

# MICHAEL J. COONS

## CURRICULUM VITAE



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### CONTACT AND PERSONAL INFORMATION

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Citizenships: Australia, USA

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### CAREER PROGRESSION

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| 2019 –      | Deputy Editor-in-Chief<br>Journal of the Australian Mathematical Society  |
| 2019 –      | Associate Professor of Mathematics<br>The University of Newcastle, Australia  |
| 2018        | Visiting Professor<br>Forschungsschwerpunkt Mathematische Modellierung, Universität Bielefeld, Germany  |
| 2017 – 2018 | Visiting Researcher<br>Alfréd Rényi Institute of the Hungarian Academy of Sciences, Budapest, Hungary   |
| 2015 – 2018 | Senior Lecturer of Mathematics<br>The University of Newcastle, Australia  |
| 2014 – 2016 | Distinguished Early Career Research Fellow (DECRA)<br>Australian Research Council, The University of Newcastle, Australia   |
| 2012 – 2014 | Lecturer of Mathematics<br>The University of Newcastle, Australia   |
| 2009 – 2012 | Fields–Ontario Postdoctoral Fellow<br>Fields Institute and University of Waterloo, Canada<br>Hosts: Kevin Hare and Cameron L. Stewart   |
| 2006 – 2009 | Ph.D. in Mathematics, Simon Fraser University, Burnaby, British Columbia, Canada<br>Thesis: <i>Parity, transcendence, and multiplicative functions</i><br>Advisors: Peter Borwein and Stephen Kwok-Kwong Choi |
| 2005 – 2006 | Fulbright Scholar<br>Alfréd Rényi Institute of the Hungarian Academy of Sciences, Budapest, Hungary<br>Host: János Pintz  |
| 2005 – 2006 | Visiting Student<br>Central European University, Budapest, Hungary  |
| 2004 – 2005 | M.S. in Mathematics, Baylor University, Waco, Texas, USA<br>Thesis: <i>General moment theorems with applications</i><br>Advisor: Klaus Kirsten  |
| 1999 – 2003 | B.A. in Mathematics, The University of Montana, Missoula, Montana, USA  |

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### AWARDS, HONOURS, AND SCHOLARSHIPS

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|------|---|
| 2020 | Plenary Speaker, Number Theory Down Under VIII, University of Melbourne;<br><b>Simons Foundation Visiting Professor</b> , Math. Forsch. Oberwolfach, Germany. |
| 2019 | Keynote Speaker, Dynamics and Number Theory, University of Sydney;<br>Invited Lecturer, AMSI Summer School, UNSW.   |

- 2017      **Mahony–Neumann–Room Prize**, Australian Mathematical Society (with J. P. Bell and K. G. Hare, for the best paper in the Bulletin of the Australian Mathematical Society in 2011–2016).
- 2016      Chair, Early Career Plenary Session, Australian Math. Soc. Meeting, ANU.
- 2014      **Australian IMU Delegate** to the *General Assembly of the IMU/ICM*, Gyeongju, Korea; Keynote Speaker, Australian Mathematical Sciences Student Conference; **Discovery Early Career Research Award**, Australian Research Council (2014–2016).
- 2013      Australian Mathematical Society Early Career Workshop, invited research presenter.
- 2012      Australian Mathematical Society representative to *Science meets Parliament*.
- 2010      Simon Fraser University Nominee for 2010 CMS Doctoral Prize (essentially, the departmental award for best PhD thesis of 2009).
- 2009      **Fields–Ontario Postdoctoral Fellowship** (2009–2012); Graduate Fellowship, Simon Fraser University.
- 2008      President’s PhD Research Stipend, Simon Fraser University; Graduate Fellowship, Simon Fraser University; Research Travel Award, Simon Fraser University.
- 2007      Second Place Poster Prize, CECM Summer Meeting.
- 2005      **Fulbright Scholar**, Alfréd Rényi Institute, Budapest, Hungary; Best Student Paper Prize, MAA Regional Meeting, Texas Section.
- 2003      Dean’s List, University of Montana; Pi Mu Epsilon, National Honors Society of Mathematics; Phi Kappa Phi, National Honors Society; Undergraduate Research Fellow, University of Montana; Scholar of the College of Arts and Sciences, University of Montana.
- 2000      Phi Theta Kappa, National Honors Society.

## PUBLICATIONS (MANY OF MY PREPRINTS ARE AVAILABLE AT [arXiv.org](https://arxiv.org).)

### Preprints

- [54] (with J. Evans, Z. Groth and N. Mañibo) *Ghost distributions of regular sequences are affine transformations of self-affine sets*, preprint.
- [53] (with J. Evans and N. Mañibo) *The spectral theory of regular sequences*, preprint.

### Published

- [52] (with M. Baake, J. Evans and P. Gohlke) *On a family of singular continuous measures related to the doubling map*, **Indagationes Mathematicae** **32** (2021), no. 4, 847–860.
- [51] (with M. Baake) *Scaling of the diffraction measure of  $k$ -free integers near the origin*, **Michigan Mathematical Journal** **70** (2021), 213–221.
- [50] *A diffraction abstraction*, in “2019–20 MATRIX Annals”, 735–744, **MATRIX Book Ser. 4**, Springer, 2021.
- [49] (with M. Baake, U. Grimm, J. A. G. Roberts and R. Yassawi) *Aperiodic order meets number theory: Origin and structure of the field*, in “2019–20 MATRIX Annals”, 663–667, **MATRIX Book Ser. 4**, Springer, 2021.
- [48] (with J. Evans) *A sequential view of self-similar measures, or, what the ghosts of Mahler and Cantor can teach us about dimension*, **Journal of Integer Sequences** **24** (2021), Article 21.2.5, 1–10.
- [47] *Degree-one Mahler functions: asymptotics, applications and speculations*, **Bulletin of the Australian Mathematical Society** **102** (2020), no. 3, 399–409.
- [46] (with M. Baake and N. Mañibo) *Constant-length binary substitutions and Mahler measures of Borwein polynomials*, in “From Analysis to Visualization: A Celebration of the Life and Legacy of Jonathan M. Borwein”, 303–322, **Springer Proceedings in Math. & Stat.**, Vol. 13, Springer, 2020.

- [45] (with Y. Bugeaud) *A Mahler Miscellany*,  
**Documenta Mathematica** (2019), Extra Vol., Mahler Selecta, 179–190.
- [44] (with M. Baake, J. M. Borwein and Y. Bugeaud) *Introduction*,  
**Documenta Mathematica** (2019), Extra Vol., Mahler Selecta, 3–11.
- [43] (co-edited with M. Baake and Y. Bugeaud) *The Legacy of Kurt Mahler: A Mathematical Selecta*,  
**Documenta Mathematica** (2019), Extra Vol., Mahler Selecta.
- [42] (with J. P. Bell, F. Chyzak and P. Dumas) *Becker’s conjecture on Mahler functions*,  
**Transactions of the American Mathematical Society** **372** (2019), no. 5, 3405–3423.
- [41] (with L. Spiegelhofer) *Number theoretic aspects of regular sequences*,  
in “Sequences, Groups, and Number Theory”, 37–87, **Trends Math.**, Birkhäuser/Springer, 2018.
- [40] *Mahler takes a regular view of Zaremba*,  
**Integers** **18A** (2018), #A6, 1–15.
- [39] (with M. Baake) *A natural probability measure derived from Stern’s diatomic sequence*,  
**Acta Arithmetica** **183** (2018), no. 1, 87–99.
- [38] *Proof of Northshield’s conjecture concerning an analogue of Stern’s sequence for  $\mathbb{Z}[\sqrt{2}]$* ,  
**Australasian Journal of Combinatorics** **71(1)** (2018), 113–120.
- [37] *Extension of theorem of Duffin and Schaeffer*,  
**Journal of Integer Sequences** **20** (2017), Article 17.9.4, 1–4.
- [36] *An asymptotic approach in Mahler’s method*,  
**New Zealand Journal of Mathematics** **47** (2017), 27–42.
- [35] (with Y. Tachiya) *Transcendence over meromorphic functions*,  
**Bulletin of the Australian Mathematical Society** **95** (2017), no. 3, 393–399.
- [34] *Regular sequences and the joint spectral radius*,  
**International Journal of Foundations of Computer Science** **28** (2017), no. 2, 135–140.
- [33] (with L. Spiegelhofer) *The maximal order of hyper-(b-ary)-expansions*,  
**Electronic Journal of Combinatorics** **24** (2017), no. 1, #P1.15, 1–8.
- [32] (with J. P. Bell) *Transcendence tests for Mahler functions*,  
**Proceedings of the American Mathematical Society** **145** (2017), no. 3, 1061–1070.
- [31] *A Problem With A Regular Outlook*,  
**Notes of the Canadian Mathematical Society** **49** (2017), no. 1, 14–15.
- [30] *Zero order estimates for Mahler functions*,  
**New Zealand Journal of Mathematics** **46** (2016), 83–88.
- [29] (with M. Hussain and B.-W. Wang) *A dichotomy law for the Diophantine properties in  $\beta$ -dynamical systems*,  
**Mathematika** **62** (2016), no. 3, 884–897.
- [28] (with E. Catt and J. Velich) *Strong normality and generalised Copeland–Erdős numbers*,  
**Integers** **16** (2016), #A11, 1–10.
- [27] (with J. P. Bell and K. Hare) *Growth degree classification for finitely generated semigroups of integer matrices*,  
**Semigroup Forum** **92** (2016), no. 1, 23–44.
- [26] (with R. P. Brent and W. Zudilin) *Algebraic independence of Mahler functions via radial asymptotics*,  
**International Mathematics Research Notices** (2016), no. 2, 571–603.
- [25] (with H. Winning) *Powers of two modulo powers of three*,  
**Journal of Integer Sequences** **18** (2015), Article 15.6.1, 1–9.
- [24] (with J. P. Bell and Y. Bugeaud) *Diophantine approximation of Mahler numbers*,  
**Proceedings of the London Mathematical Society** (3) **110** (2015), no. 5, 1157–1206.
- [23] *Addendum to: On the rational approximation of the sum of the reciprocals of the Fermat numbers*,  
**The Ramanujan Journal** **37** (2015), no. 1, 109–111.
- [22] (with J. Borwein and Y. Bugeaud) *The Legacy of Kurt Mahler*,  
**Notices of the American Mathematical Society** **62** (2015), no. 5, 526–531.

- [21] (with J. Tyler) *The maximal order of Stern's diatomic sequence*,  
**Moscow Journal of Combinatorics and Number Theory** **4** (2014), iss. 3, 3–13.
- [20] (with J. P. Bell and K. Hare) *The minimal growth of a  $k$ -regular sequence*,  
**Bulletin of the Australian Mathematical Society** **90** (2014), no. 2, 195–203.
- [19] *An arithmetical excursion via Stoneham numbers*,  
**Journal of the Australian Mathematical Society** **96** (2014), no. 3, 303–315.
- [18] (with J. Borwein and Y. Bugeaud) *The Legacy of Kurt Mahler*,  
**Australian Mathematical Society Gazette** **41** (2014), no. 1, 11–21.
- [17] (with J. Borwein and Y. Bugeaud) *The Legacy of Kurt Mahler*,  
**Newsletter of the European Mathematical Society** **91** (2014), 19–23.
- [16] (with J. P. Bell and E. Rowland) *The rational–transcendental dichotomy of Mahler functions*,  
Special Issue in Honour of the 60th Birthday of Jean-Paul Allouche  
**Journal of Integer Sequences** **16** (2013), Article 13.2.10, 1–11.
- [15] *On the rational approximation of the sum of the reciprocals of the Fermat numbers*,  
**The Ramanujan Journal** **30** (2013), no. 1, 39–65.
- [14] *Transcendental solutions of a class of minimal functional equations*,  
**Canadian Mathematical Bulletin** **56** (2013), no. 2, 283–291.
- [13] *A correlation identity for Stern's diatomic sequence*,  
**Integers** **12** (2012), #A3, 1–5.
- [12] *A note on two conjectures associated to Goldbach's problem*,  
**Publicationes Mathematicae Debrecen** **80** (2012), 1–3.
- [11] (with J. P. Bell and N. Bruin) *Transcendence of generating functions whose coefficients are multiplicative*,  
**Transactions of the American Mathematical Society** **364** (2012), no. 2, 933–959.
- [10] (with P. Vrbik) *An irrationality measure for regular paperfolding numbers*,  
**Journal of Integer Sequences** **15** (2012), Article 12.1.6, 1–10.
- [9] *Extension of some theorems of W. Schwarz*,  
**Canadian Mathematical Bulletin** **55** (2012), no. 1, 60–66.
- [8] (with J. Shallit) *A pattern sequence approach to the Stern sequence*,  
**Discrete Mathematics** **311** (2011), 2630–2633.
- [7] *On some conjectures concerning Stern's sequence and its twist*,  
**Integers** **11** (2011), #A35, 1–14.
- [6] (with S. R. Dahmen) *On the residue class distribution of the number of prime divisors of an integer*,  
**Nagoya Mathematical Journal** **202** (2011), 15–22.
- [5] *(Non)Automaticity of number theoretic functions*,  
**Journal de Théorie des Nombres de Bordeaux** **22** (2010), no. 2, 339–352.
- [4] (with P. Borwein and S. K. K. Choi) *Completely multiplicative functions taking values in  $\{-1, 1\}$* ,  
**Transactions of the American Mathematical Society** **362** (2010), no. 12, 6279–6291.
- [3] *The transcendence of series related to Stern's diatomic sequence*,  
**International Journal of Number Theory** **6** (2010), no. 1, 211–217.
- [2] (with P. Borwein) *The transcendence of power series for some number theoretic functions*,  
**Proceedings of the American Mathematical Society** **137** (2009), no. 4, 1303–1305.
- [1] (with K. Kirsten) *General moment theorems for non-distinct unrestricted partitions*,  
**Journal of Mathematical Physics** **50** (2009), no. 1, 19 pages.

#### Other contributions and theses

- x. (with J. Borwein, Y. Bugeaud, and J. van der Poorten) *The Kurt Mahler Archive*,  
a website dedicated to the mathematical life and collected works of Kurt Mahler,  
available at <http://carma.newcastle.edu.au/mahler/>
- ix. *On the multiplicative Erdős discrepancy problem*,  
10 pages (permanent preprint not intended for publication, available on my webpage).

- viii. *Yet another proof of the infinitude of primes, I*,  
4 pages (permanent preprint not intended for publication, available on my webpage).
- vii. *Hendrik Lenstra: Distinguished Lecture Series*,  
**Fields Notes**, Vol. 10:2 (2010), pages 3 and 14–15.
- vi. *Workshop on Discovery and Experimentation in Number Theory*,  
**Fields Notes**, Vol. 10:2 (2010), pages 6 and 17.
- v. *Some aspects of analytic number theory: parity, transcendence, and multiplicative functions*,  
Ph.D Thesis, xii+94 pages, ISBN: 978-0494-59811-5, Simon Fraser University, 2009.
- iv. Translation of Edmund Landau's Dissertation, *New proof of the equation  $\sum \mu(k)/k = 0$* ,  
preliminary version (2007), preprint. (Available at <http://arxiv.org/pdf/0803.3787v1>)
- iii. *The Emergence of Modern Number Theory in Hungary*,  
**Hungarian Fulbright Student Conference Papers**, TypoTEX Ltd. Electronical Publishing Co., Budapest,  
2009, 181–192.
- ii. *General moment theorems with applications*,  
vi+77 pages, Master's Thesis, Baylor University, 2005.
- i. *Numerical Methods for Left-Ventricular Contractility*,  
32 pages, Bachelor's Thesis, University of Montana, 2003.

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## EVENT ADMINISTRATION AND ORGANISATION

- Program Advisory Board, 2022 Australian Mathematical Society Meeting, to be held at the University of New South Wales, New South Wales, 12/2022.
- Organiser, *Number Theory Online Conference (NTOC2020)*, held online hosted by CARMA, University of Newcastle, 3–5/6/2020.
- Program Advisory Board, 2019 Australian Mathematical Society Meeting, held at Monash University, Victoria, 12/2019.
- Organiser, *Aperiodic Order Meets Number Theory*, held at MATRIX, University of Melbourne, Creswick, Victoria, 25/2/2019–1/3/2019.
- Organiser, CARMA Colloquia and Seminars, University of Newcastle, 2019–2020.
- Director/Organiser, *2018 Australian Mathematical Society Early Career Workshop*, held at the Barcoo Function Centre, West Beach, Adelaide, South Australia, 12/2018.
- Organiser, University of Newcastle Mathematics Colloquium, 1/2017–6/2017.
- Organiser, *Special Session in Number Theory*, 60th meeting of the Australian Mathematical Society, held at the Australian National University, Australian Capital Territory, 12/2016.
- Director/Organiser, *2016 Australian Mathematical Society Early Career Workshop*, held at the Australian Academy of Sciences, Australian Capitol Territory, 12/2016.
- Organiser, *Number Theory Down Under 4*, held at the University of Newcastle, New South Wales, 9/2016.
- Organiser, *Special Session in Number Theory*, 59th meeting of the Australian Mathematical Society, held at the Flinders University, South Australia, 9/2015.
- Director/Organiser, *2015 Australian Mathematical Society Early Career Workshop*, held at the Flinders University, South Australia, 9/2015.
- Organiser, *Number Theory Down Under 3*, held at the University of Newcastle, New South Wales, 9/2015.
- Organiser, *2015 Australian Mathematical Sciences Institute (AMSI) Summer School*, held in Newcastle, New South Wales, 1/2015.
- Organiser, *Special Session in Number Theory*, 58th meeting of the Australian Mathematical Society, held at the University of Melbourne, Victoria, 8/12/2014–12/12/2014.

- Organiser, *Special Session in Analytic methods in Diophantine equations*, Summer meeting of the Canadian Mathematical Society, held in Winnipeg, Manitoba, 6/6/2014–9/6/2014.
- Organiser, *Number Theory Down Under*, a one-day meeting for number theory (which will hopefully become annual), held at the Harbourview Function Centre in Newcastle, New South Wales, 5/10/2013.
- Organiser, *Special Session in Number Theory*, 57th meeting of the Australian Mathematical Society, held at the University of Sydney, New South Wales, 30/9/2013–3/10/2013.
- Organiser, *Special Session in Number Theory*, 56th meeting of the Australian Mathematical Society, held at the University of Ballarat, Victoria, 9/24–27/2012.
- Organiser, Formal Languages and Automata Seminar (School of Computer Science), 1/2012–4/2012. (University of Waterloo)
- Organiser, Fields/IRMACS workshop, *Discovery and Experimentation in Number Theory*, held jointly at the Fields Institute in Toronto and the IRMACS Centre in Burnaby, 9/22–26/2009.
- Organiser, Mathematics Graduate Research Seminar, 1/2007–12/2007. (Simon Fraser University)

## SPECIAL PROGRAMS, INVITED CONFERENCES, AND OTHER VISITS

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| 2020 | <p><i>Almost Periodicity in Aperiodic Order</i>, to be held at the Banff International Research Station (BIRS) in Banff, Alberta. (7/2020) (<i>Rescheduled–COVID</i>)</p> <p><i>Diophantische Approximationen</i>, to be held at Mathematisches Forschungsinstitut Oberwolfach, Germany, 19–25/4/2020. (<i>Rescheduled–COVID</i>)</p>  |
| 2019 | <p><i>Ergodic Theory, Diophantine Approximation and Related Topics</i>, held at MATRIX, University of Melbourne, Creswick, Victoria, 21/6/2019.</p> <p><i>Dynamics and Number Theory</i>, held at the University of Sydney, Sydney, New South Wales, 12/6/2019–14/6/2019.</p> <p><i>Aperiodic Order Meets Number Theory</i>, held at MATRIX, University of Melbourne, Creswick, Victoria, 25/2/2019–1/3/2019.</p> <p><i>Asia–Australia Algebra Conference</i>, held at the University of Western Sydney, Parramatta, New South Wales, 20/1/2019–26/1/2019.</p> <p><i>AMSI Summer School</i>, held at the University of New South Wales, Randwick, New South Wales, 7/1/2019–1/2/2019.</p>  |
| 2018 | <p><i>Informal Workshop on Aperiodic Order</i>, Universität Bielefeld in Bielefeld, Germany. (12/2018)</p> <p><i>Research Visit</i>, Hochschule für Technik Stuttgart, Germany. (11/2018)</p> <p><i>Research visit</i>, University of Waterloo in Ontario, Canada. (11/2018)</p> <p><i>Research visit</i>, University of York, United Kingdom. (10/2018)</p> <p><i>Diophantine Approximation and Transcendence</i>, a conference held at CIRM/Luminy in Marseille, France. (9/2018)</p> <p><i>Model Sets and Aperiodic Order</i>, a conference held at Durham University in Durham, United Kingdom. (9/2018)</p> <p><i>Research visit</i>, Université de Lorraine in Nancy, France. (5/2018)</p> <p><i>Research visits</i>, Universität Bielefeld in Bielefeld, Germany. (1/2018, 5/2018, 9/2018–1/2019)</p> <p><i>Workshop on Words and Complexity</i>, Université de Lyon in Lyon, France (2/2018)</p> |
| 2017 | <p><i>Denmark Australia Diophantine Approximation Day</i>, a conference held at Aarhus University in Aarhus, Denmark. (12/2017)</p> <p><i>Research visit</i>, Institut Henri Poincaré in Paris, France. (11/2017)</p> <p><i>Research visit</i>, INRIA in Paris, France. (11/2017)</p> <p><i>Research visits</i>, Universität Bielefeld in Bielefeld, Germany. (8/2017, 9/2017, 10/2017)</p> <p><i>Research visit</i>, Alfréd Rényi Institute of the Hungarian Academy of Sciences in Budapest, Hungary. (7/2017–2/2019)</p>  |

- Diophantine Approximation and Algebraic Curves*, a conference held at the Banff International Research Station (BIRS) in Banff, Alberta. (7/2017)
- Research visit*, Universiteit Leiden in Leiden, The Netherlands. (1–2/2017)
- 2016 *Normal Numbers: Arithmetic, Computational and Probabilistic Aspects*, a conference held at the Erwin Schrödinger International Institute for Mathematics and Physics (ESI) in Vienna, Austria. (11/2016)
- International Alumni Meeting*, a conference held at the Hungarian Academy of Sciences organised by the Hungarian Ministry of Human Capacities in Budapest, Hungary. (10/2016)
- 2015 *The Geometry, Algebra and Analysis of Algebraic Numbers*, a conference held at the Banff International Research Station (BIRS) in Banff, Alberta. (10/2015)
- Research visit*, Dalhousie University in Halifax, Canada. (6/2015)
- Automatic Sequences*, a conference held at the University of Liège, Belgium. (5/2015)
- Research visit*, Australian National University in Canberra, Australia. (5/2015)
- Algebraic, Number Theoretic and Graph Theoretic Aspects of Dynamical Systems*, a conference held at UNSW, Sydney, Australia. (2/2015)
- 2014 *2014 General Assembly of the IMU*, International Congress of Mathematicians, a conference held in Gyeongju, Korea. (8/2014, funded attendance from AustMS and AMSI)
- Research visit*, University of Waterloo in Waterloo, Ontario. (9–15/6/2014)
- Research visit*, University of Calgary in Calgary, Alberta. (19/5/2014–5/6/2014)
- 2013 *Australian Mathematical Society Early Career Workshop*, a workshop held at Waldorf Leura Garden Resort, Blue Mountain NSW. (29–30/9/2013)
- Research visit*, University of British Columbia in Vancouver, British Columbia. (12–26/9/2013)
- 2011 *3rd Montréal–Toronto Workshop in Number Theory: new developments in analytic number theory*, a conference held at the Fields Institute in Toronto, Ontario. (10/7/2011–10/9/2011)
- Analytic Aspects of L-functions and Applications to Number Theory*, a conference held at the University of Calgary in Calgary, Alberta. (6/29/2011–6/3/2011)
- 2010 *Diophantine Approximation and Transcendence*, a conference held at CIRM/Luminy in Marseille, France. (9/6/2010–9/10/2010)
- Diophantine Approximation and Analytic Number Theory: A Tribute to Cam Stewart*, a conference held at the Banff International Research Station (BIRS) in Banff, Alberta. (5/30/2010–6/4/2010)
- 2009 *Foundations of Computational Mathematics*, thematic program held at the Fields Institute in Toronto, Ontario. (7/1/2009–12/31/2009)
- 2008 Fields Institute Summer School in *Analytic Number Theory and Diophantine Approximation* held at the University of Ottawa in Ottawa, Ontario. (6/30/2008–7/11/2008)
- 2005–2006 *Fulbright Scholar*, Alfréd Rényi Institute of the Hungarian Academy of Sciences, Budapest, Hungary. (8/1/2005–6/30/2006)
- Visiting Student*, Central European University, Budapest, Hungary. (8/1/2005–6/30/2006)

PRESENTATIONS (**Bold#**=INVITED AND SPECIALISED, REGULAR#=CONTRIBUTED AND HOME SEMINARS)

## 2020

- 107.** *Fractal aspects of regular sequences: a paradigm in progress*,  
Number Theory Down Under VIII (Melbourne, VIC), 7/10/2020.
- 106.** *Some curious infinite products*,  
Number Theory Seminar, University of New South Wales (Sydney, NSW), 4/3/2020.
- 105.** *Some curious infinite products*,  
Mathematics Colloquium, University of Tasmania (Hobart, TAS), 19/02/2020.

**2019**

- 104. *Integer sequences, asymptotics and diffraction*,  
Symmetry in Newcastle, University of Newcastle (Callaghan, NSW), 6/9/2019.
- 103. *Integer sequences, asymptotics and diffraction*,  
Pure Mathematics Seminar, University of New South Wales (Sydney, NSW), 16/7/2019.
- 102. *A diffraction abstraction distraction, I*, Ergodic Theory, Diophantine Approximation and Related Topics,  
MATRIX, University of Melbourne, Creswick, Victoria, 21/6/2019.
- 101. *Scaling of the diffraction measure of  $k$ -free integers: A diffraction abstraction distraction, II*,  
Dynamics and Number Theory, University of Sydney (Sydney, NSW), 14/6/2019.
- 100. *Mahler's methods: theorems, speculations and variations*,  
CARMA Colloquium, University of Newcastle (Newcastle, Australia), 14/3/2019.
- 99.  *$\pi$ , an irrational love story*,  
Newcastle Maths Students Society, University of Newcastle (Newcastle, Australia), 14/3/2019.

**2018**

- 98. *Mahler's methods: theorems, speculations and variations*,  
Informal Workshop on Aperiodic Order, University of Bielefeld (Bielefeld, Germany), 8/12/2018.
- 97. *Mahler's methods: theorems, speculations and variations*,  
Mathematics Colloquium, Hochschule für Technik Stuttgart (Stuttgart, Germany), 29/11/2018.
- 96. *Mahler's methods: theorems, speculations and variations*,  
Pure Mathematics Colloquium, University of Waterloo (Waterloo, Canada), 5/11/2018.
- 95. *Stern measures: something more must be done!*,  
Number Theory Seminar, University of York (York, United Kingdom), 17/10/2018.
- 94. *One regular problem*,  
Forschungsschwerpunkt Math. Model. Seminar, Universität Bielefeld (Bielefeld, Germany), 21/9/2018.
- 93. *Two regular problems*,  
Diophantine approximation and transcendence, CIRM (Luminy, France), 14/9/2018.
- 92. *A regular journey at the interface of number theory and computer science*,  
Mathematics Colloquium, Universität Bielefeld (Bielefeld, Germany), 24/5/2018.
- 91. *Regular sequences via a paradigmatic example*,  
Séminaire Théorie des Nombres, Université de Lorraine (Nancy, France), 17/5/2018.
- 90. *Automatic sequences and Mahler's measure*,  
Workshop on Words and Complexity, Université de Lyon (Lyon, France), 21/2/2018.

**2017**

- 89. *2-automatic sequences, Lyapunov exponents and a dynamical analogue of Lehmer's Mahler measure problem*,  
Denmark–Australia Diophantine Approximation Day, U. Aarhus (Aarhus, Denmark), 8/12/2017.
- 88. *2-automatic sequences, Lyapunov exponents and a dynamical analogue of Lehmer's Mahler measure problem*,  
Seminar "Computations and Proofs" at SpecFun, INRIA (Paris, France), 20/11/2017.
- 87. *Binary substitutions of constant length and Mahler measures of Borwein polynomials*,  
Jonathan M. Borwein Commemorative Conference (Newcastle, NSW), 27/9/2017.
- 86. *A problematic excursion at the interface of number theory and analysis*,  
Diophantine Approximation and Algebraic Curves at BIRS (Banff, AB), 3/7/2017.
- 85. *Variations on a theme of Mahler*,  
Algebra and Number Theory Seminar, University of Leiden (Leiden, Netherlands), 13/2/2017.

**2016**

- 84. *An analytic view of transcendence*,  
University of New South Wales Number Theory Seminar (Sydney, NSW), 5/10/2016.
- 83. *The Erdős Discrepancy Problem*,  
Discrete Mathematics Seminar, University of Newcastle (Callaghan, NSW), 30/3/2016.
- 82. *Minimal growth of some structured  $\pm 1$ -sequences*,  
Discrete Mathematics Seminar, University of Newcastle (Callaghan, NSW), 16/3/2016.

**2015**

- 81. *The benefits of a regular outlook*,  
CARMA Number Theory Seminar (Callaghan, NSW), 20/10/2015.



- 80. *Asymptotics of Mahler functions*,  
The Geometry, Algebra and Analysis of Algebraic Numbers at BIRS (Banff, AB), 4/10/2015.
- 79. *Radial asymptotics and algebraic independence in Mahler's method*, Applied Mathematics, Modeling and Computational Science Conference AMMCS-CAIMS 2015 (Waterloo, ON), 12/6/2015.
- 78. *Algebraic independence results related to an automatic sequence*,  
CMS Summer Meeting (Charlottetown, PEI), 8/6/2015.
- 77. *Hypertranscendence of Stern's function*,  
Dalhousie University Number Theory Seminar (Halifax, NS), 1/6/2015.
- 76. *Algebraic independence results related to an automatic sequence*,  
Workshop on Automatic Sequences, Université de Liège (Liège, Belgium), 26/5/2015.
- 75. *Randomness in digital expansions of real numbers, or not*,  
MSI Number Theory Seminar, ANU (Canberra, ACT), 12/5/2015.
- 74. *Variations on a theme of Mahler*,  
Maths Colloquium, University of Wollongong (Wollongong, NSW), 8/5/2015.
- 73. *Variations on a theme of Mahler*,  
MSI Colloquium, ANU (Canberra, ACT), 7/5/2015.
- 72. *A function related to Mahler's method*, Algebraic, Number Theoretic and Graph Theoretic Aspects of Dynamical Systems, UNSW (Sydney, NSW), 3/2/2015.

## 2014

- 71. *Growth degree classification for regular sequences*,  
Number Theory Down Under II (Newcastle, NSW), 25/10/2014.
- 70. *From rational to regular*,  
Victorian Algebra Conference, VAC31, Monash University (Melbourne, VIC), 3/10/2014.
- 69. *Variations on a theme of Mahler*,  
CARMA Colloquium (Newcastle, NSW), 25/9/2014.
- 68. *Variations on a theme of Mahler*,  
University of New South Wales Number Theory Seminar (Sydney, NSW), 10/9/2014.
- 67. *Research at CARMA*,  
CARMA Retreat 2014 (Newcastle, NSW), 30/8/2014.
- 66. *My life in  $\$math mode$* ,  
Australian Mathematical Sciences Student Conference (Newcastle, NSW), 2/7/2014.
- 65. *Growth and gaps in regular sequences*,  
Canadian Number Theory Association XIII Meeting (Ottawa, ON), 16/6/2014.
- 64. *Growth and gaps in regular sequences*,  
University of Waterloo (CS Dept.) Formal languages and automata sem. (Waterloo, ON), 11/6/2014.
- 63. *Transcendence and algebraic independence of regular functions*,  
Number Theory Nosh, University of Calgary (Calgary, AB), 3/6/2014.
- 62. *Diophantine approximation: automatic numbers and their generalisations*,  
University of Montana Colloquium (Missoula, MT), 21/5/2014.
- 61. *Growth and gaps in regular sequences*,  
Pacific Northwest Number Theory Conference (Burnaby, BC), 17/5/2014.

## 2013

- 60. *Mind the gap*,  
Victorian Algebra Conference, VAC31, University of Melbourne (Melbourne, VIC), 29/11/2013.
- 59. *Mahler and me, a one-sided love story*,  
Australian Mathematical Society Early Career Workshop (Blue Mountain, NSW), 29/9/2013.
- 58. *Mahler's method, digital expansions, and algebraic numbers (or not)*,  
Joint UBC-SFU Number Theory Seminar (Burnaby, BC), 26/9/2013.
- 57. *Un pas de Mahler (pas de malheur, hein?)*,  
CARMA Retreat 2013 (Newcastle, NSW), 17/8/2013.
- 56. *Automatic for the people! (if you're a number theorist)*,  
University of Newcastle Mathematics Taster Talks (Callaghan, NSW), 8/8/2013.
- 55. *Mahler's method: an introspective retrospective*,  
University of Queensland Colloquium (Brisbane, QLD), 27/5/2013.
- 54. *Arithmetic and Diophantine properties of low-complexity numbers*,  
University of Melbourne Number Theory and Algebra Seminar (Melbourne, VIC), 22/3/2013.

53. *An arithmetic excursion via Stoneham numbers*,  
Monash University Colloquium (Melbourne, VIC), 21/3/2013.

## 2012

52. *The rational-transcendental dichotomy of Mahler functions*,  
Optimisation, Analysis and Number Theory Seminar, CARMA (Callaghan, NSW), 15/10/2012.
51. *A hierarchy of complexity in the context of Mahler's method*,  
CARMA Retreat 2012 (Newcastle East, NSW), 18/8/2012.
50. *A functional introduction to Mahler's method*,  
CARMA Colloquium, University of Newcastle (Callaghan, NSW), 9/8/2012.
49. *A hierarchy of complexity in the context of Mahler's method*,  
Canadian Number Theory Association XII Meeting (Lethbridge, AB), 6/17/2012.
48. *On a theorem of Randé*,  
University of Waterloo (CS Dept.) Formal languages and automata sem. (Waterloo, ON), 6/13/2012.
47. *The rational-transcendental dichotomy of Mahler functions*,  
CMS Summer Meeting (Regina, SK), 6/3/2012.
46. *Rational approximation of Mahler numbers*,  
University of Newcastle Colloquium (Callaghan, NSW), 4/23/2012.
45. *Diophantine approximation of Mahler numbers*,  
University of Lethbridge Special Colloquium (Lethbridge, AB), 4/10/2012.
44. *Rational approximations of regular numbers*,  
University of Waterloo (CS Dept.) Formal languages and automata sem. (Waterloo, ON), 4/4/2012.
43. *Diophantine approximation: automatic numbers and their generalisations*,  
Institute of Science and Technology Austria Colloquium (Klosterneuburg, Austria), 2/23/2012.
42. *Diophantine approximation: automatic numbers and their generalisations*,  
State University of New York Special Colloquium (New Paltz, NY), 2/14/2012.
41. *Diophantine approximation: automatic numbers and their generalisations*,  
University of Waterloo Number Theory Seminar (Waterloo, ON), 2/2/2012.
40. *Some problems and results concerning Stern's diatomic sequence*,  
University of Waterloo (CS Dept.) Formal languages and automata sem. (Waterloo, ON), 1/18/2012.
39. *An irrationality measure for Mahler numbers*,  
AMS–MAA Joint Mathematics Meetings (Boston, MA), 1/6/2012.

## 2011

38. *An irrationality measure for Mahler numbers*,  
CMS Winter Meeting (Toronto, ON), 12/11/2011.
37. *New proof of a theorem of Nishioka*,  
University of Toronto Number Theory Seminar (Toronto, ON), 11/9/2011.
36. *New proof of a theorem of Nishioka*,  
University of Waterloo (CS Dept.) Formal languages and automata sem. (Waterloo, ON), 11/7/2011.
35. *Some problems and results concerning Stern's diatomic sequence*,  
Applied Math., Modeling and Computational Sci. Conf. AMMCS-2011 (Waterloo, ON), 7/27/2011.
34. *Rational approximation of automatic and regular numbers II*,  
University of Waterloo (CS Dept.) Formal languages and automata sem. (Waterloo, ON), 6/20/2011.
33. *An irrationality exponent related to Fermat numbers*,  
CMS Summer Meeting (Edmonton, AB), 6/05/2011.
32. *Traversing transcendence: irrationality for the rationally minded*,  
University of Lethbridge Special Colloquium (Lethbridge, AB), 4/21/2011.
31. *On the rational approximation of ruler numbers*,  
University of Waterloo Number Theory Seminar (Waterloo, ON), 3/24/2011.
30. *Rational approximation of automatic and regular numbers I*,  
University of Waterloo (CS Dept.) Formal languages and automata sem. (Waterloo, ON), 3/04/2011.

## 2010

29. *On the distribution of  $\Omega(n)$  modulo  $m$* ,  
Seventh Midwest Num. Theory Conf. for Students and Recent PhDs (Ann Arbor, MI), 11/13/2010.
28. *The automatic multiplicative Erdős discrepancy problem*,  
University of Waterloo (CS Dept.) Formal languages and automata sem. (Waterloo, ON), 11/05/2010.

- 27. *Multiplicative functions and the rational-transcendental dichotomy*,  
University of Waterloo Colloquium (Waterloo, ON), 10/25/2010.
- 26. *Multiplicative functions, transcendence, and automaticity*,  
University of Lethbridge Number Theory and Combinatorics Seminar (Lethbridge, AB), 7/22/2010.
- 25. *Multiplicative functions and automaticity*,  
Canadian Number Theory Association XI Meeting (Wolfville, NS), 7/13/2010.
- 24. *The Erdős discrepancy problem*,  
Pacific Northwest Number Theory Conference (Burnaby, BC), 5/9/2010.

**2009**

- 23. *The residue class distribution of  $\Omega(n)$* ,  
CMS Winter Meeting (Windsor, ON), 12/7/2009.
- 22. *Some problems and results concerning multiplicative functions*,  
University of Waterloo Number Theory Seminar (Waterloo, ON), 11/19/2009.
- 21. *(Non)automaticity of number-theoretic functions*,  
McMaster University Arithmetic Geometry Seminar (Hamilton, ON), 11/12/2009.
- 20. *The Riemann hypothesis: celebrating 150- $\varepsilon$  years*,  
Fields Institute Postdoctoral Seminar Series (Toronto, ON), 11/09/2009.
- 19. *Multiplicative functions and transcendence*,  
AMS Eastern Sectional Meeting at Penn State (State College, PA), 10/24/2009.
- 18. *Parity, primes, and zeta-functions*,  
SFU Mathematics Graduate Research Seminar (Burnaby, BC), 2/10/2009.
- 17. *Transcendence and functional equations*,  
Joint UBC-SFU Number Theory Seminar (Burnaby, BC), 1/15/2009.

**2008**

- 16. *(Non)automaticity of number-theoretic functions*,  
Joint UBC-SFU Number Theory Seminar (Burnaby, BC), 10/9/2008.
- 15. *Transcendence of various numbers and series*,  
Canadian Number Theory Association X Meeting (Waterloo, ON), 7/17/2008.
- 14. *Some Properties of Completely Multiplicative Signatures*,  
Second Canada-France Congress (Montréal, QC), 6/4/2008.
- 13. *Sums of completely multiplicative signature functions*,  
The Mathematical Interests of Peter Borwein Conference (Burnaby, BC), 5/15/2008.

**2007**

- 12. *A density-residue theorem*,  
Pure Math Graduate Student Conference (Burnaby, BC), 10/12/2007.
- 11. *A General Result on Conditionally Convergent Series*,  
SFU Mathematics Graduate Research Seminar (Burnaby, BC), 10/09/2007.
- 10. *On the density of integers bi-representable as the sum of two cubes*,  
CECM Summer Meeting (Burnaby, BC), 8/08/2007 (Poster, Second Prize in Poster Competition).
- 9. *The Wonderful World of Primes*,  
CMS-PIMS Summer Math Camp (Burnaby, BC), 7/05/2007.
- 8. *On the density of integers bi-representable as the sum of two cubes*,  
CMS-MITACS Joint Conference (Winnipeg, MB), 5/31/2007. (Poster)
- 7. *A "Cubic" Excursion in Additive Number Theory*,  
Western Canadian Conference for Young Researchers in Mathematics (Calgary, AB), 5/05/2007.
- 6. *Sequences and Divergent Series*,  
SFU Mathematics Graduate Research Seminar (Burnaby, BC), 2/08/2007.

**2006**

- 5. *General Moment Theorems for Non-Distinct Unrestricted Partitions*,  
Joint UBC-SFU Number Theory Seminar (Burnaby, BC), 10/19/2006.
- 4. *The Emergence of Modern Number Theory in Hungary*,  
Hungarian Fulbright Student Conference (Budapest, Hungary), 4/21/2006.

**2005**

3. *On the Number of Partitions of an Integer as a Sum of Summands of a General Spectrum*,  
MAA Texas Section (Arlington, TX), 4/15/2005.

**2003**

2. *Mathematics of the Heart: Producing Left-Ventricular Pressure-Volume Loops using Cubic Spline Functions*,  
Montana Academy of Sciences (Missoula, MT), 5/26/2003.
1. *Cordae Tendinae and Contractility in Sheep*,  
University of Montana Conference for Undergraduate Research (Missoula, MT), 5/5/2003. (Poster)

## SUPERVISION

**Postdoctoral Fellows**

- Mumtaz Hussain (PhD, University of York, UK), 2014–2016.  
Now Senior Lecturer at La Trobe University.
- Paul Vrbik (PhD, University of Western Ontario, Canada), 2014–2016.  
Now Lecturer at the University of Queensland.

**Research Higher Degree (PhD and Masters)**

- James Evans, PhD Candidate (expected 2023), University of Newcastle  
Topic: *Spectral Methods in Aperiodic Order*  
Supervisors: M. Coons (principal), F. Breuer (co)
- Zhenlin Ran, PhD Candidate (expected 2023), University of Newcastle  
Topic: *The André-Oort Conjecture*  
Supervisors: F. Breuer (principal), M. Coons (co)
- Matthew Skerrett, PhD (2020), University of Newcastle  
Thesis: *Some Iterative Algorithms in Experimental Mathematics*  
Supervisors: M. Coons (principal), R. Brent (co)  
Now Lecturer at Royal Melbourne Institute of Technology.
- Daniel Sutherland, PhD (2015), University of Newcastle  
Thesis: *Arithmetic Applications of Hankel Determinants*  
Supervisors: M. Coons (principal), W. Zudilin (co), J. Borwein (co)

**Honours**

- Zachary Groth, BMATH Honours, Univ. of Newcastle, 7/2020–6/2021  
Project: *Fractal aspects of regular sequences*.
- Siddharth Iyer, BMATH Honours, Univ. of Newcastle, 1/2020–12/2020  
Project: *On rational approximation with restricted denominators*.

**Undergraduate****2015–2016**

- Egan Meek, MAPS Summer Research Scholarship, Univ. of Newcastle, 12/2015–2/2016.
- Joshua Hartigan, MAPS Summer Research Scholarship, Univ. of Newcastle, 12/2015–2/2016.
- Joseph Gurr, MAPS Summer Research Scholarship, Univ. of Newcastle, 12/2015–2/2016.
- Jordan Velich, MAPS Summer Research Scholarship, Univ. of Newcastle, 12/2015–2/2016.

**2014–2015**

- Jordan Velich, CARMA Summer Research Student, Univ. of Newcastle, 12/2014–2/2015.

**2013–2014**

- Heath Winning, CARMA Winter Research Student, Univ. of Newcastle, 7/2014;  
CARMA Summer Research Student, Univ. of Newcastle, 12/2013–2/2014.

**2008**

- Lawrence Ng, NSERC–USRA summer student, Simon Fraser University, 5/2008–8/2008.
- Amy Wiebe, NSERC–USRA summer student, Simon Fraser University, 5/2008–8/2008.

**TEACHING EXPERIENCE****University of Newcastle, Australia**

- |      |   |
|------|---|
| 2021 | Foundational Studies in Mathematics (MATH1002, taught twice);<br>Number Theory (MATH3170);<br>Aperiodic Order (Honours Course).   |
| 2020 | Linear Algebra (MATH2320);<br>Number Theory (MATH3170);<br>Mathematical Discovery 1 (MATH1210);<br>Fractal Geometry (MATH3210 Directed Studies/Honours Course, taught twice). |
| 2019 | Combinatorics on Words (Honours Course);<br>Number Theory (MATH3170);<br>Discrete Mathematics (MATH1510);<br>Algebra (MATH3120).  |

**AMSI Summer School, Australian Mathematical Sciences Institute, Australia**

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|------|---|
| 2019 | Analytic Number Theory (Honours Course) |
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**University of Newcastle, Australia**

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|------|---|
| 2017 | Number Theory (MATH3170);<br>Preparatory Studies in Mathematics (MATH1001);<br>Calculus of Science and Engineering (MATH2310).  |
| 2015 | Analytic Number Theory (Honours Course)   |
| 2013 | Transcendental Number Theory (Honours Course);<br>Complex Analysis (MATH 3242);<br>Engineering Mathematics (MATH 2420);<br>Analysis (MATH 2330);<br>Mathematical Discovery 1 (MATH 1210). |
| 2012 | Mathematics 2 (MATH 1120);<br>Mathematics 1 (MATH 1110).  |

**University of Waterloo, Canada**

- |      |   |
|------|---|
| 2012 | Algebra for Honours Mathematics (MATH 135).   |
| 2011 | Algebraic Number Theory (PMATH 441/641 (Graduate)).                                     |
| 2010 | Analytic Number Theory (PMATH 740 (Graduate));<br>Elementary Number Theory (PMATH 340). |

**Simon Fraser University, Canada**

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|-----------|---|
| 2007–2009 | Elementary Number Theory (MATH 342);<br>Hitchhiker’s Guide to Everyday Math (MATH 197). |
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**Baylor University, USA**

2004–2005      Pre-calculus (MATH 1304, taught twice).

**ACADEMIC SERVICE** (IN ADDITION TO EVENT ADMINISTRATION AND ORGANISATION)**International**

- Australian Delegate to the *General Assembly of the International Mathematical Union (IMU)*, Gyeongju, Korea, 8/2014.

**National**

- Program Advisory Board, Australian Mathematical Society Meeting, UNSW, 2022.
- Program Advisory Board, Australian Mathematical Society Meeting, Monash University, 2019.
- Early Career Representative, Australian Mathematical Society, 2014–2018.
- B. H. Neumann Prize Committee, Australian Mathematical Society, 2013, 2014 and 2019.
- Representative of the Australian Mathematical Society to *Science meets Parliament*, 9/2012.

**University**

- Organiser, CARMA Colloquia and Seminars, 2019–2020.
- Faculty Research Committee, Faculty of Science, University of Newcastle, 2019.
- Honours and RHD Coordinator, Mathematics, University of Newcastle, 1–4/2019.
- Member of ERA 2018 Cluster Advisory Group of Mathematical, Information and Computing Sciences, University of Newcastle, 2017–2018.
- Organiser, University of Newcastle Mathematics Colloquium, 1–6/2017.
- Deputy Director, CARMA, 1–8/2016.
- Member of CARMA Executive Committee, 4/2014–8/2016.
- Member of Academic Senate, University of Newcastle, 2014–2015.
- Member of CARMA Prize Nomination Committee, 26/9/2012–8/2016.
- Faculty Research Committee, Faculty of Science and IT, University of Newcastle, 2015.
- Member of Faculty Board, Faculty of Science and IT, University of Newcastle, 2013–2014.
- School Research Committee, Math. and Physical Sciences, University of Newcastle, 2015.
- Library Liaison, for the School of Math. and Physical Sciences, Univ. of Newcastle, 2013.

**Profession**

- External Thesis Examiner, Max Lewis (PhD in Mathematics, University of Queensland, 2020).
- Deputy Editor-in-Chief, Journal of the Australian Mathematical Society, 2019–present.
- External Thesis Examiner, C. Neil Mañibo (PhD in Mathematics, Universität Bielefeld, Germany, 2019).
- External Thesis Examiner, Topi Törmä (PhD in Mathematics, University of Oulu, Finland, 2018).
- Associate Editor, Journal of the Australian Mathematical Society, 2017–2019.
- External Thesis Examiner, Randell Heyman (PhD in Mathematics, University of New South Wales, 2015).
- Founding Member, Number Theory Down Under, Special Interest Group of the Aust. Math. Society, 2015.
- Internal Thesis Examiner, Salma Alghawi (Masters in Mathematics, University of Waterloo, 2011).
- Internal Thesis Examiner, Veronika Koltunova (Masters in Mathematics, University of Waterloo, 2010).
- Internal Thesis Examiner, Rishikesh (PhD in Mathematics, University of Waterloo, 2010).
- Treasurer, Mathematics Graduate Caucus, 1/2007–6/2008. (Simon Fraser University).
- Speaker, CMS–PIMS High School Math Camp, 7/2007 (Simon Fraser University).

- Referee for: *Acta Arithmetica*, *American Mathematical Monthly*, *Algorithmic Number Theory Symposium*, *Archiv der Mathematik*, *Australian Research Council (ARC)*, *Bulletin of the Australian Mathematical Society*, *Bulletin of the London Mathematical Society*, *Designs Codes and Cryptography*, *Developments in Language Theory (Comp. Sci. Conference Series)*, *Electronic Journal of Combinatorics*, *Experimental Mathematics*, *Finite Fields and their Applications*, *Functiones et Approximatio*, *Illinois Journal of Mathematics*, *Integers Journal*, *International Journal of Number Theory*, *International Mathematics Research Notices (IMRN)*, *Journal of Integer Sequences*, *Journal de Théorie des Nombres de Bordeaux*, *Journal of the Australian Mathematical Society*, *Journal of the European Mathematical Society*, *Journal of the London Mathematical Society*, *Journal of Number Theory*, *Mathematical Intelligencer*, *Mathematische Annalen*, *Monatshefte für Mathematik*, *Moscow Journal of Combinatorics and Number Theory*, *National Sciences and Engineering Research Council of Canada (NSERC)*, *Proceedings of the London Mathematical Society*, *Proceedings of the American Mathematical Society*, *Quaestiones Mathematicae*, *Ramanujan Journal*, *Rocky Mountain Journal of Mathematics*, *WILF80 Proceedings (Springer)*.
- Reviewer for: *AMS Math Reviews*, *Zentralblatt MATH*.

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## PROFESSIONAL AFFILIATIONS AND SOCIETIES

- Early- and Mid-Career Researcher (EMCR) Forum, Australian Academy of Science, since 2019.
- Number Theory Down Under, founding member, Special Interest Group of the AustMS, since 2015.
- Victorian Algebra Group, Special Interest Group of the Aust. Math. Society, since 2013.
- CARMA (Priority Research Centre for Computer-Assisted Research Math. and its Appl.), 2012–2020.
- Australian Mathematical Society, Sustaining Member, since 2012.
- Canadian Mathematical Society, 2006–2018.
- IRMACS (Interdisciplinary Research in the Math. and Comput. Sciences Centre, Canada), 2006–2009.

In Newcastle, Australia, on 10 August 2021