

Exact Sciences meet Poetry: 'William Rowan Hamilton's Mystic Dream of 4'

Iggy McGovern

30.09.2016
15.00h/ FCUL, Room 8.2.12
18.00h/ Fábrica Braço de Prata

Physicist [Iggy McGovern](#) worked mainly in the area of Surface Science (now Nanoscience) with a particular expertise in synchrotron radiation techniques, such as soft x-ray photoelectron spectroscopy, surface extended x-ray absorption and surface x-ray standing waves. His career spanned the development of these techniques over four decades from the parasitic use of the NINA synchrotron to the 4th generation dedicated source BESSY II; he is the co-author of 100+ papers on semiconductor surface and adsorption systems. Much of this work involved pan-European collaborations, largely supported by funding from the European Community and its antecedents.

Graduated and PhD in Physics from Queen's University, postdoc at the Universities of Pennsylvania and Wisconsin. In 1979 he is engaged by the Physics Department of Trinity College Dublin as a Professor and later as Course Director of Advanced Materials, Chairman of the Institute of Physics in Ireland and Chairperson of the Thin Films & Surfaces Group of the Institute of Physics. He has also been Alexander von Humboldt Fellow at the Fritz-Haber-Institut, Visiting Fellow at Magdalen College, Oxford and Distinguished Fellow at the Institute of Advanced Studies in La Trobe University, Melbourne. Retires in 2013 as Fellow Emeritus.

Poet [Iggy McGovern](#) began writing in the mid-1990s and published his first full collection 'The King of Suburbia' (Dedalus Press) in 2005; a second collection 'Safe House' (Dedalus Press) followed in 2010. In 2012 he edited the anthology '20|12: Twenty Irish Poets Respond to Science in Twelve Lines' (Dedalus/Quaternia Press). His most recent publication is 'A Mystic Dream of 4' (Quaternia Press 2013), a poetic biography of the 19th century Irish mathematician & poet, William Rowan Hamilton. His poetry plays with form & rhyme; it also reflects his career as a physicist. Many (20+) poems from his collections have been included in anthologies and he has presented his poetry at writers' festivals in Ireland, the United Kingdom, Europe, North America and Australasia. 'A Mystic Dream of 4' has been developed as a quasi-theatrical presentation and delivered in a number of international venues. His work was awarded several prizes: Glen Dimplex New Writers Award for Poetry 2006, Hennessy Literary Award, Sunday Tribune New Irish Writing 1996 and McCrea Literary Award for 1993/94, University of Ulster at Coleraine.

On the 30th of September 2016 the CFCUL has the pleasure to host and welcome Iggy McGovern for an informal round table to learn more about his work. Iggy will not come alone, he brings with him a book of poems that tells the story of another Physicist, Mathematician, Philosopher and Poet who had a dream that changed science: The Quaternions.

'William Rowan Hamilton's Mystic Dream of 4'.

$$i^2 = j^2 = k^2 = ijk = -1$$

(The formula for quaternions scratched by William Rowan Hamilton on Broombridge, Cabra, 16 October 1843.)

“ONE SMALL SCRATCH FOR A MAN, ONE GIANT LEAP FOR MATHEMATICS”

“There are few books which straddle mathematics and poetry, but the book ‘A mystic dream of 4’ by Iggy McGovern’ is one of them. It tells Hamilton’s story voiced by the people who knew him, and from the life as told in sonnets emerges a less super and more human character. “

Extracted and adapted from the book review in The Mathematical Gazette vol. 99, nr. 546, 558-561

Hamilton’s discovery of his quaternions was in line with his poetic temperament. He saw mathematics and poetry as a joint enterprise, and of his journey from ‘threeness’ to ‘fourness’, he wrote:

‘And how the One in Time, of Space the Three
Might, in the Chain of Symbol, girdled be:
And when my eager and reverted ear
Caught some faint echoes of an ancient strain,
Some shadowy outlines of old thoughts sublime,
Gently he smiled to see, revived again,
In later age, and Occidental clime,
A dimly traced Pythagorean lore,
A westward floating, mystic dream of FOUR.

In the 1970s Quaternions once again appeared on the active mathematical stage with the rise of computer graphics and the introduction of the all-enveloping geometric algebra. When quaternions were first discovered, their ability to deal with rotations in space was quickly realized, and it is this key property which makes them useful today.

The false thesis that the arts encourage imagination while science is bereft of it was also propounded by Samuel Taylor Coleridge, who saw mathematics as a discipline where ‘reason is feasted, but imagination is starved.’ Hamilton is an obvious counterexample to this thesis.

What laws of Nature bring science and Poetry together?

What brought Iggy McGovern Professor in Physics and Scientist in Material Science to write verse?

This and much more will be learned on Friday and you are all invited to join us on this journey!