

CURRICULUM VITAE

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Dr Amy Glen

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Research Areas: COMBINATORICS, DISCRETE MATHEMATICS, NUMBER THEORY

I am especially interested in *combinatorics on words*, from algebraic and geometric points of view, and its applications in Number Theory. Recently I have been working on problems involving the following topics, many of which have important applications to a wide variety of other scientific fields, ranging from theoretical computer science to theoretical physics and molecular biology.

Combinatorics on finite and infinite words:

Sturmian and episturmian words; Fibonacci and k -bonacci words; Thue-Morse word and its generalisations; lexicographic orderings; Lyndon words; return words; quasiperiodicity; palindromic and periodic factors of infinite words; balanced words; factor complexity; conjugation of morphisms; property-preserving morphisms; infinite words generated by morphisms; automatic sequences; theory of codes; invertible substitutions; symbolic dynamical systems.

Number Theory and Algebra:

continued fractions; transcendence theory; expansions of natural numbers in non-standard bases; numeration systems; distribution of real numbers modulo 1; free monoids; semigroups; matrix theory; Nielsen transformations; free groups; automorphisms of free groups; primitive elements of free groups.

In particular, much of my research to date has focussed on *repetitions* (including *abelian repetitions*) and *periodicity* (including *quasiperiodicity*) in finite and infinite words (particularly *Sturmian* and *episturmian words*, including the well-known *Fibonacci word*, and also the *Thue-Morse sequence*), as well as other combinatorial regularities and patterns occurring in words, such as recurring *factors*, *Lyndon words*, *palindromes*, and related notions of *word complexity*, *lexicographic ordering*, and *distribution of real numbers modulo 1* from a combinatorial perspective.

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Personal Details

Full Name: DR AMY GLEN

Place of Birth: Riverland, South Australia

Nationality: AUSTRALIAN

Education

2003–2006

PhD in Pure Mathematics

The University of Adelaide, Australia

Thesis: *On Sturmian and episturmian words, and related topics*

Awarded: August 1, 2006

Co-supervisors: Dr Alison Wolff, Dr Robert Clarke

Reviewers:

- Jeffrey O. Shallit (University of Waterloo, Canada)
- Jacques Justin (LIAFA, Université Paris Diderot – Paris 7, France)

2002

First Class Honours in Pure Mathematics

The University of Adelaide, Australia

Thesis: *On the period length of pseudorandom number sequences*

Awarded: December 2002

Supervisor: Dr Alison Wolff

1999–2001

Bachelor of Science (Mathematical and Computer Sciences)

The University of Adelaide, Australia

Major: Pure Mathematics

Graduated: December 2001

1994–1998

South Australian Certificate of Education (SACE)

Loxton High School, South Australia

Graduated: December 1998 (TER: 95.55)

Academic Employment

Since August 2018

Senior Lecturer* (Level C) in Mathematics and Statistics

School of Engineering and Information Technology, *Murdoch University*

July 2009–Aug 2018

Lecturer (Level B) in Mathematics and Statistics

School of Engineering and Information Technology, *Murdoch University*

Sept 2008–June 2009

Postdoctoral Researcher and Lecturer

The Mathematics Institute, *Reykjavík University*, Iceland

Dec 2006–Sept 2008

CRM-ISM[†] Postdoctoral Research Fellow

Laboratoire de Combinatoire d'Informatique et Mathématique, *Université du Québec à Montréal*, Canada

2006

Associate Lecturer (Level A)

School of Mathematical Sciences, *The University of Adelaide*

2005–2006

Lecturer and Instructor/Tutor in Mathematics and Statistics (casual)

School of Mathematical Sciences, *The University of Adelaide*

2003–2005

Instructor/Tutor and Teacher in Mathematics and Statistics (casual)

Degree Transfer Program, *Bradford College*, Adelaide, South Australia

2001–2004

Instructor/Tutor in Mathematics and Statistics (casual)

School of Mathematical Sciences, *The University of Adelaide*

Research Grants

2014–2017 SIR WALTER MURDOCH DISTINGUISHED COLLABORATOR SCHEME: \$10,000 per year

With *Professor Bill Smyth* (McMaster University, Canada)

2009–2011 ICELANDIC GRANT FOR EXCELLENCE (co-recipient): 24.6 million ISK/year

Combinatorics on Words and Permutations (grant no. 090038011)

2006 CANT 2006 CONFERENCE GRANT: €1000

European Commission

2005 CATEGORY 1 GRANT IMPROVEMENT SCHEME: \$17,256 AUD

Faculty of Engineering, Computer and Mathematical Sciences
The University of Adelaide, Australia

*Corresponds approximately to 'Associate Professor' in North America.

[†]CRM: Centre de Recherches Mathématiques; ISM: Institut des Sciences Mathématiques.

Honours, Awards and Scholarships

2018 AUSTMS WIMSIG CHERYL E. PRAEGER TRAVEL AWARD

- ▶ To support attendance at the *41st Australasian Conference on Combinatorial Mathematics and Combinatorial Computing* (41ACCMCC) to be held in Rotorua, New Zealand, December 10-14, 2018.

2017 TOP QUARTILE OF UNIT SURVEYS IN THE SCHOOL FOR MAS225 IN SEMESTER 2

- ▶ Overall satisfaction score (Q8: 5.71) in the Unit Survey for MAS225 (Discrete Mathematics & Management Science) — jointly taught with Dr Mark Lukas — was in the top quartile of Unit Surveys in the School of Engineering & IT in Semester 2, 2017.

2017 TOP QUARTILE OF UNIT SURVEYS IN THE SCHOOL FOR MAS161 IN SEMESTER 2

- ▶ Overall satisfaction score (Q8: 5.65) in the Unit Survey for MAS161 (Calculus & Matrix Algebra) was in the top quartile of Unit Surveys in the School of Engineering & IT in Semester 2, 2017.

2017 TOP QUARTILE OF UNIT SURVEYS IN THE SCHOOL FOR MAS162 IN SEMESTER 1

- ▶ Overall satisfaction score (Q8: 5.28) in the Unit Survey for MAS162 (Foundations of Discrete Mathematics) was in the top quartile of Unit Surveys in the School of Engineering & IT in Semester 1, 2017.

2017 INDUCTED INTO THE MURDOCH LEARNING EXCELLENCE ACADEMY (LEAD) AS A [MURDOCH LEAD SENIOR FELLOW](#) [Murdoch LEAD](#) (Learning Excellence Academy) promotes and celebrates excellence and leadership in learning and teaching at Murdoch. Murdoch LEAD Fellowships recognise staff who demonstrate excellence, leadership, creativity and innovation in their learning and teaching practice. The main aim of the Academy is to build a community of practitioners who will model, promote, mentor and lead best practices in learning and teaching for both the university and the sector.

2016 TOP QUARTILE OF TEACHING AND UNIT SURVEYS IN THE SCHOOL FOR MAS162 IN SEMESTER 1

- ▶ Overall satisfaction score (Q8: 5.69) in the Unit Survey for MAS162 (Foundations of Discrete Mathematics) was in the top quartile of Unit Surveys in the School of Engineering & IT in Semester 1, 2016.
- ▶ Overall satisfaction score (Q7: 5.73) in the Teaching Survey for MAS162 (Foundations of Discrete Mathematics) was in the top quartile of Teaching Surveys in the School of Engineering & IT in Semester 1, 2016.

2016 MAS130 IN TOP 10 OUA UNITS

MAS130 (Calculus & Matrix Algebra) was in the **top 10 OUA units** offered through Murdoch University in Study Period 4 in 2015/16 (based on student feedback in surveys) — formally recognised by the *PVC Learning and Teaching*.

2015 SCHOOL DEAN'S AWARD FOR TEACHING EXCELLENCE

Awarded for the **highest** overall satisfaction score (Q7: 5.72) in Teaching Surveys in the School for the unit MAS161 (Calculus & Matrix Algebra) in Semester 2, 2015 (\$2,000 grant).

2015 TOP QUARTILE OF UNIT SURVEYS IN THE SCHOOL FOR MAS161

Overall satisfaction score (Q8: 5.54) for the unit MAS161 (Calculus & Matrix Algebra) was in the top quartile of Unit Surveys in the School of Engineering & IT in Semester 2, 2015.

2015 TOP QUARTILE OF TEACHING SURVEYS IN THE SCHOOL FOR MAS162

Overall satisfaction score (Q7: 5.30) for the unit MAS162 (Foundations of Discrete Mathematics) was in the top quartile of Teaching Surveys in the School of Engineering & IT in Semester 1, 2015.

Oct–Dec 2015 SCIENCE DIRECT TOP 25 HOTTEST ARTICLES^{††}

The paper "A. Glen, J. Jusitin, S. Widmer, L.Q. Zamboni, *Palindromic richness*, *European J. Combin.* 30 (2008), 510–531" was named amongst the top 25 hottest articles in the *European Journal of Combinatorics*.

July–Sept 2015 SCIENCE DIRECT TOP 25 HOTTEST ARTICLES[‡]

The paper "A. Glen, F. Levé, *Generalized trapezoidal words*, *Journal of Combinatorial Theory, Series A* 136 (2015), 96–125" was named amongst the top 25 hottest articles in the *Journal of Combinatorial Theory, Series A*.

^{††}<http://top25.sciencedirect.com/subject/mathematics/16/journal/european-journal-of-combinatorics/01956698/archive/67/>

[‡]<http://top25.sciencedirect.com/subject/mathematics/16/journal/journal-of-combinatorial-theory-series-a/00973165/archive/66/>

2014 TOP QUARTILE OF UNIT SURVEYS IN THE SCHOOL FOR MAS161

Overall satisfaction score (Q8: 5.68) for the unit MAS161 (Calculus & Matrix Algebra) was in the top quartile of Unit Surveys in the School of Engineering & IT in Semester 2, 2014.

2014 VICE CHANCELLOR'S AWARD FOR TEACHING EXCELLENCE^{§}**

Murdoch University's highest award for General Teaching Excellence in a Discipline (\$4,000 prize money).

July–Sept 2013 SCIENCE DIRECT TOP 25 HOTTEST ARTICLES[†]

The paper "A. Glen, J. Simpson, *The total run length of a word*, Theoretical Computer Science 501 (2013), 41–48" was named amongst the top 25 hottest articles in the journal *Theoretical Computer Science*.

2013 NOMINATIONS FOR 2013 VICE CHANCELLOR'S AWARDS FOR TEACHING EXCELLENCE

- ▶ Nominated by 11 students through a standard Teaching Survey for the unit MAS167 (Computational Mathematics) at *Murdoch University* in Semester 1, 2013.
- ▶ Nominated on the basis of being in the top 10% of teaching staff in the student surveys of teaching at *Murdoch University* in 2013.

2012 NOMINATIONS FOR 2012 VICE CHANCELLOR'S AWARDS FOR TEACHING EXCELLENCE

- ▶ Nominated by 13 students through a standard Teaching Survey for the unit MAS161 (Calculus & Matrix Algebra) at *Murdoch University* in Semester 2, 2012.

2011 NOMINATION FOR 2011 VICE CHANCELLOR'S AWARDS FOR TEACHING EXCELLENCE**Oct–Dec 2008 SCIENCE DIRECT TOP 25 HOTTEST ARTICLES[‡]**

The paper "A. Glen, J. Jusitin, S. Widmer, L.Q. Zamboni, *Palindromic richness*, European J. Combin. 30 (2008), 510–531" was named amongst the top 25 hottest articles in the *European Journal of Combinatorics*.

2006–2008 CRM-ISM POSTDOCTORAL FELLOWSHIP – Université du Québec à Montréal, Canada

Awarded on merit to promising researchers from around the world who have recently obtained or will soon obtain their Ph.D. in Mathematics.

2006 HEAD OF SCHOOL'S AWARD FOR LECTURING EXCELLENCE (×2)

School of Mathematical Sciences, The University of Adelaide

Awarded to staff who achieve a mean or median score of at least 6 out of 7 in their SELTs for the question: "All things considered, how would you rate the effectiveness of this person as a university teacher?"

Award received for *all* of my evaluated courses in 2006:

- Statistical Modelling II (6.6, 7)*
- Statistical Practice I (6, 6)*
- Statistical Practice I (Life Sciences) (5.8, 6)*

2003 UNIVERSITY MEDAL FOR 2002 (1 of only 19 such medals) – The University of Adelaide

Awarded for outstanding academic merit during undergraduate studies.

2003–2006 GEORGE FRASER SCHOLARSHIP – The University of Adelaide

Awarded to the highest ranking applicant for an Australian Postgraduate Award who is not in receipt of an award or scholarship of greater value.

2002 MACE BEARER

Academic Procession at the December graduation ceremony for the Mathematical and Computer Sciences at *The University of Adelaide*.

[§]<http://our.murdoch.edu.au/Educational-Development/VCS-Learning-and-Teaching-Awards/Teaching-awards/2014-recipients/>

^{**}<http://staffnews.murdoch.edu.au/uni-awards-top-teachers-for-2014/>

[†]<http://top25.sciencedirect.com/subject/computer-science/7/journal/theoretical-computer-science/03043975/archive/47/>

[‡]<http://top25.sciencedirect.com/subject/mathematics/16/journal/european-journal-of-combinatorics/01956698/archive/20/>

*Numbers in parentheses are the SELT scores (mean, median)

2002 NANCY WEBB PRIZE FOR 2001 – *School of Mathematical Sciences, The University of Adelaide*

Awarded to the female student with the highest aggregate score in courses comprising a major in either Applied Maths, Pure Maths, or Statistics.

2001 AUSTRALIAN BUREAU OF STATISTICS SCHOLARSHIP

Awarded for undergraduate study in Statistics at an Australian university.

1999–2002 WYATT UNIVERSITY SCHOLARSHIP FOR COUNTRY STUDENTS

Awarded to outstanding country students undertaking a bachelor degree at an Australian university.

1999–2001 DEAN'S CERTIFICATE OF MERIT – *School of Mathematical Sciences, The University of Adelaide*

Awarded for outstanding academic achievement.

1999 MEMBERSHIP OF THE GOLDEN KEY INTERNATIONAL HONOUR SOCIETY

In recognition of outstanding scholastic achievement and excellence (top 15%).

1999 ADELAIDE UNIVERSITY ACCESS AND RURAL SCHOLARSHIP

Awarded to outstanding secondary school students from rural areas entering The University of Adelaide.

Professional Activities

Editorial work

- ▶ From 2012–2016, I served on the **Editorial Board** of the peer-reviewed *Journal of Discrete Mathematics*.
- ▶ From 2012–2013, I served on the **Editorial Board** of the peer-reviewed journal *ISRN Combinatorics*.
- ▶ From December 2010 to August 2011, I also served on the **Program Committee** of the *5th International Conference on Language and Automata Theory and Applications (LATA2011)* – <http://grammars.grlmc.com/LATA2011>.

Referee work

I have been a **referee** for the following peer-reviewed journals and conferences.

- ▶ ADVANCES IN APPLIED MATHEMATICS
- ▶ DISCRETE APPLIED MATHEMATICS
- ▶ DISCRETE MATHEMATICS
- ▶ DISCRETE MATHEMATICS AND THEORETICAL COMPUTER SCIENCE
- ▶ DEVELOPMENTS IN LANGUAGE THEORY 2009–2011, 2013 (conference)
- ▶ ELECTRONIC JOURNAL OF COMBINATORICS
- ▶ EUROPEAN JOURNAL OF COMBINATORICS
- ▶ FUNDAMENTA INFORMATICA
- ▶ GAZETTE OF THE AUSTRALIAN MATHEMATICAL SOCIETY
- ▶ INFORMATION AND COMPUTATION (journal)
- ▶ INFORMATION PROCESSING LETTERS
- ▶ INTEGERS (Electronic Journal of Combinatorial Number Theory)
- ▶ INTERNATIONAL CONFERENCE ON WORDS 2007, 2009, 2013, 2015, 2017
- ▶ INTERNATIONAL JOURNAL OF ALGEBRA AND COMPUTATION
- ▶ INTERNATIONAL JOURNAL OF FOUNDATIONS OF COMPUTER SCIENCE
- ▶ INTERNATIONAL WORKSHOP ON COMBINATORIAL IMAGE ANALYSIS 2008

- ▶ ISRN COMBINATORICS
- ▶ JOURNAL DE THÉORIE DES NOMBRES DE BORDEAUX
- ▶ JOURNAL OF COMBINATORIAL THEORY, SERIES A
- ▶ JOURNAL OF COMPUTER AND SYSTEM SCIENCES
- ▶ JOURNAL OF DISCRETE ALGORITHMS
- ▶ JOURNAL OF INTEGER SEQUENCES
- ▶ JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS
- ▶ KYBERNETIKA
- ▶ MATHEMATICAL REVIEWS (AMS MathSciNet)
- ▶ RAIRO THEORETICAL INFORMATICS AND APPLICATIONS
- ▶ THEORETICAL COMPUTER SCIENCE
- ▶ THEORY OF COMPUTING SYSTEMS
- ▶ 5TH INTERNATIONAL CONFERENCE ON LANGUAGE AND AUTOMATA THEORY AND APPLICATIONS (LATA2011)
- ▶ 16TH INTERNATIONAL SYMPOSIUM ON FUNDAMENTALS OF COMPUTATION THEORY 2007
- ▶ 28TH INTERNATIONAL SYMPOSIUM ON THEORETICAL ASPECTS OF COMPUTER SCIENCE (STACS 2011)
- ▶ 34TH INTERNATIONAL SYMPOSIUM ON THEORETICAL ASPECTS OF COMPUTER SCIENCE (STACS 2017)
- ▶ 35TH INTERNATIONAL SYMPOSIUM ON MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE (MFCS 2010)
- ▶ 41ST INTERNATIONAL COLLOQUIUM ON AUTOMATA, LANGUAGES AND PROGRAMMING (ICALP 2014)
- ▶ 43RD INTERNATIONAL COLLOQUIUM ON AUTOMATA, LANGUAGES AND PROGRAMMING (ICALP 2016)

I have also been a *Discovery Grant reviewer* in Mathematics and Statistics for the *Natural Sciences and Engineering Research Council of Canada* (NSERC).

Conference and Event Organisation

- Sept 24–26, 2017:** CONFERENCE WEBSITE EDITOR
WIMSIG Conference 2017: Celebration of Women in Australian Mathematical Sciences
 University of South Australia, Adelaide
- Dec 5–8, 2016:** SPECIAL SESSION IN COMBINATORICS
60th Annual Meeting of the Australian Mathematical Society
 Australian National University, Canberra, ACT
 CO-ORGANISED with Jamie Simpson (Curtin/Murdoch)
- Oct 26–29, 2015:** STRINGMASTERS @ MURDOCH 2015
<http://ccwaperth.wordpress.com/stringmasters>
 Centre for Combinatorics on Words and Applications, Murdoch University, Perth, Western Australia
 CO-ORGANISED with Jamie Simpson (Curtin/Murdoch) and Bill Smyth (McMaster University)
- Sept 28–Oct 1, 2015:** SPECIAL SESSION IN COMBINATORICS
59th Annual Meeting of the Australian Mathematical Society
 Flinders University, Adelaide, South Australia
 CO-ORGANISED with Jamie Simpson (Curtin/Murdoch)
- June 2, 2014:** WOMEN IN MATHEMATICS AFTERNOON TEA
 The University of Western Australia, Perth
 CO-ORGANISED with Alice Devillers and Cheryl Praeger (UWA)
- November 15, 2013:** WOMEN IN MATHEMATICS AFTERNOON TEA
 The University of Western Australia, Perth
 CO-ORGANISED with Alice Devillers (UWA)
- May 25–28, 2009:** INVITED MINI-SYMPOSIUM IN COMBINATORICS ON WORDS
2nd Canadian Discrete and Algorithmic Mathematics Conference
 Centre de Recherches Mathématiques (CRM), Montréal, Canada
 CO-ORGANISED with Narad Rampersad and James Currie (Winnipeg)

Professional Societies and Groups

I am a **founder** and **director** of the CENTRE FOR COMBINATORICS ON WORDS AND APPLICATIONS at Murdoch University (<http://ccwaperth.wordpress.com>) and am also a **member** of the following professional societies and groups.

- ▶ AUSTRALIAN MATHEMATICAL SOCIETY – AustMS (since 2003)
- ▶ AUSTMS WOMEN IN MATHEMATICS SPECIAL INTEREST GROUP – WIMSIG (since 2012)
- ▶ COMBINATORIAL MATHEMATICS SOCIETY OF AUSTRALASIA – CMSA (Life Member since 2010)

I have on-going administrative involvement with these professional societies and groups in the following capacities.

- ▶ CHAIR of the AustMS Student Conference Support Committee (2018)
- ▶ VICE PRESIDENT of the CMSA (2018)
- ▶ MEMBER of the AustMS Equity, Diversity and Inclusion Committee (2018)
- ▶ WEBMASTER of the AustMS Women in Mathematics SIG (since early 2013)

Past roles on committees and councils include:

- ▶ CHAIR of the JUDGING PANEL for the CMSA *Anne Penfold Street Student Prize* (2017)
- ▶ COUNCIL OF THE CMSA, Ordinary Member (2014–2017)
- ▶ COUNCIL OF THE AUSTMS, Ordinary Member (2013–2015)
- ▶ EXECUTIVE COMMITTEE OF THE AUSTMS WOMEN IN MATHEMATICS SIG, Ordinary Member (2013–2014)

Programming languages

- ▶ L^AT_EX: markup language for mathematical typesetting
- ▶ MATLAB: numerical computing environment
- ▶ PYTHON: powerful, high-level programming language
- ▶ SAGE: free, open-source mathematical software (Python-based)
- ▶ MAPLE: computer algebra system
- ▶ C: imperative (procedural) systems implementation language
- ▶ R/S⁺: language and environment for statistical computing

SAGE mathematical software contribution

- ▶ Combinatorics on Words package (see <http://code.google.com/p/sage-words>)

Professional Development

June 30, 2015: SUPERVISOR ENHANCEMENT WORKSHOP (3 hours) at Murdoch University

Sept 30–Oct 1, 2010: AUSTRALIAN LEARNING AND TEACHING COUNCIL WORKSHOP: *Effective Learning and Teaching in the Quantitative Disciplines*, The University of Queensland

September 25–26, 2010: 2ND EARLY CAREER WORKSHOP of the Australian Mathematical Society, Rydges Oasis Resort, Caloundra, Queensland

Semester 2, 2010: ENHANCING POSTGRADUATE SUPERVISION COURSE, Murdoch University

Semester 1, 2010: TERTIARY TEACHING COURSE, Murdoch University

Service to the University and Community

MURDOCH UNIVERSITY

- ▶ CHAIR, *PhD Advisory Committee* for J. Jose (since 2018)
- ▶ MEMBER, *Dean's Advisory Board – Engineering & IT* (ongoing, since 2017)
- ▶ MEMBER, *School Research Committee – Engineering & IT* (ongoing, since 2017)
- ▶ MEMBER, *School International Committee – Engineering & IT* (ongoing, since 2016)
- ▶ UNIT CONTACT, *School TNE Project – Engineering & IT* (ongoing, since 2016)
- ▶ MEMBER, *School Board – Engineering & Information Technology* (ongoing, since 2013)
- ▶ MEMBER, *School of CMS Learning & Teaching Workgroup* (2011–2012)
- ▶ SCHOOL WEBSITE APPROVER, *Standardisation of the University's web pages* (2011–2012)
- ▶ MEMBER, *School Selection Committee for Level B position in Statistics* (early 2011)
- ▶ MEMBER, *School of CMS Workload Model Working Party* (2010)
- ▶ VOLUNTEER, Murdoch University “Open Your Mind Day” (2010, 2012)
- ▶ PROGRAM COORDINATOR, *Maths and Stats Clinic** (2010–2013)
- ▶ CONVENOR, *Mathematics and Statistics Seminar Series* (ongoing, since 2009)

THE UNIVERSITY OF ADELAIDE

- 2006
- ▶ PRESENTER of a talk on “Opportunities in Mathematics”
Forum for Level III Mathematics Students (May 24)
 - ▶ OPEN DAY REPRESENTATIVE
School of Mathematical Sciences
 - ▶ MENTOR AND TEAM CAPTAIN
Siemens Science Experience[†] for Year 9 students (January 17–19)

2003–2005

- ▶ MENTOR AND TEAM LEADER
Siemens Science Experience[†] for Year 9 students (January 11–13, 2005)
- ▶ POSTGRADUATE STUDENT REPRESENTATIVE
Discipline of Pure Mathematics
- ▶ MATHEMATICS CURRICULUM COMMITTEE

*An approved Murdoch University Volunteer Program in which volunteer students in their latter years of study provide assistance with concepts and problem solving to other Murdoch students taking any of the 100-level Maths and Stats units.

[†]An outreach programme to encourage talented high school students to pursue studies in science, technology, and engineering.

MURDOCH UNIVERSITY

2018 Semester 1 – MAS162 Foundations of Discrete Mathematics (*coordination, lectures, tutorials, external tutoring*)

May Trimester in Dubai – MAS167 Computational Mathematics (*coordination*)

May Trimester in Singapore – MAS162 Foundations of Discrete Mathematics (*coordination*)

Semester 2

– MAS161 Calculus & Matrix Algebra (*coordination, lectures, tutorials, external tutoring*)

– MAS225 Discrete Mathematics & Management Science (50% *coordination, lectures, tutorials, external tutoring*)

2017 January Trimester in Dubai – MAS167 Computational Mathematics (*coordination*)

Semester 1 – MAS162 Foundations of Discrete Mathematics (*coordination, lectures, tutorials, external tutoring*)

Semester 2

– MAS161 Calculus & Matrix Algebra (*coordination, lectures, external tutoring*)

– MAS225 Discrete Mathematics & Management Science (50% *coordination, lectures, tutorials, external tutoring*)

September Trimester in Dubai – MAS167 Computational Mathematics (*coordination*)

2016 Semester 1 – MAS162 Foundations of Discrete Mathematics (*coordination, lectures, external tutoring*)

May Trimester in Dubai – MAS167 Computational Mathematics (*coordination*)

Semester 2 – MAS161 Calculus & Matrix Algebra (*coordination, lectures, tutorials, external tutoring*)

2015 January Trimester in Dubai – MAS167 Computational Mathematics (*coordination*)

Semester 1 – MAS162 Foundations of Discrete Mathematics (*coordination, lectures, external tutoring*)

Semester 2 – MAS161 Calculus & Matrix Algebra (*coordination, lectures, tutorials, external tutoring*)

OUA Study Period 3 – MAS130 Calculus & Matrix Algebra (*coordination*)

September Trimester in Dubai – MAS167 Computational Mathematics (*coordination*)

OUA Study Period 4 – MAS130 Calculus & Matrix Algebra (*coordination*)

2014 Semester 1 – *Research Studies Program* (no teaching) from February 3 to July 20, 2014

Semester 2 – MAS161 Calculus and Matrix Algebra (*coordination, lectures, tutorials, external tutoring*)

OUA Study Period 3 – MAS130 Calculus and Matrix Algebra (*coordination*)

Honours supervision (100%) – Rosie Murray (Thesis: *Topics in Combinatorics on Words*)

2013 Semester 1

– MAS167 Computational Mathematics (*coordination, lectures, tutorials, external tutoring*)

– MAS164 Fundamentals of Mathematics (*external tutoring*)

– MAS4013 Applied Combinatorics (Honours unit)

Trimester 2 (Dubai) – MAS167 Computational Mathematics (*coordination*)

Semester 2 – MAS161 Calculus and Matrix Algebra (*coordination, lectures, tutorials, external tutoring*)

OUA Study Period 3 – MAS130 Calculus and Matrix Algebra (*coordination*)

Honours supervision (100%) – Rosie Murray (Thesis: *Topics in Combinatorics on Words*)

2012 Semester 1 – MAS167 Computational Mathematics (*coordination, lectures, tutorials, external tutoring*)

Trimester 3 (Dubai) – MAS167 Computational Mathematics (*coordination*)

Semester 2

– MAS161 Calculus and Matrix Algebra (*coordination, lectures, tutorials, external tutoring*)

– MAS167 Computational Mathematics (*tutorials, external tutoring*)

Honours supervision (100%) – Rosie Murray (Thesis: *Topics in Combinatorics on Words*)

Summer Research Project (Dec 2012 – Jan 2013) – Jeanette Koh (Project: *Words Coding Curves*)

*All units/courses span 12–13 weeks, unless otherwise specified.

2011 Semester 1 – MAS167 Computational Mathematics (*coordination, lectures, tutorials, external tutoring*)

Semester 2

- MAS161 Calculus and Matrix Algebra: *coordination, lectures, tutorials, external tutoring*
- MAS167 Computational Mathematics (*tutorials, external tutoring*)

Honours Supervision (25%) – William Stelbovics (Thesis: *The History of the Normal Distribution*), 1st class

2010 Semesters 1 & 2 – MAS167 Computational Mathematics (*coordination (S2), lectures, tutorials*), including coordination of the N1 offering at the Dubai campus[†] from September to December.

2009 Semester 2

- MAS4011 Applied Combinatorics and Discrete Mathematics (Honours unit)
- MAS167 Computational Mathematics: *lectures (Weeks 9–14), tutorials*

REYKJAVÍK UNIVERSITY

2008–2010 PHD STUDENT: Steven Widmer

- * Co-supervised with Prof. Luca Zamboni, Université Claude Bernard – Lyon 1, France.
- * Awarded PhD (with an Honourable Mention) at Université Claude Bernard – Lyon 1 in November 2010.

2008 COURSE (Autumn semester): Discrete Mathematics (Level 1)

THE UNIVERSITY OF ADELAIDE

2006 COURSES:

- Statistical Practice I (Weeks 1–6, Semester 1)
- Statistical Practice I – Life Sciences (Weeks 1–4, Semester 2)
- Statistical Modelling II
- Differential Equations and Statistical Methods II (SM part)
- Laplace Transforms & Probability and Statistics (PS part)

ASSESSMENT:

Assessor for an Honours thesis in Statistics: *"Graphical Chain Models Using Longitudinal Data: Evaluating Risk Factors For Cataract"*.

2005 LECTURES:

- Mathematics 1MA – Algebra (Weeks 1–6, Semester 1)
- Statistical Modelling II

TUTORIAL CLASSES:

- Statistical Practice I
- Statistical Practice I (Life Sciences)
- Mathematics 1MA
- Introduction to Financial Mathematics I
- Mathematical Statistics III

CONSULTING:

- Mathematics 1MA
- Statistical Modelling II

[†]<http://dubai.murdoch.edu.au>

HONOURS EXAM SUPERVISION (Semester 1):

- Generalised Linear Models
- Mathematical Statistics III
- Statistical Modelling III

HONOURS EXAM SUPERVISION (Semester 2):

- Algebraic Topology/Bioinformatics
- Fractal Geometry III
- Transform Methods and Signal Processing
- Finite Geometry/Modelling Teletraffic
- Aerodynamics
- Topics in Analysis

EXAM MARKING:

- Mathematics 1MA (Algebra)
- Statistical Practice I (Life Sciences)
- Statistical Modelling II

2004 TUTORIAL CLASSES:

- Theory of Statistics III
- Statistical Theory and Modelling II
- Statistical Practice I

EXAM MARKING:

- Laplace Transforms, Probability & Statistical Methods
- Statistical Practice I

2003 TUTORIAL CLASSES:

- Statistical Practice I
- Statistical Theory and Modelling II
- Introduction to Mathematical Statistics II

MARKING:

- Fractal Geometry III assignments
- Mathematics I exams (Algebra section)

2002 TUTORIAL CLASSES:

- Statistical Theory and Modelling II
- Statistical Practice I

2001 TUTORIAL CLASS: Statistical Practice I

CONSULTING: Statistical Theory and Modelling II

MARKING: Methods in Applied Mathematics II

BRADFORD COLLEGE

2005 TUTORIAL CLASS: Statistical Practice I

2004 TUTORIAL CLASSES:

- Introduction to Financial Mathematics I
- Statistical Practice I

2003 TUTORIAL CLASS: Statistical Practice I

OTHER TEACHING

1997 LOXTON LUTHERAN PRIMARY SCHOOL (Loxton, South Australia)

Work experience as a teaching assistant for 1 week.

Responsibilities as a Lecturer:

- Developing unit/course material.
- Preparing and delivering lectures, including the making of over-head transparencies (in the past) or computer presentation slides.
- Producing lecture notes and hand-outs for students.
- Developing questions and exercises for assignments, tutorials, computer practical sessions, and final examinations, together with solutions and marking schemes.
- Uploading course material to the *Learning Management System* (LMS) – an on-line learning environment for students, lecturers, and instructors.
- Conducting tutorial or practical classes each week, in which problems are worked through with students and concepts are explained further.
- Keeping in touch with students via email as well as announcements and discussion boards on the LMS.
- Mentoring/supervising tutorial and practical instructors.
- Marking assignments and examinations, and assigning final grades.
- Providing weekly consultation hours for students.
- Other administrative duties, including distributing material to instructors, etc.

Responsibilities as an Instructor (tutorial classes):

- Preparing for tutorials and computer practical sessions.
 - Conducting tutorial classes each week, in which problems are worked through with students and concepts are explained further.
 - Marking assignments and examinations.
 - Providing weekly consultation hours for students in some units/courses.
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Teaching Interests

Pure Mathematics: Discrete Mathematics, Combinatorics, Number Theory, Algebra, Finite Geometry

Statistics/Applied Mathematics: Mathematical/Theoretical Statistics, Introductory Statistics, Financial Mathematics

Refereed Journal Papers[†]

- (24) *Palindromes in starlike trees* (with Jamie Simpson, W.F. Smyth), submitted for publication (2018).
- (23) *More properties of the Fibonacci word on an infinite alphabet* (with Jamie Simpson, W.F. Smyth), submitted for publication (2017).
- (22) *Counting Lyndon factors* (with Jamie Simpson, W.F. Smyth), *The Electronic Journal of Combinatorics* 24(3) (2017) #P3.28, 13 PP.
- (21) *Generalized trapezoidal words*** (with Florence Levé), *Journal of Combinatorial Theory Series A* 136 (2015) 96–125.
- (20) *The total run length of a word[§]* (with Jamie Simpson), *Theoretical Computer Science* 501 (2013) 41–48.
- (19) *Extremal properties of (epi)Sturmian sequences and distribution modulo 1* (with Jean-Paul Allouche), *L'Enseignement Mathématique* 56 (2010) 365–401.
- (18) *Crucial abelian k -power free words* (with Bjarni V. Halldórsson, Sergey Kitaev), *Discrete Mathematics and Theoretical Computer Science* 12 (2010) 83–96.
- (17) *On shortest crucial words avoiding abelian powers* (with Sergey Avgustinovich, Bjarni V. Halldórsson, Sergey Kitaev), *Discrete Applied Mathematics* 158 (2010) 605–607.
- (16) *Distribution modulo 1 and the lexicographic world* (with Jean-Paul Allouche), *Annales Sci. Math. Québec* 33 (2009) 125–143.
- (15) *Episturmian words: a survey[‡]* (with Jacques Justin), *RAIRO – Theoretical Informatics and Applications* 43 (2009) 403–442.
- (14) *A new characteristic property of rich words* (with Michelangelo Bucci, Alessandro De Luca, Luca Q. Zamboni), *Theoretical Computer Science* 410 (2009) 2860–2863.
- (13) *A connection between palindromic and factor complexity using return words[¶]* (with Michelangelo Bucci, Alessandro De Luca, Luca Q. Zamboni), *Advances in Applied Mathematics* 42 (2009) 60–74.
- (12) *Palindromic richness^{††}* (with Jacques Justin, Steve Widmer, Luca Q. Zamboni), *European Journal of Combinatorics* 30 (2009) 510–531.
- (11) *Directive words of episturmian words: equivalences and normalization* (with Florence Levé, Gwénaél Richomme), *RAIRO – Theoretical Informatics and Applications* 43 (2009) 299–319.
- (10) *Quasiperiodic and Lyndon episturmian words* (with Florence Levé, Gwénaél Richomme), *Theoretical Computer Science* 409 (2008) 578–600.
- (9) *Rich, Sturmian, and Trapezoidal words* (with Aldo de Luca, Luca Q. Zamboni), *Theoretical Computer Science* 407 (2008) 569–573.
- (8) *A note on the Markoff condition and central words* (with Aaron Lauve, Franco V. Saliola), *Information Processing Letters* 105 (2008) 241–244.
- (7) *Characterizations of finite and infinite episturmian words via lexicographic orderings* (with Jacques Justin and Giuseppe Pirillo), *European Journal of Combinatorics* 29 (2008) 45–58.
- (6) *A characterization of fine words over a finite alphabet*, *Theoretical Computer Science* 391 (2008) 51–60.

[†]Available on my website or at http://arxiv.org/a/glen_a_1.

Listed amongst the **top 25 hottest articles in the *Journal of Combinatorial Theory, Series A* on ScienceDirect during the period July–September 2015 (see <http://top25.sciencedirect.com/subject/mathematics/16/journal/journal-of-combinatorial-theory-series-a/00973165/archive/66/>).

§Listed amongst the **top 25 hottest articles** in the *Theoretical Computer Science* journal on ScienceDirect during the period July–September 2013 (see <http://top25.sciencedirect.com/subject/computer-science/7/journal/theoretical-computer-science/03043975/archive/47/>).

‡18th most cited paper between 2008 & 2013 in the Combinatorics category on the arXiv (see http://scholar.google.com.au/citations?hl=en&vq=phy_discretemathematics&view_op=list_hcore&venue=Ux-dohQAG7QJ.2013).

¶6th most cited paper between 2008 & 2013 in *Advances in Applied Mathematics* according to Google Scholar (see https://scholar.google.com.au/citations?hl=en&vq=phy_discretemathematics&view_op=list_hcore&venue=KolcX_uBonEJ.2014).

††Listed amongst the **top 25 hottest articles** in the *European Journal of Combinatorics* on ScienceDirect during October–December 2008 and also October–December 2015 (see <http://top25.sciencedirect.com/subject/mathematics/16/journal/european-journal-of-combinatorics/01956698/archive/20/> and <http://top25.sciencedirect.com/subject/mathematics/16/journal/european-journal-of-combinatorics/01956698/archive/67/>). It is also the 4th most cited paper between 2008 & 2014 in the *European Journal of Combinatorics* according to Google Scholar (see https://scholar.google.com.au/citations?hl=en&vq=phy_discretemathematics&view_op=list_hcore&venue=Wsa9pUKWIAJ.2014) and the 13th most cited paper between 2008 & 2013 in the Combinatorics category on the arXiv (see http://scholar.google.com.au/citations?hl=en&vq=phy_discretemathematics&view_op=list_hcore&venue=Ux-dohQAG7QJ.2013).

- (5) *On the critical exponent of generalized Thue-Morse sequences* (with Alexandre Blondin-Massé, Srečko Brlek, Sébastien Labbé), *Discrete Mathematics and Theoretical Computer Science* 9 (2007) 293–304.
 - (4)* *Powers in a class of \mathcal{A} -strict standard episturmian words*, *Theoretical Computer Science* 380 (2007) 330–354.
 - (3)* *Occurrences of palindromes in characteristic Sturmian words*, *Theoretical Computer Science* 352 (2006) 31–46.
 - (2)* *Conjugates of characteristic Sturmian words generated by morphisms*, *European Journal of Combinatorics* 25 (2004) 1025–1037.
 - (1) *Euler and his contribution to Number Theory* (with Paul Scott), *The Australian Mathematics Teacher* 60 (2004) 2–5.
-

Book Chapters[†]

- (1) *Crucial words for abelian powers* (with Bjarni V. Halldórsson, Sergey Kitaev), *Lecture Notes in Computer Science*, vol. 5583, Springer-Verlag, Berlin, 2009, pp. 264–275.
-

Conference Papers[†]

- (6) *Crucial words for abelian powers* (with Bjarni V. Halldórsson, Sergey Kitaev), in: V. Diekert *et al.* (Eds.), *Proceedings of the 13th International Conference on Developments in Language Theory – DLT 2009* (Stuttgart, Germany), June 30 – July 3, 2009.
- (5) *A new characteristic property of rich words* (with Michelangelo Bucci, Alessandro De Luca, Luca Q. Zamboni), *12èmes Journées Montoises d’Informatique Théorique* (Mons, Belgium), August 27–30, 2008, 6 pages.
- (4) *Directive words of episturmian words* (with Florence Levé, Gwénaél Richomme), *12èmes Journées Montoises d’Informatique Théorique* (Mons, Belgium), August 27–30, 2008, 15 pages.
- (3) *Order and quasiperiodicity in episturmian words*, *6th International Conference on Words* (Marseille, France), September 17–21, 2007, 10 pages.
- (2) *A characterization of fine words over a finite alphabet*, *International School and Conference on Combinatorics, Automata & Number Theory* (Liège, Belgium), May 8–19, 2006, 10 pages.
- (1) *Powers in a class of \mathcal{A} -strict standard episturmian words*, *5th International Conference on Words* (Montréal, Canada), September 13–17, 2005.

Preprints and Work in Progress

- (4) *More on words with simple Burrows-Wheeler transforms*, in preparation.
- (3) *A generalisation of Markoff’s condition*, in preparation.
- (2) *A note on self-episturmian numbers*, in preparation.
- (1) *A simple characterization of bi-primitive morphisms*, in preparation.

*indicates work that is part of my PhD thesis

[†]Available on my website or at http://arxiv.org/a/glen_a_1.

Other Research Papers[†]

- (4) *On Sturmian and episturmian words, and related topics* (PhD excerpt), Bulletin of the Australian Mathematical Society 74 (2006) 155–160.
 - (3) PHD THESIS*: *On Sturmian and episturmian words, and related topics*, The University of Adelaide, Australia, April 2006, 191 pages.
 - (2) *Transcendence of certain k -ary continued fraction expansions* (2005), unpublished manuscript, 13 pages.
 - (1) HONOURS THESIS: *On the period length of pseudorandom number sequences*, The University of Adelaide, Australia, November 2002, 100 pages.
-

Research Collaborators

Australia: Paul Scott (Adelaide); Jamie Simpson (Perth).

Canada: Alexandre Blondin-Massé (Montréal); Srečko Brlek (Montréal); James Currie (Winnipeg); Sébastien Labbé (Montréal); Franco Saliola (Montréal); Bill Smyth (McMaster University)

France: Jean-Paul Allouche (Paris); Jacques Justin (Paris); Florence Levé (Amiens); Geneviève Paquin (Chambery); Gwénaél Richomme (Montpellier); Steve Widmer (Lyon); Laurent Vuillon (Chambery); Luca Q. Zamboni (Lyon/Turku).

Italy: Michelangelo Bucci (Napoli); Aldo de Luca (Napoli); Alessandro De Luca (Napoli); Giuseppe Pirillo (Firenze).

Reykjavík, Iceland: Bjarni Halldórsson; Sergey Kitaev.

Russia: Sergey Avgustinovich (Novosibirsk).

USA: Aaron Lauve (Chicago).

Visiting Research Invitations

June 20–July 18, 2011

LABORATOIRE DE MIS, UNIVERSITÉ DE PICARDIE JULES VERNE, Amiens, France
HOST: Florence Levé

July 23–29, 2008

DEPARTMENT OF MATHEMATICS & STATISTICS, UNIVERSITY OF WINNIPEG, Canada
HOSTS: James Currie; Narad Rampersad

November 4–17, 2007

DEPARTMENT OF MATHEMATICS, UNIVERSITY OF NORTH TEXAS, USA
HOST: Luca Q. Zamboni

September 22–26, 2007

MATEMATISKA INSTITUTIONEN, UPPSALA UNIVERSITET, Sweden
HOST: Ernst Dieterich

*<http://hdl.handle.net/2440/37765>

[†]Available on my website.

Conference Talks (17)

- 2017** *On a generalisation of the Fibonacci word to an infinite alphabet*
5TH INTERNATIONAL COMBINATORICS CONFERENCE (5ICC)
Monash University, Melbourne, Australia, December 4–9
- 2017** *On Lyndon words containing the minimum number of Lyndon factors*
WIMSIG CONFERENCE 2017: CELEBRATION OF WOMEN IN AUSTRALIAN MATHEMATICAL SCIENCES
University of South Australia, Adelaide, September 24–26
- 2016** *An introduction to combinatorics on words — balanced words, Lyndon words, and palindromes*
40TH AUSTRALASIAN CONFERENCE ON COMBINATORIAL MATHS & COMBINATORIAL COMPUTING (40ACCMCC)
The University of Newcastle, Australia, December 12–16
- 2016** *Some applications of Combinatorics on Words in Number Theory*
NUMBER THEORY DOWN UNDER 4: OPEN PROBLEMS IN NUMBER THEORY
The University of Newcastle, Australia, September 23–26
- 2015** *On the number of palindromically rich words*
59TH ANNUAL MEETING OF THE AUSTRALIAN MATHEMATICAL SOCIETY
Flinders University, Adelaide, September 28 – October 1
- 2014** *Palindromically rich GT-words*
38TH AUSTRALASIAN CONFERENCE ON COMBINATORIAL MATHEMATICS & COMBINATORIAL COMPUTING
Victoria University of Wellington, New Zealand, December 1–5
- 2013** *A note on self-maximal numbers*
37TH AUSTRALASIAN CONFERENCE ON COMBINATORIAL MATHEMATICS & COMBINATORIAL COMPUTING
The University of Western Australia, Perth, December 9–12
- 2013** *Total run length of a word (open problems)*
FIELDS WORKSHOP ON CHALLENGES IN COMBINATORICS ON WORDS, Fields Institute, Toronto, Canada, April 22–26
- 2012** *On a generalisation of trapezoidal words*
OUTSTANDING CHALLENGES IN COMBINATORICS ON WORDS, Banff International Research Station (BIRS), Banff Centre, Canada, February 19–24
- 2012** *Combinatorics of Lyndon words*
MINI-CONFERENCE: COMBINATORICS, REPRESENTATIONS, AND STRUCTURE OF LIE TYPE
The University of Melbourne, February 16–17
- 2011** *On a generalisation of trapezoidal words*
35TH AUSTRALASIAN CONFERENCE ON COMBINATORIAL MATHEMATICS & COMBINATORIAL COMPUTING
Monash University, Melbourne, December 5–9
- 2010** *Rich, Sturmian, and trapezoidal words*
54TH CONFERENCE OF THE AUSTRALIAN MATHEMATICAL SOCIETY, The University of Queensland, Brisbane, September 27–30
- 2010** *On almost rich words*
MINI-WORKSHOP: COMBINATORICS ON WORDS, Mathematisches Forschungsinstitut Oberwolfach, Germany, August 22–28
- 2008** *A new characteristic property of rich words*, 12ÈMES JOURNÉES MONTOISES D’INFORMATIQUE THÉORIQUE
Mons, Belgium, August 27–30.
- 2007** *Order and quasiperiodicity in episturmian words*
SIXTH INTERNATIONAL CONFERENCE ON WORDS, CIRM, Marseille, France, September 17–21.

- 2006 *A characterization of fine words over a finite alphabet*
COMBINATORICS, AUTOMATA & NUMBER THEORY CONFERENCE, Université de Liège, Belgium, May 8–19.
- 2005 *Powers in a class of \mathcal{A} -strict standard episturmian words*
5TH INTERNATIONAL CONFERENCE ON WORDS, Université du Québec à Montréal, Canada, Sept 13–17.
-

Conference and Workshop Invitations (10)

- December 12–16, 2016** 40TH AUSTRALASIAN CONFERENCE ON COMBINATORIAL MATHS & COMBINATORIAL COMPUTING (40ACCMCC)
The University of Newcastle, Australia
- October 11, 2016** WOMEN IN STEM ROUNDTABLE MEETING & MORNING TEA at Government House in Perth upon the invitation of *Professor Lyn Beazley AO FTSE* (Science Ambassador and WA Australian of the Year 2015) and *Her Excellency the Honourable Kerry Sanderson AC* (Governor of Western Australia)
- September 23–26, 2016** NUMBER THEORY DOWN UNDER 4: OPEN PROBLEMS IN NUMBER THEORY (workshop)
The University of Newcastle, Australia
- March 9–14, 2014** Workshop on COMBINATORICS & ALGORITHMIC OF STRINGS
Schloss Dagstuhl, Germany
- April 22–26, 2013** FIELDS WORKSHOP ON CHALLENGES IN COMBINATORICS ON WORDS
Fields Institute, Toronto, Canada
- February 19–24, 2012** OUTSTANDING CHALLENGES IN COMBINATORICS ON WORDS
Banff International Research Station (BIRS), The Banff Centre, Canada
ORGANISERS: James Currie, Jeffrey Shallit
- February 16–17, 2012** MINI-CONFERENCE: COMBINATORICS, REPRESENTATIONS, AND STRUCTURE OF LIE TYPE
Department of Mathematics and Statistics, The University of Melbourne, Australia
ORGANISERS: Arun Ram, Lawrence Reeves, Craig Westerland
- August 22–28, 2010** MINI-WORKSHOP: COMBINATORICS ON WORDS
Mathematisches Forschungsinstitut Oberwolfach, Germany
ORGANISERS: Valérie Berthé, Juhani Karhumäki, Dirk Nowotka, Jeffrey Shallit
- June 6–8, 2009** SPECIAL SESSION ON ALGEBRAIC COMBINATORICS
CMS* Summer Meeting 2009, Memorial University, St. John's, Newfoundland, Canada
ORGANISERS: Steve Kirkland, Karen Meagher
- March 27–29, 2009** SPECIAL SESSION ON THE INTERFACE BETWEEN NUMBER THEORY & DYNAMICAL SYSTEMS
AMS† Spring Central Sectional Meeting 2009, University of Illinois at Urbana-Champaign, Illinois, USA
ORGANISERS: Florin Boca, Jeffrey Lagarias, Kenneth Stolarsky

*Canadian Mathematical Society

†American Mathematical Society

Invited Talks and Colloquia (22)

- December 12–16, 2016** *An introduction to combinatorics on words — balanced words, Lyndon words, and palindromes*
40TH AUSTRALASIAN CONFERENCE ON COMBINATORIAL MATHS & COMBINATORIAL COMPUTING (40ACCMCC)
The University of Newcastle, Australia
- September 23–26, 2016** *Some applications of Combinatorics on Words in Number Theory*
NUMBER THEORY DOWN UNDER 4: OPEN PROBLEMS IN NUMBER THEORY
The University of Newcastle, Australia
- February 23, 2012** *On a generalisation of trapezoidal words*
WORKSHOP: OUTSTANDING CHALLENGES IN COMBINATORICS ON WORDS
Banff International Research Station (BIRS), The Banff Centre, Canada
- February 16, 2012** *Combinatorics of Lyndon words*
MINI-CONFERENCE: COMBINATORICS, REPRESENTATIONS, AND STRUCTURE OF LIE TYPE
The University of Melbourne
- July 12, 2011** *A combinatorial approach to a problem in distribution modulo 1*
SÉMINAIRE DU LABORATOIRE DE MIS, Université de Picardie Jules Verne, Amiens, France
- February 12, 2010** *Finite & infinite words in Number Theory*
SCHOOL OF MATHEMATICAL SCIENCES COLLOQUIUM, The University of Adelaide
- November 17, 2009** *Combinatorics on words & some applications to problems in Number Theory*
GROUPS & COMBINATORICS SEMINAR, School of Mathematics & Statistics, Univ. of Western Australia
- June 6, 2009** *Abelian repetitions and crucial words*
ALGEBRAIC COMBINATORICS session in the CMS SUMMER MEETING, Memorial University, St. John's, Newfoundland, Canada
- April 1, 2009** *Palindromic sequences in Number Theory*
SEMINAR OF THE DEPARTMENT OF MATHEMATICS AND STATISTICS, University of Winnipeg, Canada
- March 28, 2009** *Palindromic properties of infinite sequences with applications to Number Theory*
AMS SPRING CENTRAL SECTIONAL MEETING
SESSION: Interface between Number Theory and Dynamical Systems
University of Illinois at Urbana-Champaign, Illinois, USA
- January 12, 2009** *Crucial words for abelian powers*
MATHEMATICS COLLOQUIUM, Mathematics Division, Science Institute, University of Iceland
- September 26, 2008** *Palindromic richness*
LECTURE SERIES OF THE ICELANDIC CENTRE OF EXCELLENCE IN THEORETICAL COMPUTER SCIENCE (ICE-TCS), Reykjavík University, Iceland
- September 12, 2008** *Rich words*
LE SÉMINAIRE DE COMBINATOIRE ET D'INFORMATIQUE THÉORIQUE, LaCIM, Université du Québec à Montréal, Canada
- July 25, 2008** *Palindromic richness*
SEMINAR OF THE DEPARTMENT OF MATHEMATICS AND STATISTICS, University of Winnipeg, Canada
- November 16, 2007** *Christoffel words and Markoff's condition*
MILlican COLLOQUIUM SERIES, Department of Mathematics, University of North Texas, USA
- October 17, 2007** *Markoff's property, central words, and Christoffel words*
ISM GRADUATE STUDENT SEMINAR, Département de Mathématique, Université du Québec à Montréal, Canada
- Sept 25, 2007** *Episturmian words: extremal properties and quasiperiodicity*
ALGEBRA AND GEOMETRY RESEARCH GROUP SEMINAR, Matematiska Institutionen, Uppsala Universitet, Sweden

- March 14, 2007** *A few words about skew and episkew words*
WORKSHOP ON RECENT PROGRESS IN COMBINATORICS ON WORDS, Centre de Recherche Mathématique, Université de Montréal, Canada
- February 12, 2007** *Characterizations of finite and infinite episturmian words via lexicographic orderings*, ALGEBRAIC COMBINATORICS SEMINAR, The Fields Institute, University of Toronto, Canada
- January 22, 2007** *Powers in a class of \mathcal{A} -strict standard episturmian words*
SÉMINAIRE D'INFORMATIQUE MATHÉMATIQUE, LaCIM, Université du Québec à Montréal, Canada
- December 8, 2006** *Characterizations of finite and infinite episturmian words via lexicographic orderings*
SÉMINAIRE DE COMBINATOIRE ET D'INFORMATIQUE THÉORIQUE, LaCIM, Université du Québec à Montréal, Canada
- May 24, 2006** *Opportunities in Mathematics*
FORUM FOR LEVEL III MATHEMATICS STUDENTS, School of Mathematical Sciences, Adelaide University
-

Seminars (15)

- August 27, 2009** *Palindromic sequences in Number Theory*
MATHEMATICS & STATISTICS SEMINAR, Murdoch University, Australia
- March 20, 2009** *Palindromic properties of infinite sequences with applications to Number Theory*
LECTURE SERIES OF THE ICELANDIC CENTRE OF EXCELLENCE IN THEORETICAL COMPUTER SCIENCE (ICE-TCS), Reykjavík University, Iceland
- November 14, 2008** *More on rich words*
COMBINATORICS SEMINAR, Reykjavík University, Iceland
- January 21, 2008** *Markoff's property and Christoffel words*
ALGORITHMS & COMPLEXITY SEMINAR, University of Waterloo, Canada
- October 5, 2006** *Characterizations of finite and infinite episturmian words*
NUMBER THEORY SEMINAR SERIES, School of Mathematical Sciences, The University of Adelaide
- June 15, 2006** *Fine words over a finite alphabet*
POSTGRADUATE SEMINAR SERIES, School of Mathematical Sciences, The University of Adelaide
- April 28, 2006** *Fine words over a finite alphabet*
NUMBER THEORY SEMINAR SERIES, School of Mathematical Sciences, The University of Adelaide
- August 25, 2005** *Powers in a class of \mathcal{A} -strict episturmian words*
NUMBER THEORY SEMINAR SERIES, School of Mathematical Sciences, The University of Adelaide
- September 2, 2004** *Sturmian words, β -shifts & transcendence (paper study)*
NUMBER THEORY SEMINAR SERIES, School of Mathematical Sciences, The University of Adelaide
- April 29, 2004** *Transcendence of Sturmian or morphic continued fractions II*
NUMBER THEORY SEMINAR SERIES, School of Mathematical Sciences, The University of Adelaide
- April 22, 2004** *Transcendence of Sturmian or morphic continued fractions I*
NUMBER THEORY SEMINAR SERIES, School of Mathematical Sciences, The University of Adelaide
- February 27, 2004** *Combinatorics on Sturmian words*
MAJOR REVIEW SEMINAR, School of Mathematical Sciences, The University of Adelaide
- August 7, 2003** *Standard sequences and characteristic words (continued)*
NUMBER THEORY SEMINAR SERIES, School of Mathematical Sciences, The University of Adelaide
- July 31, 2003** *Standard sequences and characteristic words (book study)*
NUMBER THEORY SEMINAR SERIES, School of Mathematical Sciences, The University of Adelaide
- September 18, 2002** *On the period length of pseudorandom number sequences*
HONOURS SEMINAR, School of Mathematical Sciences, The University of Adelaide

Participation in Conferences

December 4–9, 2017

5TH INTERNATIONAL COMBINATORICS CONFERENCE (5ICC)
Monash University, Melbourne, Australia

September 24–26, 2017

WIMSIG CONFERENCE 2017: CELEBRATION OF WOMEN IN AUSTRALIAN MATHEMATICAL SCIENCES
University of South Australia, Adelaide

December 12–16, 2016

40TH AUSTRALASIAN CONFERENCE ON COMBINATORIAL MATHS & COMBINATORIAL COMPUTING (40ACCMCC)
The University of Newcastle, Australia

September 28 – October 1, 2015

59TH ANNUAL MEETING OF THE AUSTRALIAN MATHEMATICAL SOCIETY
Flinders University, Adelaide, South Australia

December 1–5, 2014

38TH AUSTRALASIAN CONFERENCE ON COMBINATORIAL MATHEMATICS & COMBINATORIAL COMPUTING
Victoria University of Wellington, New Zealand

December 9–13, 2013

37TH AUSTRALASIAN CONFERENCE ON COMBINATORIAL MATHEMATICS & COMBINATORIAL COMPUTING
The University of Western Australia, Perth, Australia

February 16–17, 2012

MINI-CONFERENCE: COMBINATORICS, REPRESENTATIONS, AND STRUCTURE OF LIE TYPE
The University of Melbourne, Australia

December 5–9, 2011

35TH AUSTRALASIAN CONFERENCE ON COMBINATORIAL MATHEMATICS & COMBINATORIAL COMPUTING
Monash University, Melbourne, Australia

December 6–10, 2010

34TH AUSTRALASIAN CONFERENCE ON COMBINATORIAL MATHEMATICS & COMBINATORIAL COMPUTING
The Australian National University, Canberra, Australia

September 27–30, 2010

54TH CONFERENCE OF THE AUSTRALIAN MATHEMATICAL SOCIETY
The University of Queensland, Brisbane, Australia

September 14–18, 2009

7TH INTERNATIONAL CONFERENCE ON WORDS
University of Salerno, Italy

August 3–7, 2009

AUSSIE STRINGMASTERS 2009
DEBII, Curtin University of Technology, Perth, Australia

August 27–30, 2008

12ÈMES JOURNÉES MONTOISES D'INFORMATIQUE THÉORIQUE
Université de Mons-Hainaut, Belgium

June 1–5, 2008

2ND CANADA-FRANCE CONGRESS
Centre de Recherche Mathématique, Université de Montréal, Canada

September 17–21, 2007

SIXTH INTERNATIONAL CONFERENCE ON WORDS
CIRM, Marseille, France

May 8–19, 2006

COMBINATORICS, AUTOMATA & NUMBER THEORY
 Université de Liège, Belgium

September 13–17, 2005

FIFTH INTERNATIONAL CONFERENCE ON WORDS
 Université du Québec à Montréal, Canada

Participation in Schools and Workshops**September 23–26, 2016**

NUMBER THEORY DOWN UNDER 4: OPEN PROBLEMS IN NUMBER THEORY
 The University of Newcastle, Australia

October 26–29, 2015

STRINGMASTERS
 Murdoch University

March 9–14, 2014

COMBINATORICS & ALGORITHMIC OF STRINGS
 Schloss Dagstuhl, Germany

April 22–26, 2013

FIELDS WORKSHOP ON CHALLENGES IN COMBINATORICS ON WORDS
 Fields Institute, Toronto, Canada

February 19–24, 2012

OUTSTANDING CHALLENGES IN COMBINATORICS ON WORDS
 Banff International Research Station (BIRS), The Banff Centre, Canada
 ORGANISERS: James Currie, Jeffrey Shallit

September 25–26, 2010 2ND EARLY CAREER WORKSHOP of the Australian Mathematical Society
 Rydges Oasis Resort, Caloundra, Queensland

March 5–16, 2007 RECENT PROGRESS IN COMBINATORICS ON WORDS
Centre de Recherche Mathématique, Université de Montréal, Canada
 ORGANISERS: Srečko Brlek, Christophe Reutenauer, Bruce Sagan

September 2004 RESEARCH: A COMMERCIAL PERSPECTIVE

A one-day introductory commercial awareness seminar for postgraduate research students (developed and delivered by the *Education Centre for Innovation Commercialisation*, Adelaide).

Jan–Feb 2004

AMSI SUMMER SCHOOL, *University of NSW*, Sydney, Australia

- *Combinatorial Matrices and Graph Theory*
 Dr. Ian Wanless (ANU), Dr. Catherine Greenhill (UNSW)
- *Topics in Number Theory*
 Emeritus Prof. Alfred J. van der Poorten (Macquarie University)

July 2003

SUCCESSFUL PRESENTATIONS WORKSHOP (Dr Michael Teubner)
School of Mathematical Sciences, The University of Adelaide