

Reports of Sponsored Meetings

AGA: ANALYSIS, GEOMETRY, ALGEBRA
8-10 MAY 2019, TRINITY COLLEGE DUBLIN

In the early summer of 2018 it was decided that there were few people more deserving of a conference marking their 65th birthday and (notional) retirement than Richard Timoney of Trinity College. Quietly, a scientific committee was formed, a host volunteered (TCD, naturally), an initial few speakers invited, and a web page cobbled together. With Margaret Timoney's approval, this was revealed to Richard on his 65th birthday, July 17th 2018. Although Richard was undergoing treatment in hospital at the time, he looked forward to the conference in May 2019 with optimism.

The title of the meeting reflects some of the principle themes that can be seen in Richard's work: analysis, geometry and algebra, hence the moniker AGA.¹ Generous financial support was received from the principle sponsor of the meeting, the Hamilton Mathematics Institute, itself funded from the Simons Foundation, as well as from the cognate academic schools at UCD and TCD, and of course the Irish Mathematical Society.

Sadly, Richard passed away on New Year's Day 2019. His obituary appeared in Bulletin 83. His loss inevitably meant that the AGA meeting assumed a more reflective tone but it remained a celebration of Richard's life and work. For many, those outside Ireland especially, who knew or had worked with Richard, the meeting provided an opportunity to mark the passing of a fellow mathematician who was held in the highest regard.

The scientific programme consisted of three days of talks and, to cater for the number of people who wished to contribute, each lecture was quite short at 25 minutes duration. Many speakers further curtailed their time in order to share much appreciated reminiscences of Richard. The first to do so was Professor Patrick Prendergast, Provost of Trinity College, who opened the meeting on Wednesday 8th May and pointed out that Richard had lectured him in his earlier days as an engineering student in Trinity.

Throughout, a great depth and range of mathematical work was evident in the high quality presentations which, reflecting the title of the meeting, provided many reminders that no topic in mathematics can be fully understood without recourse to the others.

The last lecture on Thursday 9th was delivered by S. Dineen, entitled "A sample of Richard's contributions to infinite dimensional analysis". Afterwards, there were warm tributes from those assembled, including a short address by Vice-Provost of Trinity, Professor Chris Morash. Happily, Margaret and several members of Richard's family were able to join us for this session and dinner afterwards.

There were about sixty participants altogether. Twenty-nine lectures were presented with all but four of the speakers travelling from overseas. The full programme and the slides of most talks are available on the conference website, <https://maths.ucd.ie/aga>. Photos of the conference, and of Richard, are also available there. (If asked, the password is `richardt`.)

The organisers of AGA were Seán Dineen, Chris Boyd, Michael Mackey and Pauline Mellon of UCD, and Vladimir Dotsenko and Donal O'Donovan of TCD with administrative assistance from Karen O'Doherty and Emma Clancy at TCD School of Mathematics.

¹An alternate permutation was considered for a short time but we quickly realised that the meeting would not be very visible in a web search for "Dublin GAA".



Report by Michael Mackey, University College, Dublin
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INTERNATIONAL CONFERENCE ON LINEAR ALGEBRA AND MATRIX THEORY
 23-24 MAY 2019, O'BRIEN CENTRE FOR SCIENCE – UCD

Organisers

Anthony Cronin and Helena Smigoc

On May 23rd and 24th 2019 an International Conference on Linear Algebra and Matrix Theory was held at UCD to honour Professor Thomas J. Laffey on the occasion of his 75th birthday. The event was supported by Science Foundation Ireland, the Irish Mathematical Society, Optum Technology and the UCD School of Mathematics and Statistics, all of whom we give great thanks to.

The international and national speakers reflected Tom's varied and long career from talks on matrix algebras, centralizers, spectra and idealizers to group representation theory and the nonnegative inverse eigenvalue problem. Day one of the event concluded with testimonials reflecting the many contributions Tom has made to mathematics, education and outreach both in Ireland and internationally. Professor Rod Gow regaled us with many entertaining stories of Tom's encyclopedic knowledge of politics, Irish weather and of course mathematics over his career at UCD spanning more than forty years. Rod also spoke eloquently on Tom's contribution to Linear Algebra and Matrix Theory research including his seminal work on providing a constructive proof of the celebrated Boyle-Handelman theorem on the existence of a nonnegative matrix with given non-zero spectrum, and the awarding to Tom of the Hans Schneider prize in 2013, which recognises research, contributions, and achievements at the highest level of linear algebra. Professor Pat Guiry gave thanks for Tom's 30 year involvement as a judge at the BT Young Scientist and Technology Exhibition. Gordon Lessells gave an entertaining pictorial account of Tom's considerable contribution to the Irish and International

Mathematical Olympiads, work which Tom is still involved with. Tom's first cousin Tom Doherty gave a beautiful account of three acts of kindness Tom Laffey bestowed on him as a young boy in addition to the beautiful recital of a section of the poem A Psalm of Life by H.W. Longfellow. Thankfully Tom's brother and sisters and their families joined us for these glowing tributes and attended the conference dinner afterwards. There were over 50 participants over the two days, with a total of 23 talks, 11 from international speakers including the president of the European Mathematical Society Professor Volker Mehrmann. Details of the programme and abstracts of all the talks are available at the conference website <http://www.maths.ucd.ie/lamt/> The meeting concluded with the announcement of the Thomas J. Laffey Wikipedia page going live. This page is available to view at https://en.wikipedia.org/wiki/Thomas_J._Laffey/



Report by Anthony Cronin, UCD, Dublin
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IRISH GEOMETRY CONFERENCE 2019
 17-18 MAY 2019, MAYNOOTH UNIVERSITY

Geometry and the closely related field of topology were largely absent from Irish mathematics at a research level until relatively recently, despite being major areas of mathematical research internationally since (at least) the middle of the twentieth century. This situation has changed in recent years, with the annual Irish Geometry Conference being one of the fruits of this development.

The meeting has two main aims. One is to provide a platform where Irish geometers and topologists can present their current research among their peers in order to inform, but also to foster new collaborations within the community. The second is to invite one or more internationally prominent researchers to give invited addresses, allowing local mathematicians the chance to interact for a couple of days with a major figure, possibly leading to new research directions.

This year the main speaker was Professor Wilhelm Klingenberg from the University of Durham in the UK who spoke on joint work with Brendan Guilfoyle (Tralee) regarding a conjecture of Toponogov on complete convex surfaces. Professor Klingenberg is a renowned expert in the areas of complex and symplectic geometry, as well as geometric analysis and mathematical optics. He is also the Managing Editor of the journal

Proceedings of the Greek Mathematical Society. A lively presence throughout the conference, Professor Klingenberg's expertise and engaging style made for a wonderful talk.

Also speaking at this year's event was Dr Vladimir Dotsenko from TCD, Graham Ellis from NUI Galway, Madeeha Khalid from UCD, Eduardo Mota Sanchez from UCC, Arne Ruffer from UL as well as Stephen Buckley and Mark Walsh from Maynooth. A wide range of subjects from Geometry and Topology were covered. At the algebraic end we heard about certain derived categories and group cohomology while at the more geometric analytical end there were talks on constant mean curvature surfaces, quasihyperbolic geodesics and positive scalar curvature. Moduli spaces were a significant theme, with talks on both moduli spaces of vector bundles on K3 surfaces as well as those of stable rational curves.

A stimulating first round of talks on Friday 17th was followed by great conversation and dinner at local Thai restaurant, Kin Khao. The IGC this year was organised by Mark Walsh and David Wraith of Maynooth University. The conference traditionally has no registration fee and this year was no different. It relies mostly on department and university support. The organisers are grateful to Maynooth University and to the Irish Mathematical Society for their financial assistance in hosting this event.



The conference website is at

[https://www.maynoothuniversity.ie/mathematics-and-statistics/
irish-geometry-conference-2019](https://www.maynoothuniversity.ie/mathematics-and-statistics/irish-geometry-conference-2019)

It gives the details of the programme and has abstracts of all the talks.

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GROUPS IN GALWAY 2019
10-11 MAY 2019, NUI GALWAY

The conference website is at

<http://www.maths.nuigalway.ie/conferences/gig19/>

It gives the details of the programme and has abstracts of all the talks, as well as a photograph of the participants.

Report by the editor,
