*, 7/93)
- [18] U. Baumgartner, M. Laca, J. Ramagge and G.A. Willis, Hecke algebras from groups acting on trees and HNN extensions, *J. Algebra* **321** (2009) 3065–3088. (A*, 9/66)
- [17] J. Mare, J. De Doná, M. Seron, H. Haimovich and J. Ramagge, When does QP yield the exact solution to constrained NMPC?, *Int. J. Control* **82** (2009) 812–821. (A, 23/183)
- [16] U. Baumgartner, J. Ramagge and B. Rémy, Contraction groups in complete Kac-Moody groups, *Groups Geom. Dyn.* **2** (2008) 337–352. (B, 4/44)
- [15] U. Baumgartner, J. Ramagge and G.A. Willis, A compactly generated group, whose Hecke algebras admit no bounds on their representations, *Glasg. Math. J.* **48** (2006) 193–201. (B, 206/352)
- [14] U. Baumgartner, J. Foster, J. Hicks, H. Lindsay, B. Maloney, I. Raeburn, J. Ramagge and S. Richardson, Hecke algebras of group extensions, *Comm. Alg.* **33** (2005) 4135–4147. (B, 38/66)
- [13] A. Ram and J. Ramagge, Affine Hecke Algebras, cyclotomic Hecke algebras and Clifford theory, A tribute to C. S. Seshadri (Chennai, 2002), 428–466, Trends Math., Birkhäuser, Basel, 2003. (–,–)
- [12] J. Ramagge and W.W. Wheeler, Cohomology of buildings and finiteness properties of \tilde{A}_n -groups, *Trans. Amer. Math. Soc.* **354** (2002) 47–61. (A*, 39/352)
- [11] J. Ramagge, Groups, representations and Haagerup’s inequality for buildings. Functional Analysis, Optimization and Applications, J. Giles and B. Ninness (eds), *Proc. CMA* **36** (1999) 121–126. (–,–)
- [10] J. Ramagge, A.G. Robertson and T. Steger, A Haagerup Inequality for $\tilde{A}_1 \times \tilde{A}_1$ and \tilde{A}_2 Buildings, *Geom. Funct. Anal.* **8** (1998) 702–731. (A*, 2/93)

- [9] J. Ramagge and W.W. Wheeler, Posets and differential graded algebras, *J. Austral. Math. Soc. Ser. A* **64** (1998) 1–19. (B, 201/352)
- [8] J. Ramagge and A.G. Robertson, Factors from buildings, *Contemp. Math.* **206** (1997) 165–167. (A,–)
- [7] J. Ramagge and A.G. Robertson, Factors from trees, *Proc. Amer. Math. Soc.* **125** (1997) 2051–2055. (A, 79/283)
- [6] J. Ramagge and A.G. Robertson, Triangle buildings and actions of type III_{1/q^2} , *J. Funct. Anal.* **140** (1996) 472–504. (A*, 7/93)
- [5] J. Ramagge, How to make life hell for the judges of the B.H. Neumann Prize, *Austral. Math. Soc. Gaz.* **23** (1996) 186–187. (C,–)
- [4] J. Ramagge, A realization of certain affine Kac-Moody groups of types II and III, *J. Algebra* **171** (1995) 713–806. (A*, 9/66)
- [3] J. Ramagge, On certain fixed point subgroups of affine Kac-Moody groups, *J. Algebra* **171** (1995) 473–514. (A*, 9/66)
- [2] J. Ramagge, Affine Kac-Moody groups of types II and III, *C. R. Math. Acad. Sci. Paris* **319** (1994) 207–212. (–, 108/352)
- [1] J. Ramagge, An introduction to Kac-Moody groups, *Austral. Math. Soc. Gaz.* **19** (1994) 207–212. (C,–)

RESEARCH STUDENTS

Nur Sa'Aidah Ismail	MMath 2008, Lecturer, Universiti Teknologi Mara, Malaysia
Jason Kimberley	PhD 2006
Paul Cutting	PhD 2005, working in the Department of Health and Ageing
Matt Skerritt	Honours 2005, currently PhD student at UoN
Summer 2002/3	James Foster, Jacqui Hicks, Helen Lindsay, Ben Maloney and Sarah Richardson, see [13]
Leah Ratliff	Honours 2000, completed PhD at USyd in 2006

At least eight students I have supervised for vacation scholarships and project work have gone on to undertake PhD studies.

RESEARCHER PROFILES

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>

although the initial segment of the address will vary for other institutions.

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.

I evaluate my teaching and modify my practice in accordance with student feedback. At UOW the benchmark is the average of the first 8 questions on a standard questionnaire. My three most recent evaluations have all had averages of 5.8 out of a possible 6.

I represent Academic Senate on the UOW Strategic Course Development Committee.

EDUCATIONAL DEVELOPMENT

I was a driving force in the development of the *Bachelor of Medical Mathematics* at UOW. The aim was to provide an attractive option for students who wanted to use the mathematical sciences to make a difference to society but who did not want to be teachers. The BMedMath is particularly popular with females.

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. Tibra 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* by Professor Gavin Brown in 2009.

EDUCATIONAL FUNDING

- | | |
|-----------|---|
| 2009-2010 | DEEWR: AMSI (Ramage 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> (Ramage 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> |
| 2008-2009 | AMSI Summer School (Ramage as Director), \$220,000 |

PRESENTATIONS ON EDUCATION

- | | |
|-----------|--|
| 2012 | <i>Current patterns of mathematics study</i> , IISME, Sydney |
| 2010-2011 | UWA Year of Mathematics including
<i>Mathematics in the spotlight</i> keynote at launch 3 Nov 2010
<i>Is maths a foreign language?</i> , 26 May 2011
<i>Teaching and Learning Mathematics in the Australian Curriculum</i> , 3 Nov 2011 |
| 2010 | <i>Mathematics for Primary Educators</i> , IISME, Sydney
Handout of presentation available for download |
| 2007 | <i>Reflexiones sobre la convergencia europea y la enseñanza con un enfoque antípodo y un sabor matemático</i> , Universitat de València |
| 2003 | <i>Vermont Mathematics Initiative</i> , Vermont, USA |

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 to the University of Wollongong 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.

DIRECTING EVENTS AND PROGRAMS

I was Director of the Australian Mathematical Sciences Institute [2009 Summer School](#) at UOW. This was a four-week residential summer school attended by 70 Honours and PhD students from around the country and overseas. My responsibilities as Director included: chairing the program committee; preparing the timetable and booking rooms; organising accommodation for students and lecturers; organising social events; coordinating photographers and media releases; mentoring the participants; and general trouble-shooting on a day-to-day basis. The budget for the event was \$220,000 and I delivered the event under budget.

In 2006 I was Director of the [Women@UoN](#) program at UoN. This is a professional development program for female staff, both academic and professional, at the university. The program is now well-established, but at the time it was a relatively recent development. During my tenure as Director I broadened the scope of the program to better meet the needs of both academic and professional staff. Engagement significantly increased and attendance at events doubled.

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 [5]; 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.

My experiences and competencies have led the UOW Professional and Organisational Development Services staff to consult with me when redesigning both the UOW formal Career Development process and the Heads Leadership program. I was the Academic Senate representative on the UOW Academic Staff Professional Development Committee.