

centre to the Belfield campus which was still a sprawling woodland. David and a close-knit group of colleagues kept logs of the birds they spotted on their lunchtime walks. This catalogue is now archived in UCD library.

In 1975 David met Fíona, a librarian newly arrived to UCD. They married in 1976 and enjoyed a further 46 years together. They both loved the Irish countryside and regularly holidayed there. His fondness for Ireland was apparent when he became an Irish citizen in 2005.

David was an active member of the Irish Mathematical Society, assuming the role of Treasurer from 1990–1993, and he played a significant role in redrafting the constitution of the society in 1992. He was an ardent supporter of student societies and enjoyed many years as Senior Treasurer of the university drama society, *DramSoc*.

An achievement that David was particularly proud of, was the role he played in introducing the Honours BA in Mathematical Studies to UCD. David felt a 3-year honours offering was required and was instrumental in the design and delivery of the new programme.

David prepared meticulously for lectures, and his courses were highly organised. Students held him in high regard, and he generously gave of his time to any student who appeared at his office door looking for assistance. In fact, he very much enjoyed these interactions.

I met David when I arrived as an assistant lecturer to UCD in 1997. He mentored me in all matters relating to my courses, patiently provided computer support, and of course corrected the grammar on my examination papers!

After his retirement in 2006, David pursued his interests with his usual vigour. An avid reader, with an interest in the history of typography and printing, he volunteered at Project Gutenberg, rising to the level of post-processor. He was most proud of a collaboration with his friend Prof Kevin Cathcart. They worked on *The Book of the Twelve Prophets* vol. II., by G. Adam, which had more than 1,500 footnotes, many in Greek and Hebrew; David ensured the fonts were faithfully reproduced.

David died after a short illness. Thank you to his wife Fíona, his friend Kevin Cathcart, his colleague Michael Mackey, and several of his other mathematics colleagues, for sharing their stories of David with me.

John McKay: 1939–2022



Professor John McKay, who was elected a member of the London Mathematical Society on 16 November 1967, died on 19 April 2022, aged 82.

Leonard Soicher writes: John McKay was an exceptional

mathematician. His broad mathematical interests and knowledge, together with his curiosity, intuition, and insights, led to his discovery of important new connections between different areas of mathematics and the opening up of whole new areas of research. He was also a pioneer of the use of computers in pure mathematical research.

John McKay was born in Otford, Kent on 18 November 1939. He was a student at Dulwich College, and went on to study Mathematics at the University of Manchester where, after graduating, he remained as a Nuffield Research Fellow until 1964. During this period he worked with the Manchester Atlas computer, one of the most powerful computers in the world at that time.

In 1964 John moved to the University of Edinburgh to work on a PhD (in Computer Science) on algebra and computing with Sidney Michaelson and Douglas Munn. While at Edinburgh, he met and married Wendy, a fellow student. John left Edinburgh in 1967 to become a Research Fellow at the Atlas Computer Laboratory in Chilton, to work with another Atlas computer (one of three world-wide). Chilton was in commuting distance to Oxford, and John attended seminars in Mathematics at the University of Oxford. There he collaborated with Graham Higman, using his computer skills in the first constructions of the third sporadic simple group of Janko and the sporadic simple group of Held.

John McKay was excellent at connecting researchers and their ideas. In 1967–1968 John Leech was a Research Fellow at the Atlas Computer Laboratory, and was aware that his amazing 24-dimensional lattice would have a very large group of automorphisms. Leech was trying, with no luck, to get researchers in group theory interested in this automorphism group. However, John McKay was able to get John Conway interested, leading to Conway's discovery of his three sporadic simple groups.

In 1969 John McKay went to America as a Visiting Assistant Professor in Mathematics at the California

Institute of Technology (CalTech) where he completed and submitted his Edinburgh PhD thesis, primarily concerned with the computer calculation of the (ordinary) character tables of finite groups. John was formally awarded his PhD in 1971.

Around this time, the McKay Conjecture came into being, which concerns the number of irreducible complex characters of a finite group G that have degree not divisible by a given prime p . The Conjecture, which is still open, and its subsequent generalizations have driven major new developments in representation theory over the last 50 years.

In 1971 John took up a position in Computer Science at McGill University in Montreal, Canada, but he did not get on well there, and in 1974 moved up the road to become an Associate Professor in the Department of Computer Science at Concordia University.

In 1978, while working on computational Galois theory, John noticed that the co-efficient of q in the q -expansion of Felix Klein's j -invariant is $196884 = 1 + 196883$, and the smallest degrees of the irreducible complex representations of the (then conjectured) Monster group were 1 (for the trivial representation) and 196883. John thought this possible connection required investigation, which led in due course to the Conway-Norton monstrous moonshine conjectures, the proofs of which earned Richard Borcherds a Fields Medal in 1998.

In 1979 John made another remarkable discovery, now called the McKay Correspondence. This associates to a complex representation R of a finite group G a certain directed multigraph (now the *McKay graph*), and John observed that the graphs for the finite subgroups of $SU(2, \mathbb{C})$ with respect to their natural 2-dimensional representations are precisely the extended A, D, and E Coxeter-Dynkin diagrams. This fact and its generalizations have since greatly influenced diverse areas of mathematics.

In 1979 John became a full Professor of Computer Science and in 1990 he took up a joint Computer Science and Mathematics position at Concordia. He was elected a Fellow of the Royal Society of Canada in 2000, and in 2003 won the CRM-Fields Prize for Mathematics, the highest honour for a mathematician in Canada. In 2007 a conference was jointly organised by Concordia University and the Centre de Recherches Mathématiques in Montreal to honour John McKay and celebrate his influence on mathematics.

In February 2017 John broke both his hips, and after four months in hospital was moved to a nursing home. There, with good humour, he kept up with the world and

in touch with his colleagues, still having mathematical ideas. John died peacefully on 19 April 2022.

John and Wendy had divorced in 1985, and John married his second wife Trinh in 1988. John is survived by Trinh, his sister Elizabeth, his son Sacha and daughter Tanya from his first marriage, a nephew, and three grandchildren.

I was very fortunate to have John McKay as my supervisor for both my master's degree and postdoc. I thank Trinh Vo-McKay, John Harnad, Yang-Hui He, Hershy Kisilevsky, and Wendy McKay for interesting and useful information to help me write this obituary.

Death Notices

We regret to announce the following deaths:

- Derrick S.F. Crothers, formerly of Queen's University Belfast, who was elected a member of the London Mathematical Society on 15 June 1979, died on 15 January 2021, aged 78.
- Garth Dales, formerly of Lancaster University, who was elected a member of the London Mathematical Society 20 November 1969, died on 8 October 2022, aged 78.
- Geoffrey S. Joyce, of King's College London, who was elected a member of the London Mathematical Society on 19 November 1993, died on 18 June 2021, aged 80.
- David Monk, formerly of the University of Edinburgh, who was elected a member of the London Mathematical Society on 19 December 1957, died on 3 October 2022, aged 90.

Biographical Memoirs and LMS Obituaries

Memoirs for the following people have been published in *Biographical Memoirs of Fellows of the Royal Society*:

- Sir Erik Christopher Zeeman (1925–2016); tinyurl.com/dmbas73f
- Ludwig Dmitrievich Faddeev (1934–2017); tinyurl.com/2krpkurh

Obituaries (both recent and historical) published in the LMS *Bulletin* are free to read and can be accessed at tinyurl.com/bduxhkhe.