

Communicating STEM

FOURTH ANNUAL COMMUNICATING SCIENCE, TECHNOLOGY,
ENGINEERING, MATHS (STEM) CONFERENCE.



THEME: ENGAGEMENT IN STEM OUTREACH – MAKING IT HAPPEN!



VENUE: ARMAGH PLANETARIUM, COLLEGE HILL, ARMAGH BT61 9DB

DATE: THURSDAY, MAY 13, 2010

Institutional Biographies 2010

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Discover Science & Engineering

Discover Science & Engineering (DSE) is the national integrated awareness programme that aims to increase interest in science, technology, engineering and maths among students, teachers and members of the public. DSE is managed by Forfás on behalf of the Office of Science and Technology at the Department of Enterprise, Trade and Employment.

DSE's mission is to contribute to Ireland's continued growth and development as a society that has an active and informed interest and involvement in science, engineering and technology.

Its overall objectives are to increase the numbers of students studying the physical sciences, promote a positive attitude to careers in science, engineering maths and technology, and to foster a greater understanding of science and its value to Irish society.

Engineers Ireland – STEPS to engineering

Engineers Ireland is one of the largest and oldest representative bodies on the island of Ireland, with a membership of engineers which now totals over 24,000. The membership incorporates all disciplines of the engineering profession in Ireland across industry, the public service, semi-state organisations and academic institutions. STEPS to engineering was established in 2000 to encourage primary and post-primary students to explore the world of science and engineering and to consider engineering as a possible career choice. This programme is managed by Engineers Ireland and is supported by the Department of Education & Science, Forfás, FÁS and a number of major engineering employers. The value of the programme has been formally recognised by Government and is a key element of the National Discover Science & Engineering programme.

The National University of Ireland, Galway

The National University of Ireland, Galway, through initiatives and centres such as the Digital Enterprise Research Unit (DERI), the Environmental Change Institute, Applied Optics, and the Regenerative Medicine Institute (REMEDI), actively supports science outreach and communication in Ireland. The idea of an all-island annual conference on science outreach and communication arose out of the interdisciplinary research collaboration between the Department of Marketing (Dr Christine Domegan), the School of Education (Dr Kevin Davison & Dr Veronica McCauley), and the Centre for Innovation and Structural Change (CISC) (Dr Aidan Kane). NUI Galway is committed to working collaboratively with a wide range of stakeholders, from schools and universities to the private sector, and government level policy makers, in order to strengthen science in society and, in turn, Ireland's knowledge economy.

Communicating STEM Conference 2010

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The theme of the conference is 'Engagement in STEM Outreach – Making it Happen!', which will focus on the strategies for the successful delivery of science outreach by illustrating how some of the 'Top 10 tips for science communication' developed during the 2009 conference can be implemented. A professionally facilitated session will take place as part of the conference. The aim of this discussion will be to develop a 'white paper' detailing the top strategies for effective science engagement.

The conference will provide an ideal platform for those working in science communication to share experiences, problems and solutions with key industry professionals from Ireland, the United Kingdom and throughout Europe.

Speaker Biographies 2010

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Dr Alan Blair is the STEM Adviser to the Association of Northern Ireland Colleges (ANIC) and, from 2007 to 2009, managed the STEM Review in Northern Ireland. Alan is also a past board member of MATRIX, the Northern Ireland Science Industry Panel, and a Fellow of the Institution of Engineering and Technology.



Andrea Bandelli is an advisor for various science education projects and institutions in Europe, the USA, and for the national research foundation of South Africa. His academic interest is in the role of the public in the governance of science centres and museums.



Brendan Smith is Education Outreach Officer for the Digital Enterprise Research Institute (DERI) at NUI Galway, recognised as the world's largest institute involved in developing the next generation of the World Wide Web known as the 'Semantic Web'. His work involves implementing a series of Internet courses and projects for schools and community groups aimed at allowing participants to expand their educational opportunities, upgrade their technology skills and improve the quality of their everyday lives through the use of state-of-the-art web tools.



Robert Hill is Director of the Northern Ireland Space Office, based at the Armagh Planetarium. He has spearheaded the campaign to bring astronomy to pupils through the newly revised curriculum in the region. He is currently co-ordinating the creation of thematic units with regional government and the Council for Curriculum, Examinations and Assessment, to align the latest astronomy-related resources to accredited and integrated education.



Fiachra Ó Marcaigh has worked in digital media for the last 10 years, helping AMAS clients to develop and implement their Internet strategies. Increasingly, this involves a range of Web 2.0 channels, as well as web and email. His previous professional experience was in traditional media, including *The Irish Times*.



Dr Martin Hendry is Senior Lecturer and Director of Teaching in the Department of Physics and Astronomy at Glasgow University. He is a passionate enthusiast for popular astronomy and science outreach, and regularly lectures to schools, astronomy societies, museums and science festivals across the world.



Prof. Patrick Cunningham is Chief Scientific Adviser to the Irish Government and Professor of Animal Genetics in Trinity College Dublin. He was formerly Deputy Director (Research) in the Irish National Agriculture and Food Research Institute (1980 - 1988), visiting Professor at the Economic Development Institute, World Bank (1988), and Director of the Animal Production and Health Division, Food & Agriculture Organisation of the UN, Rome (1990-1993).



Dr Sally Montgomery OBE is Chief Executive of W5 in Belfast. Dr Montgomery holds a BSc and PhD in Zoology and is a trained and experienced educator teaching in secondary schools and FE colleges, and was Head of Education at the Ulster Museum. Sally was the Project Director to create W5 and has been the Chief Executive since it opened in 2001.

Programme of Events

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Venue: Armagh Planetarium, College Hill, Armagh BT61 9DB

Date: Thursday, May 13, 2010

Engagement in STEM outreach – Making it Happen!

9:00am	Welcome <i>Dr Tom Mason, Director, Armagh Planetarium</i>
9:05am	Introduction <i>Caitriona Geraghty, STEPS to Engineering Executive, Engineers Ireland</i>
9:15am	Keynote Speaker Sustainable engagement: maximising the relevancy of science outreach <i>Andrea Bandelli, specialist in informal learning and science communications. Director of European project DECIDE</i>
9:55am	Working with technology to achieve effective science communication <i>Brendan Smith, Education Outreach Officer for DERI at NUI Galway</i>
10:25am	Questions & answers
10:40am	Tea & coffee
11:00am	The value of working with Star Trek technology to promote science <i>Mike McKay, European Space Agency's Senior Advisor on Mission Operations</i>
11:30am	Reaching out: strategies to empower students to take up science-related careers. What matters – flash tricks or reality and vision? <i>Dr Sally Montgomery, Chief Executive, WS Belfast</i>
12:00noon	Did we really land on the moon? Practical science projects that explore 'moon hoax' conspiracy theories <i>Dr Martin Hendry, Senior Lecturer in Astronomy and Director of Learning and Teaching, University of Glasgow</i>
12:30pm	Questions & answers
12:45pm	Buffet lunch
1:45pm	TBC <i>Irvine Richardson, Northern Ireland Board Inspectorate</i>
2:05pm	New channels bring new challenges – using new media channels for effective science communication <i>Fiachra Ó Marcaigh, Director AMAS and senior consultant</i>
2:35pm	Questions & answers
2:50pm	Tea & coffee
3:05pm	Building the knowledge economy <i>Prof. Patrick Cunningham, Chief Scientific Adviser to the Irish Government</i>
3:30pm	From policy to action – effectively engaging stakeholders in communicating STEM. A consideration of key stakeholders, their roles and interrelationships <i>Dr Alan Blair, Programme Manager of the STEM review in Northern Ireland</i>
3:50pm	Facilitated session – the development of top strategies for effective science communication <i>Facilitated by Robert Hill, Director Northern Ireland Space Office</i>
4:55pm	Close
5:00pm	Tea/coffee and light refreshments
6:00pm	Special post-conference show hosted by the staff of Armagh Planetarium – <i>We are Astronomers!</i>

14/05/2010 OPEN MORNING

(9:30-12:00) – information session and tour of Armagh Planetarium

This information session is open to all registered delegates who wish to attend.