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Mathematics
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Irish Mathematics Calendar 2017

MATHS FOR ALL
Maths Week
Ireland

Brian McMaster was born 12 January in Bangor, Down, and was educated at QUB, where he taught and did research in topology for four decades. He supervised numerous doctoral students, and co-authored a book on undergraduate topology with one of those, Aisling McCluskey of NUIG.

Statistician **Jerome Sheahan** was born 8 January in Boherbue, Cork, and educated at UCC, Carlton University and the University of Calgary. After a decade at the University of Alberta, in Edmonton, he settled at UCG/NUIG, where he often serves as consultant to numerous statistical clients. He is the recipient of several teaching awards.

Mathematical physicist **Sheila Tinney** (née Power, 1918-2010) was born 15 January in Galway, where her father was professor of maths. She was educated at UCD and the University of Edinburgh, becoming the first Irish woman to get a doctorate in mathematical science. She worked at UCD, introducing generations of students to quantum physics.

Robert Boyle (1627-1691) was born 25 January in Lismore, Waterford, and as a child was educated privately and at Eton, as well as in Italy. He was one of the most important figures of the period known as the Scientific Revolution, and is best known for Boyle's law which describes the inversely proportional relationship between the pressure and volume of a gas.

Physicist Edith Stoney (1869-1938) was born 6 January an in Dublin, daughter to George Stoney who coined the term "electron." She aced her maths studies at Newnham College at Cambridge, although they didn't allow women to graduate; TCD later awarded her the degrees she'd earned. She had a remarkable career in physics and medical physics.

Sean Tobin was born 16 January in Moneygall, Tipperary, and was educated at UCG and at Manchester. He spent 40 years at UCG, spearheading an algebra and group theory focus there. He is perhaps best known for his early work on the Burnside Problem.

1. The Irish Mathematics Teachers' Association was founded 2 Jan 1964. The IMTA aims to further the study and teaching of mathematics and to foster co-operation between teachers of mathematics at all levels. All those interested in mathematics and mathematics education may apply for membership, but it mainly comprises teachers of mathematics at post-primary level.

2. Over 1000 post-primary students with 500 projects across all areas of STEM will compete at the 54th BT Young Scientist and Technology Exhibition. The event attracts over 50,000 visitors and winners have a distinguished record in subsequent international competitions.

3. Get a clue. In fact, get 17 clues, you'll need them all: On 1 Jan 2012, Gary Maguire of UCD announced that his team had proved that there is no 16-clue Sudoku puzzle.

JANUARY 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
						1 New Year's Day
2 Walter Heitler (1904-1981) Irish Mathematics Teacher's Association (IMTA) founded, 1964	**3**	**4**	**5** John Cosgrove	**6** Edith Anne Stoney (1869-1938)	**7**	**8** Ray Flannery (1941-2013)
9	**10**	**11** BTYSTE	**12** Brian McMaster BTYSTE	**13** Ken Houston BTYSTE	**14** BTYSTE	**15** Sheila Power (1918 - 2010)
16 Annette Pilkington Colm O'Muircheartaigh Sean Tobin	**17**	**18**	**19**	**20** John McCarthy	**21**	**22** Brendan Goldsmith Barbara Yates (1919-1998)
23	**24**	**25** Robert Boyle (1627 - 1691)	**26**	**27** Registration deadline Apps4Gaps Team Maths Regional Competitions	**28** Des MacHale G4G Europe Lisbon	**29** G4G Europe Lisbon
30 Coulter McDowell (1932-1993) G4G Europe Lisbon	**31** G4G Europe Lisbon					

Maths Week Ireland
MATHS FOR ALL

Stephen Buckley was born 8 February in Cork city, and was educated at UCC and the University of Chicago. He has long been on the staff at Maynooth, where his research interests are broad, including algebra, metric geometry and geometric analysis.

Siobhan Vernon (née O'Shea, 1932-2002) was born 22 February in Macroom, Cork. After completing her BSc and MSc at UCC, she taught there for over 30 years. Her 1964 PhD in mathematical analysis, also from UCC, is believed to be the first doctorate in pure mathematics earned by an Irish born and educated woman.

John O'Donoghue was born 24 February in Nenagh, Tipperary, and was educated at St John Fisher College (Rochester), Rensselaer Polytech, and at Loughborough. His career has been spent at Thomond College and the University of Limerick, specialising in mathematics education in particular. He was a founding director of the NCE-MSTL, now EPI-STEM. He has written two books and supervised numerous theses.

Terry Maguire was born 4 February in Passage West, Cork, and studied science at UCC. After years of working in higher education in Scotland she did her doctorate in mathematical education at the University of Limerick. She founded *Maths Eyes* and now works for the National Forum for the Enhancement of Teaching & Learning in Higher Education.

Agnes Clerke (1842-1907) was born 10 February in Skibbereen, Cork. She was educated privately, studying mathematics, physics and astronomy at the third level in Dublin, and later in Italy. Settling in London, she published extensively, wrote numerous popular and well regarded books on the history of astronomy, and contributed to the Encyclopaedia Britannica on both astronomy and mathematics.

Sean Dineen was born 12 February in Clonakilty, Cork, and was educated at UCC and the University of Maryland College Park (and on the beaches of Brazil, rumour has it). His career was spent at UCD, where he supervised numerous doctoral theses and wrote (or edited) 7 books on analysis, calculus, and mathematical finance.

1. Dara Ó Briain from Bray, Wicklow, was born 4 February. He studied maths and physics at UCD before embarking on a successful career in comedy and TV presentation, and is known for his maths and science outreach with the TV shows School of Hard Sums and Dara Ó Briain's Science Club.

2. The Central Statistics Office has an extensive public engagement programme. It includes the John Hooper Medal statistics competition for schools and Apps4Gaps, a competition to create apps that make the best use of public data sets.

February

2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	**2** Cornelius Lanczos (1893 - 1974) CERME Dublin	**3** CERME Dublin	**4** Dara Ó Briain Terry Maguire CERME Dublin	**5** Stephen O'Brien (1918-1992) Bartholemew Lloyd (1772 - 1837) CERME Dublin
		CERME Dublin				
6	**7**	**8** Stephen Buckley Francis Edgeworth (1845 - 1926)	**9**	**10** Agnes Mary Clerke (1842 - 1907)	**11** Elizabeth Oldham	**12** Sean Dineen
13	**14** John Perry (1850–1920)	**15** Sophie Wilcock (1850 - 1922) George Stoney (1826 - 1911)	**16** Petros Florides NI Science Festival	**17** NI Science Festival	**18** Arthur Kingston NI Science Festival	**19** Therese Dooley NI Science Festival
20 Joseph Varilly John Connolly NI Science Festival	**21** David Lewis NI Science Festival	**22** Maeve McCarthy NI Science Festival	**23** NI Science Festival	**24** John O'Donoghue Siobhan O'Shea (1932 - 2002) Gordon Foster (1921 - 2010) Submission deadline John Hooper Medal NI Science Festival	**25** James McConnell (1915 - 1999) NI Science Festival	**26** NI Science Festival
27 John Ryan	**28**					

Maths Week Ireland — Maths For All

Mathematical physicist **Lochlainn O'Raifeartaigh** (1933-2000) was born 11 March in Dublin. Educated at UCD and the University of Zürich, he worked for over 30 years at the Dublin Institute for Advanced Studies, supervising many graduate students and writing five books. He is best known for several ground-breaking results in the application of group theory to the physics of elementary particles, notably his "no-go theorem".

Philosopher **George Berkeley** (1685-1753) was born 2 March 1685 in Kilkenny. He was educated at TCD and wrote a critique of the foundations of calculus. The University of California at Berkeley is named after him (though pronounced differently).

Neil Hallinan was born 21 March in Aughavoulimane, Tipperary, and was educated at UCD and UWE, Bristol. For thirty-six years he taught at St. Mary's, Holy Faith Convent, Glasnevin. He's been involved with the IMTA since the early 1980s, and is currently co-ordinating the Archives of the IMTA, at NUI Maynooth.

Mathematical physicist **David Spearman** was born 25 March in Dublin, and was educated at TCD and Cambridge. The bulk of his career was spent on the staff at TCD, where he supervised three doctoral theses and rose to the rank of vice-provost and pro-chancellor.

Mathematical physicist **John Lighton Synge** (1897-1995) was born 23 March in Dublin. Educated at TCD, he worked there and at the University of Toronto, as well as in the USA, and at the DIAS. He supervised many theses and wrote 11 books. He is credited with the introduction of a new geometrical approach to the special and general theories of relativity.

Nóra Ní Chuív (granddaughter of Éamon de Valera) was born 2 March in Dublin, and was educated at UCD and the University of Washington. Her career was spent at the University of New Brunswick in Canada, where she authored mathematical guides for surveying engineers. She also published in probability and software reliability testing.

Mathematics is a foundational pillar of modern engineering and Engineers Ireland is the professional body for Ireland's engineering profession. Dating back to 1865 it is an all-island Institution with over 23,000 members. Engineers Week was founded in 2007 to promote engineering as a career and information can be found at www.engineersweek.ie.

March
2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	**2** Nóra Ní Chuív Gerry Gardner (1926 - 2009)	**3** Maths Counts Maynooth	**4** Team Maths Final Maths Counts Maynooth	**5** Iggy Ó Muircheartaigh Engineers Week
6 Engineers Week	**7** Engineers Week	**8** Engineers Week	**9** Engineers Week	**10** Eugene Gath Entry deadline SciFest @College Engineers Week	**11** Lochlainn O'Raifeartaigh (1933 - 2000) Inst. Physics Spring Meeting	**12** George Berkeley (1685 - 1753)
13	**14**	**15** Aisling McCluskey	**16** Aoibhinn Ní Shúilleabháin Winners announced John Hooper Medal	**17** St. Patrick's Day Michael P Tuite	**18**	**19**
20 Spring Equinox	**21** Neil Hallinan	**22**	**23** John L. Synge (1987 - 1995)	**24**	**25** David Spearman	**26** Sumertime Begins Hugh Hamilton (1729-1805)
27	**28**	**29**	**30**	**31** Paul Feehan		

Maths Week Ireland
Maths for All

Statistician **Roy Geary** (1896-1983) was born 11 April in Dublin. After study at UCD and the Sorbonne, he had a long career in the Department of Industry and Commerce, before leading both the Central Statistics Office and the Economic and Social Research Institute. His name lives on in the Stone–Geary utility function, the Geary–Khamis dollar, and elsewhere.

Dionysius Lardner (1793-1859) was born 3 April in Dublin. He was educated at TCD and worked there as a chaplain while publishing mathematical articles. For a few years he worked at the University of London as professor of physics and astronomy. He is best remembered for the mammoth Cabinet Cyclopædia, a series of over 100 volumes, which he edited.

Philip Boland was born 20 April in Syracuse, New York. He was educated at Le Moyne College and the University of Rochester. During his 36 years on the staff at UCD his interests shifted from analysis to probability and statistics. He founded the statistics department there and also started the actuarial and financial studies programme. His books include Statistical and Probabilistic Methods in Actuarial Science.

Applied mathematician **James Gleeson** was born 19 April in Nenagh, Tipperary, and was educated at UCD and Caltech. He started his career at UCC before settling at the University of Limerick, where he co-directs the Mathematics Applications Consortium for Science and Industry (MACSI). He has supervised many theses.
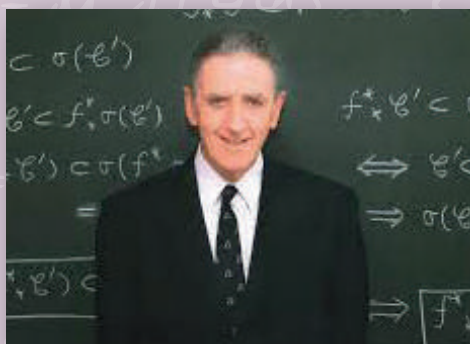
Mathematical physicist **John T. Lewis** (1932-2004) was born 15 April in Swansea. He was educated at QUB, taught at Oxford, and for 25 years he was director of the Dublin Institute of Advanced Studies. His areas of interest included quantum measurement, Bose–Einstein condensation and large deviations theory, and he supervised about 30 doctoral theses.

William Molyneux (1656-1698) was born 17 April in Dublin, and was educated at TCD. He abandoned a career in law and turned to mathematical and scientific endeavours. His role in the 1684 founding of the Dublin Philosophical Society for the Improvement of Natural Knowledge, Mathematics and Mechanics is considered to have been very influential.

1. Computus: Easter falls on 16 April this year. It was 27 March last year. Why does it vary from year to year? It is determined by astronomical considerations, and the monasteries in early medieval Ireland (circa 600-850) were renowned throughout Europe for this study of calendar, known as the computus. For more information, see the work of Prof. Dáibhí Ó Cróinín & Dr Daniel McCarthy.

2. The Irish Mathematical Society was founded 14 April 1976. The IMS aims to further mathematics and mathematical research on the island. Its membership is international, but it mainly represents mathematicians in Irish universities and other third level institutes.

APRIL

2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1	**2**
3 Richard Townsend (1821-1884) Dionysius Lardner (1793-1859)	**4**	**5**	**6** Layer Phenomena Workshop NUIG	**7** Submission deadline Apps4Gaps Layer Phenomena Workshop NUIG	**8**	**9**
10	**11** R. C. Geary (1896 - 1983)	**12**	**13**	**14** Annie Russell (1868 - 1947) Irish Mathematical Society (IMS) founded, 1976	**15** John T. Lewis (1932 - 2004)	**16** Easter Sunday
17 Easter Monday Mark McCartney William Molyneaux (1656 - 1698)	**18**	**19** James Gleeson James Cullen (1867 - 1933)	**20** Philip Boland	**21** William Monck (1839-1915)	**22** James McMahon (1856-1922)	**23** Tech Week
24 Norma Glasgo Reid Tech Week	**25** Tech Week	**26** Kevin Hutchinson Tech Week	**27** Tech Week	**28** John Toland Tech Week	**29** Cormac Smith (1926-2009) Tech Week	**30** Sally McClean

John Casey (1820-1891) was born 12 May in Coolattin, Limerick. He was self-educated until he graduated from TCD in middle age. He later opted to teach at the Catholic University of Ireland, rather than at TCD where he was offered a positon, and wrote seven books on geometry.

Astronomer **Alice Everett** (1865-1949) was born 15 May in Glasgow, and brought up in Belfast, where her father was professor of natural philosophy at Queen's College. She studied maths there, and at Girton College, Cambridge, but her BA and MA degrees were awarded by the Royal University of Ireland. She worked at the Royal Observatory in Greenwich, and later did research in optics and the engineering of early television.

Cathleen Morawetz (née Synge) was born 5 May in Toronto, and split her early years between there and Dublin, when her father John Lighton Synge was on the staff at TCD. She was educated at the University of Toronto, MIT and NYU. Her career was spent at the Courant Institute, researching nonlinear PDEs, and she served as President of the American Mathematical Society.

Trevor West (1938-2012) was born 8 May in Midleton, Cork. He was educated at TCD and Cambridge, and spent most of his career at TCD, where he worked in functional analysis. He served several terms on Seanad Éireann and wrote numerous books, on mathematics and other subjects.

T.S. (Stan) Broderick (1893-1962) was born 22 May in Youghal, Cork, and was educated at UCC. A probabilist, his career was spent at TCD, where he rose to the rank of vice-provost. Poet Edna Longley is his daughter.

Applied mathematician **James Caldwell** was born 16 May in Macosquin, Londonderry, and was educated at QUB and Teesside University. Most of his career was spent at the University of Southern Queensland (Toowoomba), Sunderland Polytechnic, and the City University of Hong Kong. He has written postgraduate level textbooks in mathematical modelling.

1. Society of Actuaries in Ireland was founded in 1972. Over the intervening 45 years its membership has grown to more than 1,000.
2. In May 2012 it was announced by Eugene Benilov, Cathal Cummins and William Lee at the University of Limerick that an old stout bubbles mystery had been solved: it was the shape of the standard pint glass which allowed bubbles to sink along the edges during pouring, while invisibly rising in the middle to complete the circulation.

MAY   2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1 May Bank Holiday	2	3 Society of Actuaries in Ireland founded, 1972	4 Johnny Burns Engineers Ireland Annual Conference	5 Robin Harte Cathleen Morawetz	6 Dana Mackey IMO final round	7
8 Trevor West (1938 - 2012)	9	10 Entry deadline SciFest@Northwest	11 Martin Mathieu	12 John Casey (1820 - 1891)	13	14
15 Alice Everett (1865 - 1949) Conference on Applied Statistics in Ireland	16 Jack Todd (1911 - 2007) Conference on Applied Statistics in Ireland	17 Shane Dowdall James R. Timoney (1909 - 1985) Conference on Applied Statistics in Ireland	18 40th GIC (Groups in Galway)	19 Brendan Scaife 40th GIC (Groups in Galway)	20 40th GIC (Groups in Galway)	21
22 Stan Broderick (1893-1962) A. C. Dixon (1865 - 1936)	23 Adrian Dunne James Caldwell	24	25 Gar de Barra	26 Helen Purtill Apps4Gaps Announcement SIAM UKIE NUIG	27 John Campbell (1862 - 1924)	28 Tony O'Farrell Robert William Genese (1848-1922)
29 Bank Holiday (NI)	30	31				

Maths for all — Maths Week Ireland

Alicia Stott (née Boole, 1860–1940) was born 8 June in Cork, a daughter of George & Mary Boole, and was educated in London. Though she never attended university, she was a pioneer in the visualisation of 4-dimensional shapes. She published several papers, and coined the term polytope for higher dimensional analogues of polyhedra.
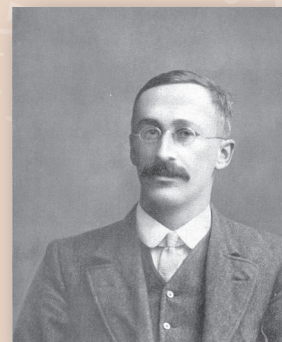
Statistician **William Gosset** (1876-1937) was born 13 June in Canterbury, England, and educated at Oxford. For 35 years he worked at the Guinness brewery in Dublin. He is best remembered for the so-called Student's t-distribution.

Astrophysicist **Luke Drury** was born 22 June in Dublin, and was educated at TCD and at Cambridge. After several years at the Max-Planck Institute in Heidelberg, he has spent the last three decades at the Dublin Institute of Advanced Study.

Muriel Wales (1913-2009) was born Muriel Kennett on 9 June in Belfast. In 1914, her mother moved to Vancouver and soon remarried; henceforth Muriel was known by the last name Wales. She was educated at the University of British Columbia and the University of Toronto. Her 1941 PhD in algebra makes her the first Irish born woman with a doctorate in pure maths. She spent most of the 1940s working in atomic energy, in Toronto and Montreal
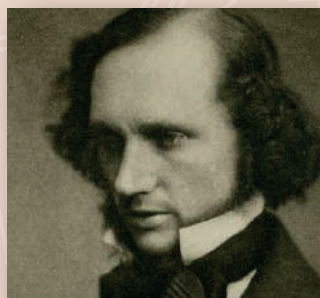
Physicist and engineer **William Thomson** (1824-1907, later known as Lord Kelvin) was born 24 June in Belfast, and was educated at Glasgow and Cambridge. His long career was entirely spent at Glasgow, doing pioneering work on heat, electricity and thermodynamics. He is also remembered for his engineering insights which led to the first successful transatlantic cable.

Rod Gow was born 4 June in Glasgow and brought up in York. He was educated at Cambridge and the University of Liverpool. He worked for over 30 years at UCD, where his primary interests have been in group representation theory, linear algebra and field theory. He is also a noted expert on the history of 19th century mathematics.

1. Mathematician and mathematical biographer Edmund Robertson was born 1 June in St Andrew's Scotland. Over the past two decades, he's written 2800 biographies of Mathematicians for the MacTutor History of maths Website hosted by the University of St. Andrews. MacTutor is a great source of detailed information on Irish mathematicians.

2. The Robert Boyle Summer School celebrates the legacy of Ireland's most famous scientist. Although not a mathematician he made famous the mathematical relationship between pressure and volume of an enclosed gas giving support to the belief that the universe operated on mathematical laws.

JUNE

2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
			1 Edmund Robertson	**2** Alexei Pokrovskii (1948 - 2010) Ralph Henstock (1923 - 2007)	**3**	**4** Rod Gow Donal McCarthy (1908 - 1980)
5 Bank Holiday (ROI)	**6**	**7**	**8** Alicia Boole (1860 - 1940)	**9** Muriel Wales (1913-2009)	**10** John Semple (1904 - 1985)	**11**
12	**13** William Gosset (1876 - 1937)	**14** Sarah Mitchell	**15**	**16**	**17**	**18**
19 Peter Lynch Dublin Institute for Advanced Studies Act signed, 1940	**20**	**21** Summer Solstice Fiacre Ó Cairbre	**22** Luke Drury Robert Boyle Summer School	**23** Robert Boyle Summer School	**24** Derek Crothers Robert Boyle Summer School	**25** Susan Lazarus Samuel Verblunsky (1906 - 1996) Robert Boyle Summer School
26 Victor Meally (1911 - 1986) William Thomson (1824 - 1907)	**27**	**28**	**29** Phelim Boyle	**30**		

Maths Week Ireland

MATHS FOR ALL

Rachel Quinlan was born 25 July in Galway, and was educated at UCG/NUIG and the University of Alberta. She first taught at UCD and then settled at NUIG where she has supervised doctoral theses in algebra. Her interests include linear algebra and its interactions with group theory, combinatorics, and field theory.

Oliver Byrne (1810-1880) was born 31 July in Avoca, Wicklow. He started publishing in Dublin at age 20, but spent most of the rest of his life in England and the USA. He is remembered for a book giving an innovative coloured treatment of Euclid.
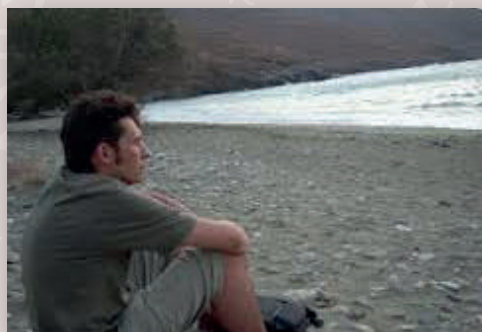
Ivan Todorov was born 14 July in Bulgaria. He was educated at the University of Sofia and the University of Athens, before settling at QUB. His interests are in operator algebras, functional analysis, abstract harmonic analysis, and quantum information theory, and he has supervised many postgraduate students.
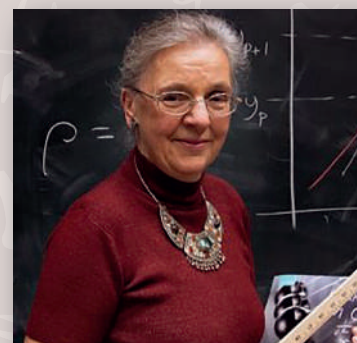
Theoretical physicist **Sara McMurry** was born 30 July in Bedford, and was educated at Bedford College and Oxford. She worked at TCD for four decades, writing a book on quantum mechanics and another entitled "Mathematics As a Language - Understanding and Using Maths." She has also brought maths to young children in India.

Sinead Breen was born 29 July in Wexford. She was educated at DCU and taught at Maynooth before moving to St. Patrick's College, Drumcondra, where she lectures in maths and carries out research in maths education.

Richard M. Timoney was born 17 July in Dublin, and is son of Prof J. R. (Dick) Timoney. He was educated at UCD and at the University of Illinois Urbana-Champaign. His career has been spent at TCD, where he has supervised numerous theses. His research interests include several complex variables and functional analysis.

The International Mathematical Olympiad is the world championships for secondary school maths students. The 58th Olympiad takes place in Brazil 12-23 July 2017. Many participants have gone on to win Fields Medals or have otherwise distinguished careers in mathematics. This includes Maryam Mirzakhani from Iran who was the first female winner of the Fields Medal in 2014. In 2016 the Irish team had an equal number of boys and girls for the first time.

JULY
2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1 Robert Ball (1840 - 1913)	**2** Ross Geoghegan
3 John Kinsella	**4** Edgar Harper (1880 - 1916)	**5**	**6** Ciarán Mac an Bhaird	**7**	**8**	**9**
10	**11** Joseph Larmor (1857 - 1942)	**12** Battle of Boyne (NI)	**13**	**14** Ivan Todorov	**15**	**16**
17 Richard M. Timoney William Donald Davison (1937-2013)	**18**	**19**	**20** Brendan O'Sullivan Paddy Kennedy (1929 - 1966)	**21** Áine Ní Shé	**22** Adrian Raftery Eugene Benilov	**23**
24	**25** Rachel Quinlan	**26**	**27** Richard Ingram (1916-1967)	**28** John Bell (1928 - 1990) Carew Meredith (1904 – 1976)	**29** Sinead Breen Sean Close	**30** Sara McMurry Martin J. Newell (1910-1985)
31 Oliver Byrne (1810 - 1880)						
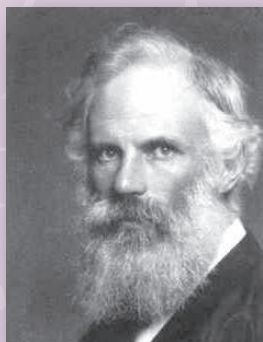
Mathematical physicist **George FitzGerald** (1851-1901) was born 3 August 1851 in Dublin, and his education and career were both at TCD. He was a pioneer in electromagnetic theory, and his name lives on today in the Lorentz–FitzGerald contraction.
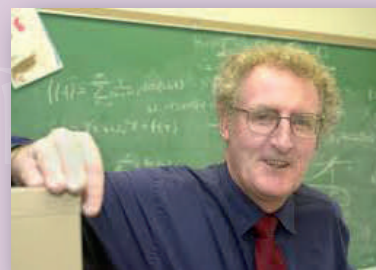
Natalia Kopteva was born 22 August in Moscow, and was educated at Moscow State University. She has taught at the University of Limerick for over a decade, and has co-authored one book. Her area of research is numerical analysis for partial differential equations.

William Rowan Hamilton (1805-1865) was born 4 August in Dublin, and is Ireland's most renowned mathematician and mathematical physicist. He was educated and spent most of his career at TCD. His extensive legacy includes innovations in algebra, mechanics and optics. He is most well known for quaternions, a non-commutative algebraic system.

Mathematical physicist **George Stokes** (1819-1903) was born 13 August in Skreen, Sligo. His education and entire professional life was at Cambridge. His legacy includes Stoke's theorem in multivariable calculus and the Navier-Stokes equations in fluid dynamics.

Theoretical physicist **Erwin Schrödinger** (1887-1961) was born 12 August in Vienna, and was educated there. In 1940, at the invitation of Éamon de Valera, he helped to set up the Dublin Institute for Advanced Studies, where he worked until 1957. He is best remembered for his foundational work in quantum mechanics.

Joe McKenna was born 5 August in Dublin, and was educated at UCD and at the University of Michigan. He has spent the last thirty years at the University of Connecticut, studying nonlinear partial differential equations, especially those relating to periodic flexing in large flexible structures such as bridges and ships. He has supervised many PhDs students, most of them women.

The Weaire-Phelan structure, a complex 3-dimensional structure representing an idealised foam of soap bubbles was discovered by Denis Weaire and Robert Phelan at TCD in 1993. The structure was the inspiration for the Aquatic Centre built for the Bejing Olympics in 2008.

AUGUST 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1	2 Pauline Mellon	3 George Fitzgerald (1851 - 1901)	4 Francis Murnaghan (1893 - 1976) William Rowan Hamilton (1805 - 1865)	5 Joe McKenna	6
7 Bank Holiday (ROI)	8 Annraoi de Paor	9	10	11 John Miller	12 Michael Mackey Erwin Schrödinger (1887 - 1961)	13 George Stokes (1819 - 1903)
14	15	16	17	18	19	20
21	22 Natalia Kopteva Philip Gormley (1910 - 1973)	23	24	25	26 James Booth (1806 - 1878)	27
28 Bank Holiday (NI)	29 Dáibhí Ó Cróinín John Herivel (1918 - 2011)	30	31 IMS AGM IT Sligo			

Maths Week Ireland
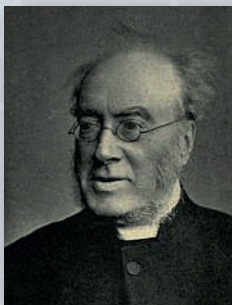
George Salmon (1819-1904) was born 25 September in Dublin, and grew up in Cork. He studied at TCD where he also spent his career, writing numerous popular and influential books on higher level algebra and geometry, some of which appeared in French, German and Italian translation.

Anca Mustata was born in 29 September in Romania, and was educated at Bucharest and at the University of Utah. She is an algebraic geometer working at UCC, and has recently supervised two PhD students there. She is also active in *Maths Circles*.

Patricia Eaton (née Matthews) was born 13 September in Belfast, and was educated at QUB. Switching from topology to teacher education, she has spent her career at Stranmillis, where she has served as head of continuing education.

Tom Carroll was born 21 September in Kildorrery, Cork, and was educated at UCC and the Open University (Milton Keynes). His career has been spent at UCC. His research interests include complex analysis, potential theory, Brownian motion, and financial mathematics. He plays a lead role in the national TEAME maths e-assessment project.

Patrick d'Arcy (1725-1779) was born 27 September in Kiltulla Castle, Galway, and was educated privately in Paris, following which he had a successful career in the French army. He is remembered for his contributions to dynamics, especially angular momentum.
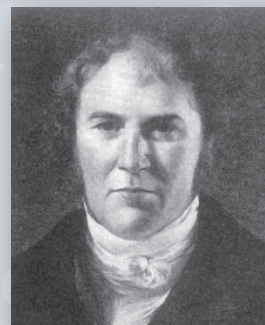
Robert Adrain (1775-1843) was born 30 September in Carrickfergus, Antrim, and is believed to have been self-taught. Following the 1798 rebellion, he moved to the USA, where he was one of the leading lights of academic mathematics in the early 19th century, publishing the method of least squares before Gauss.

Colm Mulcahy was born in Sep in Dublin, and educated at UCD and Cornell. For almost 30 years he has taught at Spelman College in Atlanta, Georgia. He is the creator and curator of the free, online, Annals of Irish Mathematics and Mathematicians, which he sees as an ideal place to share freely information on the rich legacy of maths both in Ireland and due to Irish people overseas.

SEPTEMBER 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				1 Mary Mulvihill (1959 - 2015) IMS AGM IT Sligo	**2** Joseph Spelman (1932-2016)	**3**
4 Annie McElderry (1874 - 1968)	**5**	**6**	**7**	**8**	**9**	**10**
11	**12**	**13** Patricia Eaton	**14**	**15**	**16** Martin L. Newell	**17**
18	**19**	**20**	**21** Tom Carroll	**22** Autumn Equinox Ted Hurley	**23** Frontiers of Physics	**24**
25 George Salmon (1819 - 1904)	**26**	**27** Patrick d'Arcy (1725 - 1779)	**28** George Allman (1824 - 1904)	**29** Anca Mustata	**30** Robert Adrain (1775 - 1843)	

Physicist **Ernest Walton** (1903-1995) was born 6 October in Dungarvan, Waterford, and his family moved around Ireland a great deal when he was young. He studied maths and physics at TCD and Cambridge, and his "splitting the atom" with John Cockroft in the early 1930s lead to the two men later sharing a Nobel prize. He lectured at TCD for 4 decades.
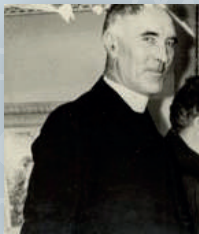
Pádraig de Brún (1889-1960) was born 13 October in Grangemockler, Tipperary, and was educated at UCD and the Sorbonne. He spent three decades at St. Patrick's College, Maynooth, before becoming president of UCG. A priest and a classics and Irish scholar, as well as a mathematician, he wrote the famous poem "Thánaig Long ó Valparaiso".
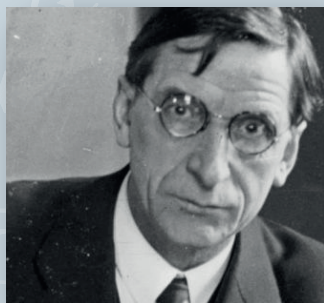
Éamon de Valera (1882-1975) was born 14 October in New York, and he grew up in Bruree, Limerick. He earned a maths degree in Dublin from the Royal University of Ireland, and then taught at various schools before turning to nationalist activities, and ultimately entering a long career in politics. In 1940, as Taoiseach, he initiated the foundation of the Dublin Institute for Advanced Studies.

Mathematical physicist **Arthur Conway** (1875-1950) was born 2 October in Wexford, and was educated at the Royal University of Ireland. He also studied at Oxford. He worked for almost 50 years at UCD, rising to the rank of president. In 1915, he authored one of the very first ever books on relativity.
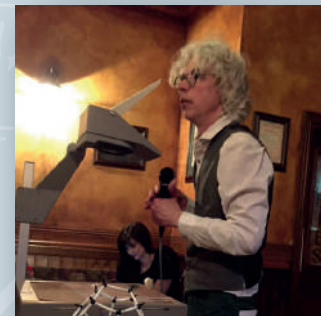
Physicist **Stefan Hutzler** was born 1 October in Regensburg, Germany, and was educated there and at TCD. His career to date has been spent at TCD as part of the foams and complex systems group. He also applies statistical physics to financial risk analysis, and has supervised numerous theses.

Astronomer **Derek McNally** was born 28 October in Belfast, and was educated at QUB and at Royal Holloway. His career was spent at the University of London, where he served as director of the observatory, and at the University of Hertfordshire. His publications include the book *Positional Astronomy*.
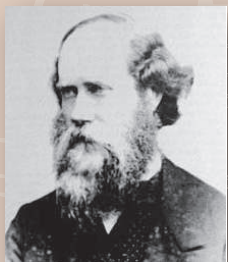
1. Maths Week Ireland is the world's biggest festival celebrating mathematics and its applications. It is a partnership of over 50 groups across the island interested in promoting maths. It takes place every October on the week incorporating Hamilton Day.

2. The Hamilton Walk takes place on 16 October commemorating William Rowan Hamilton's walk from Dunsink Observatory to Broom Bridge and his famous discovery of quaternions. It is organised by Fiacre O'Cairbre of Maynooth University.

3. The Royal Irish Academy commemorates its former president William Rowan Hamilton with the distinguished Hamilton Lecture also on 16 October.

4. Martin Gardner "The best friend mathematics ever had" was an American popular maths and science writer. Each year on or around 21 October "Celebration of Mind" activities take place to honour his legacy.

OCTOBER 2017

| Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
						1 Stefan Hutzler Alfred O'Rahilly (1884 - 1969)
2 Arthur Conway (1875 - 1950)	**3** Maurice O'Reilly	**4** Joe Travers Mark Walsh	**5**	**6** Ernest Walton (1903 - 1995)	**7** Muiris O Sirium Anna Hanna	**8** Brendan Murphy
9	**10** Global Math Project	**11**	**12**	**13** Pádraig de Brún (1889 - 1960)	**14** Eabhnat Ní Fhloinn Éamon de Valera (1882 - 1975) Maths Week	**15** Munster Maths and Science Family Fair Maths Week
16 Philip Kumar Maini RIA Hamilton Lecture Hamilton Walk Maths Week	**17** Denis Weaire Maths Week	**18** Maths Week	**19** Olivia Fitzmaurice Maths Week	**20** Maths Week	**21** Martin Gardner (1914 - 2010) Celebration of Mind IMTA MathsFest & AGM UCC Maths Week	**22** Maths Week
23	**24**	**25**	**26**	**27**	**28** Derek McNally	**29** Summertime Ends
30 Hallowe'en Bank Holiday (ROI)	**31**					

Maths Week Ireland
MATHS FOR ALL

Henry Smith (1826-1883) was born 2 November in Dublin, and was brought up in England, being educated at both the Sorbonne and Oxford. His career was spent at Oxford, but he also did administrative work in London. He's best remembered for results in number theory, such as the fact that each integer is a sum of five squares, and he also worked in matrix theory and integration theory.
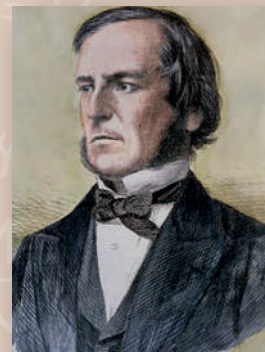
Mathematician and logician **George Boole** (1815-1864) was born 2 November in Lincoln. Despite being largely self-taught, in 1849 secured a job as Professor of mathematics at Queen's College, Cork. His legacy includes Boolean algebra, which laid the foundations of the information age. His daughter Alicia also made contributions to mathematics.

David Wraith was born in November in Sheffield, England, and was educated at Cambridge and Notre Dame. His career to date has been spent at Maynooth. He recently received a National Expert Teaching Award and co-authored the book Moduli Spaces of Riemannian Metrics.
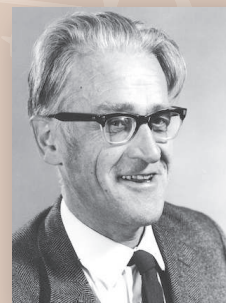
Mathematical physicist **David Bates** (1916-1994) was born 16 November in Omagh, Tyrone. He was educated at QUB and University College London, and later taught at both institutions. He worked in atmospheric and molecular physics, and was a founding member of the Alliance Party of Northern Ireland.

Writer **Bram Stoker** (1847-1912) was born 8 November in Dublin. He earned a BA in mathematics from TCD before pursuing a long career in London theatre management. His 1897 Gothic horror novel *Dracula* made him world famous.

Gordon Lessells was born 9 Nov in Fraserburgh, Aberdeenshire, Scotland, and was educated at Aberdeen and Oxford. He has been on the staff at University of Limerick for 35 years, having been at UCC before that, and has long played a leadership role in the Irish Mathematical Olympiad.

1. The Irish Applied Mathematics Teachers Association (IAMTA) was formed in 2006 to represent the views of applied maths teachers. The IAMTA is a small vibrant community of like-minded teachers all of whom wish to enhance their own understanding of the subject as well as the learning experience of their pupils. It holds an annual meeting each November.

2. In November 2016 it was announced that a team lead by Kevin Moroney & William Lee at the University of Limerick had successfully applied maths to the issue of making the perfect cup of coffee. They found that the size of the coffee grain is critical!
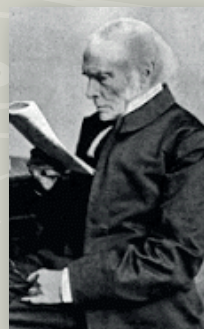
NOVEMBER 2017

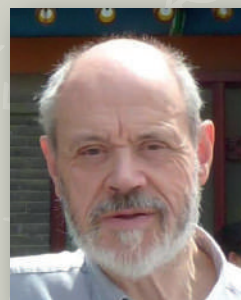| Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	2 Henry Smith (1826 - 1883) George Boole (1815 - 1864)	3	4	5
6 Charles Graves (1812 - 1899)	7	8 Bram Stoker (1847 - 1912)	9 Gordon Lessells	10	11	12 **Rememberence Sunday** Gerard Murphy (1948 - 2006) Science Week (ROI)
13 James Thomson (1786 - 1849) Science Week (ROI)	14 Science Week (ROI)	15 Science Week (ROI)	16 Catherine Comiskey Science Week (ROI)	17 Science Week (ROI)	18 David Bates (1916 - 1994) Science Week (ROI)	19 Matthew F. McCarthy Albert McConnell (1903 - 1993) Science Week (ROI)
20	21	22	23	24	25 Irish Applied Maths Teachers Association (IAMTA) founded 2006	26
27	28	29 Brendan Steen (1921 - 2015)	30			

Maths Week Ireland
MATHS FOR ALL
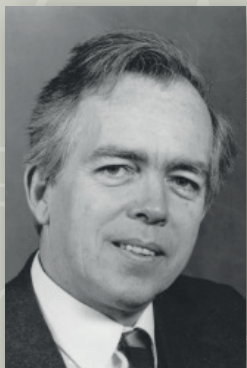
James Taylor was born 13 December in Carrickfergus, Antrim, and was educated at QUB and Cambridge. His career was spent at Birmingham, Westfield College, Liverpool, and the University of Virginia. His expertise includes Brownian motion, "small sets" and fractals. He has three books to his name, as well as seven joint publications with Erdős. His son Charles is also a mathematician.

Tony Wickstead was born 13 December in Plymouth, and was educated at Cambridge and the University of London. He recently retired after four decades on the staff at QUB, where he supervised numerous doctorates. His research concerns Banach lattices and linear operators on them.

John Graves (1806-1870) was born 4 December in Dublin. He studied science and classics at TCD, as a classmate and friend of Hamilton, and then pursued law in London. Throughout, he maintained a parallel career as a mathematician and avid collector of maths books and pamphlets. One of his notable discoveries, from late 1843, was octonions, an extension of Hamilton's quaternions.

Andrew Young (1919-1992) was born 16 December in Edentown, Lancashire, England, grew up in Scotland, and was educated at St Andrews and the University of Liverpool. After 20 years on the staff at Liverpool, he moved to Coleraine, Londonderry. There he worked for 15 years and supervised over 20 PhD theses in numerical analysis.

Applied mathematician **Michael Carroll** (1936-2016) was born 8 December in Urlingford, Kilkenny. He studied mechanical engineering at UCG and Brown, and spent his career at Berkeley and Rice University, also serving as dean. His interests were in mechanics, electromagnetism, and acoustics. He was also a playwright, and had crosswords published in the *New York Times*.

Theoretical physicist and applied mathematician **Benjamin Moiseiwitsch** (1927-2016) was born 7 December in London, and was educated at the University of London. He spent four decades on the staff at QUB, where be supervised numerous theses and wrote four books. He also served as dean.

Newgrange overlooking a bend in the river Boyne in Meath is Ireland's most iconic megalithic tomb. The tomb was designed and built with a keen mathematical and engineering eye over 5,000 years ago. Around the Winter Solstice each year the rising sun casts a beam of light that the creeps along the passage perfectly illuminating the central chamber.

DECEMBER 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				1 Raymond Flood	**2**	**3** Declan Quinn James Flavin (1936 - 2012) John Donaghey (1878-1949)
4 John Graves (1806-1870)	**5** Tom Laffey	**6**	**7** Brendan Guilfoyle Peter McPolin Benjamin Moiseiwitsch (1927-2016) Paddy Quinlan (1919-2001)	**8** Michael Carroll (1936-2016)	**9**	**10**
11 David Madigan Allan Isaac (1936-2013)	**12**	**13** James Taylor Tony Wickstead William McCrea (1904 - 1999) Eoghan McKenna (1891 - 1967)	**14**	**15**	**16** Anthony Cronin Andrew Young (1919 - 1992)	**17** Maurice Kennedy (1924 - 1994)
18	**19**	**20** William Snow Burnside (1839-1920)	**21** Winter Solstice Samuel Haughton (1821 - 1897)	**22**	**23**	**24**
25 Christmas Day Tom Sherry Patrick Dineen (1840 - 1934)	**26** Boxing Day/ St. Stephen's Day	**27** David Callan	**28**	**29**	**30**	**31** New Year's Eve

DID YOU KNOW? *(you would if you followed **@IrishMathsFacts** on Twitter!)*

1. The Poisson distribution is seen in action when studying the number of yeast cells used when brewing Guinness, as shown by William Gosset (1876-1937).

2. Irish born and bred Sophie Bryant (1850-1922) was the first woman to have a paper published in the Proceedings of the London Mathematical Society.

3. The Edgeworth series in statistics is named after Longfordman Francis Ysidro Edgeworth (1845-1926).

4. The legacy of Dubliner William Rowan Hamilton (1805-1865) not only includes innovations in mechanics, optics, and algebra (e.g., quaternions), but also the icosian game.

5. The Geary–Khamis dollar, more commonly known as the international dollar, was proposed by Dublin statistician Roy Geary (1896-1983).

6. Tyrone's James MacCullagh (1809-1847) is credited with introducing what is now called the curl of a vector field.

7. Bram Stoker (1847-1912) from Dublin studied mathematics before pursuing a career in theatre management and later writing the Gothic horror novel *Dracula*.

8. Lorentz–FitzGerald contraction is named after Dublin mathematical physicist George FitzGerald (1851-1901).

9. Lisburn's John Edward Campbell (1862-1924) is remembered for his 1897 discovery of the Baker–Campbell–Hausdorff formula

10. Annraoi de Paor from Waterford has published the book *An Illustrated Collection of Limericks for Engineers and Physicists*.

11. Statistician Adrian Raftery from Dublin has supervised over 25 PhDs and was identified as the world's most cited researcher in mathematics for the period 1995-2005.

12. A statistical analysis by mathematician, geophysicist and social activist Gerry Gardner (1926-2009) from Offaly was used in a US Supreme Court decision.

13. Siobhan Vernon (1932-2002) from Cork is believed to be the first Irish woman to earn a doctorate in pure mathematics in Ireland.

14. Matthew O'Brien (1814–1855) from Clare is credited with anticipating many results of classic vector analysis.

15. George Boole's daughter Alicia Stott (1860–1940) from Cork was a pioneer in the visualisation of 4-dimensional shapes, and she coined the term polytope.

16. Iggy McGovern from Belfast has published the book *A Mystic Dream of 4*, a sonnet sequence based on the life of William Rowan Hamilton.

17. Mathematical physicist Sheila Tinney (1918-2010) from Galway was the first Irish woman to get a doctorate in mathematical science.

18. In 1978, Derryman John Toland proved Stokes' conjecture on the existence of gravity waves of maximum height on deep water.

19. David Attis has published the book *Mathematics and the Making of Modern Ireland: Trinity College Dublin from Cromwell to the Celtic Tiger*.

20. Shortly before he died, William Rowan Hamilton (1805-1865) was elected the first foreign member of the National Academy of Sciences of the USA.

21. Arthur Conway (1875-1950) from Wexford, who lectured at UCD for over 40 years, wrote one of the very first books on the mathematics of relativity, in 1915.

22. A light hearted song & video celebrating the life and importance of George Boole has had thousands of views. Find "*The George Boole Song*" online.

23. Meterologist and mathematician Peter Lynch has published a new book called *That's Maths*, based on his long-running blog and *Irish Times* column.

24. The Undergraduate Awards 2016 Medal featured pioneering mathematical physicist Sheila Tinney (1918-2010) in recognition of her trail-blazing career. (photo front cover credit: Manus Dennison)

Did you know that Maths Week Ireland is the biggest maths festival in the world with over 300,000 engaged in maths activities in 2016?

You can get involved too – contact mathsweek@wit.ie

JANUARY 2018

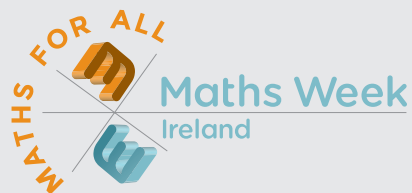| Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Maths Week Ireland

MATHS FOR ALL

This calendar is a product of a wider project to celebrate Irish Mathematics and Mathematicians both bygone and modern: illustrating the proud historical and strong contemporary contribution to the world of mathematics and consequently to the world at large. The project includes the Annals of Irish Mathematics, the Atlas of Irish Mathematics and documentation of Irish Mathematical Books.

The project can be found on www.mathsireland.ie and followed on twitter @IrishMathsFacts.
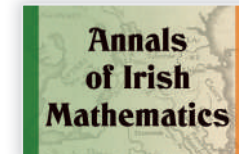
Maths Week Ireland was established in 2006 to promote mathematics and its applications across the island of Ireland. It is coordinated by Calmast STEM Outreach centre at Waterford Institute of Technology. Taking place every October in the week including the 16th, Hamilton Day, it has grown to be the biggest festival of its kind in the world with over 300,000 participating in 2016. It is a partnership of universities, institutes of technology, teacher training colleges, professional bodies, visitor centres and other groups concerned with mathematics.

More information can be found at www.mathsweek.ie or follow on twitter @mathsweek