



*Cormac O'Raifeartaigh*

## Communicating science

Cormac's path to teaching the cosmos

A first approach to science, maybe the most basic and fundamental, relates to people primarily concerned about understanding the universe, wondering about surrounding nature and answering the big questions about the universe's history, future and our place in it. This has been Cormac O'Raifeartaigh's constant interest. "I like the imagination part. It's hard to believe most of the atom is empty space, or that a telescope looks back in time as well as out in distance. It's even harder to believe that time and space are dynamic, not a fixed stage on which life is played out", he says.

### Beginnings

Cormac has dedicated most his student years and professional life to science. He explains how it all started. "I was far better at languages and classical music than science, but I found science fascinating. I started in medicine in University College Dublin (UCD),

hated it and switched to science after a year". He then opted for physics. "Physics in college seemed more about core ideas than the other sciences. I liked the out-there stuff that forced you to think, like relativity and quantum theory. I never thought about a future career."

But Cormac's passion for science was always more about theories and ideas than experiments. "I did a PhD in experimental physics at Trinity College Dublin (TCD), using magnetic resonance techniques to study the quantum behaviour of electrons in solids. I loved the college, but the work was hard and sometimes dull. I'm definitely not the most patient of experimentalists! I then did a postdoc in the University of Aarhus. Again, I loved Denmark, but didn't really enjoy the labwork that much". He explains: "I sometimes feel that the discoveries of science are a lot more interesting than the getting of those results, due to the specialisation required in order to uncover something new".

### Teaching and writing

Being now a lecturer in physics at Waterford Institute of Technology, Cormac found what he was looking for – thinking, talking and writing about core science outside the bench. "I now teach simple introductory courses in both cosmology and particle physics, and that's great fun", he says. "On a typical day I'll give two or three lectures in the morning, with a practical or a meeting in the early afternoon. I then retire to the office from 4 to 7 pm where the real work is done. I used to spend this time writing up research results, but I've recently taken a break from technical research in order to do some writing about science."

### Freedom and stimulation

Cormac is happy with his role, and enjoys the freedom that goes with it. "What every academic treasures is that the balance of teaching, research and outreach is to some extent self-determined", he says. "More generally, I just like being in a third-level college - I love the atmosphere, and the fact there is always something of interest going on somewhere". Though he was lucky enough to get the first academic position he applied for when he came back to Ireland, he recognises that the academic career path is difficult. "A four- or five-year PhD followed by a few years postdoctoral research is not to be sneezed at. I don't know any shortcuts."

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