MATRIX News

Jan de Gier*

Mathematical Research Institute MATRIX

MATRIX, Australia's international and residential mathematical research institute, is gearing up for its 2017 winter research programs. I would also like to highlight our research programs that take place in conjunction with a large international conference, such as the *Tutte Centenary Retreat* in November 2017 after the 5th International Combinatorics Conference at Monash and the *Month of Mathematical Biology* in July 2018 surrounding the annual meeting of the Society for Mathematical Biology in Sydney.

In December 2017 we host the advanced research program *Geometric R-matrices: from Geometry to Probabilty* co-organised by Fields Medallist Andrei Okounkov, who will speak at the 2017 AustMS meeting at Macquarie University sponsored by MATRIX.

At the time of this writing our April deadline has just passed and we have received exciting applications from organisers across Australia and internationally.

Alf van der Poorten library at MATRIX

MATRIX is extremely grateful for the gracious gift of Alf's extensive mathematics library by the Van der Poorten family. The books will soon be available in the MATRIX House.

Book series

Each year Springer will publish the MATRIX Annals whose Editorial Board consists of David Wood (editor-in-chief), Jan de Gier, Cheryl Praeger and Terence Tao. Articles can be peer-reviewed, containing original results, or reviews on a topic related to the program, or non-peer-reviewed expository lecture notes based on talks or activities at MATRIX. The first volume is expected to have over 600 pages (!) and will be published in September 2017.

MATRIX programs

The MATRIX Scientific Committee selects programs on scientific excellence as well as on the participation rate of high profile international participants, among

other criteria. MATRIX programs tend to have ample unstructured time to encourage collaborative research rather than having a traditional conference format. Longer term programs, lasting three weeks or more, could have an embedded conference or lecture series. Shorter workshops focussing on a special theme are also welcome. MATRIX offers additional support to participants with families through the MATRIX Family Fund.

The next deadline for program proposals in 2018–2020 will be in Ocober 2017

Guidelines for proposals and expressions of interest (which may be submitted at any time) are available on our website www.matrix-inst.org.au.

Upcoming programs

- *11–23 June: Computational Inverse Problems*
  Organisers: Tiangang Cui (Monash), Hans De Sterck (Monash), Markus Hegland (ANU), Youssef Marzouk (MIT), Ian Turner (QUT), Karen Willcox (MIT)
- *26 June to 21 July: Integrability in Low-Dimensional Quantum Systems*
  Organisers: Murray Batchelor (ANU), Patrick Dorey (Durham), Giuseppe Mussardo (SISSA Trieste), Paul Pearce (Melbourne), Chaiho Rim (Sogang, Seoul)
- *16–28 October: Elliptic Partial Differential Equations of Second Order: Celebrating 40 Years of Gilbarg and Trudinger's Book*
  Organisers: Lucio Boccardo (Sapienza Università di Roma), Florica-Corina Cîrstea (University of Sydney), Julie Clutterbuck (Monash University), L. Craig Evans (University of California, Berkeley), Enrico Valdinoci (University of Melbourne)

Four more programs are scheduled for October – December 2017. Three programs are scheduled for 2018 with more to come. It is great to see program organisers from a variety of Australian universities, including ANU, Macquarie, Melbourne, Monash, Newcastle, Queensland, QUT, RMIT, Sydney, UTS, UWA, Wollongong, along with very large numbers of international participants.

MATRIX Minors

MATRIX Minor programs are self-funded visits to MATRIX to make use of the available office space and facilities at the Creswick Campus outside program times, for example to work intensively in a small group. Such visits are subject to the approval of MATRIX but can be arranged by sending an email request that briefly outlines the proposed research and timings.

Questions

Comments, suggestions and requests are always welcome. Please send these, as appropriate to:

Directors	Jan de Gier (jdg@matrix-inst.org.au)
	David Wood (davidw@matrix-inst.org.au)
Executive Officer	Sally Zanic (sallyz@matrix-inst.org.au)
Chair of the Advisory Board	Tony Guttmann (guttmann@unimelb.edu.au)

Professor de Gier's research interests are in mathematical physics and statistical mechanics, in particular in the theory and application of solvable lattice models as well as special functions in stochastic processes and combinatorics. Jan is a former Editor of the Gazette, organised an AMSI summer school and was inaugural Chair of the Australia and New Zealand Association of Mathematical Physics (ANZAMP). He currently is Head of the School of Mathematics and Statistics at The University of Melbourne and co-Director of MATRIX.