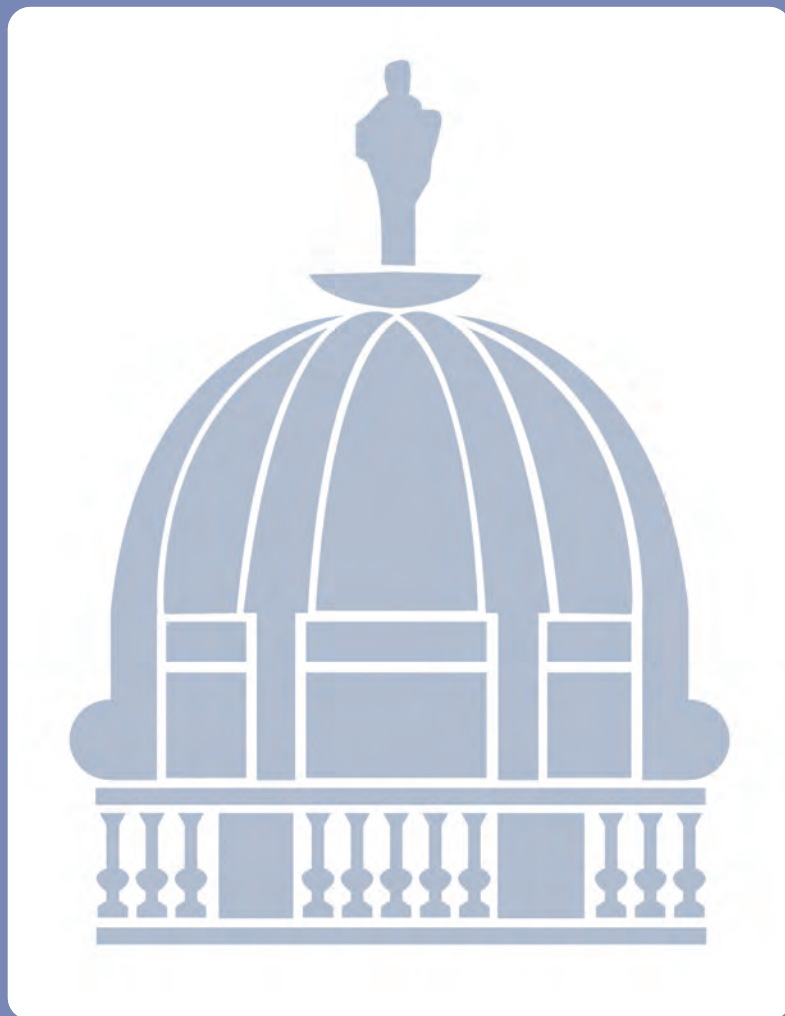


THE ROYAL
SOCIETY
OF EDINBURGH

LAUNCH
OF
THE RSE
YOUNG ACADEMY OF SCOTLAND



TUESDAY 29 NOVEMBER 2011

The RSE Young Academy of Scotland

29 November 2011

LAUNCH PROGRAMME

11.45–12.00	Registration (RSE Reception Hall)
12.15–12.45	Welcome (Upper Gallery) Professor Alice Brown , General Secretary of the RSE Sir John Arbuthnott , President of the RSE Dr Martin Parker , School of Music, University of Edinburgh
12.45–13.45	Lunch (Wellcome West)
13.45–14.00	Break
14.00–14.30	<i>Major Challenges: Radical Solutions</i> (Wellcome East) Kenneth Roy – Chair Shami Chakrabarti – <i>The Future of Society</i> Professor Steve Jones – <i>Where Will Science Take Us?</i>
14.30–16.00	Debate facilitated by Kenneth Roy
16.00–16.15	Vote on logo for the Young Academy
16.15–16.30	Break
16.30	Reception (Wellcome East and West)
17.00	Professor Alice Brown Sir John Arbuthnott Professor Anne Glover
18.00	Reception ends

Welcome by Sir John Arbuthnott, The President of the Royal Society of Edinburgh



It is my great pleasure to congratulate you all on being appointed as the first cohort of members of The RSE Young Academy of Scotland. The Young Academy is a unique and new development and today's launch event marks this exciting and historic initiative.

Young Academies have developed in a number of countries to fill a gap between their influential national academies and their distinguished Fellows, and the young, rising stars that represent the future of each nation. They provide a platform for the Young Academy members to have effective interactions with society and policy makers.

The RSE's vision is that the Young Academy will bring together the best of Scotland's emerging scholars and professionals to provide a distinctive and influential voice that will be central to the future leadership and vitality of Scottish society.

It is your enthusiasm and drive, underpinned by support from the RSE, that will ensure that this vision is realised and that the Young Academy will make a significant impact. Take this opportunity to make a difference. I very much look forward to seeing how the Young Academy evolves and develops over the next few years.

Welcome by Professor Alice Brown, General Secretary of the Royal Society of Edinburgh



As the new General Secretary of the Royal Society of Edinburgh, I would like to add my congratulations to those of Sir John. I have moved into this post at a fascinating time and I am very much looking forward to working with you all over the coming years.

I would like to take this opportunity to record my thanks to those who have worked tirelessly to get The RSE Young Academy of Scotland from an initial idea to where we are today – launching the first Young Academy in the UK.

Professor Geoffrey Boulton, my predecessor as General Secretary, and Professor Peter Holmes, who was until recently the Society's Fellowship Secretary, have been central to the development of the Young Academy. Under the expert leadership of Lord Wilson, they worked to gain the support of the RSE Fellowship and Council for the vision that has become The RSE Young Academy of Scotland.

The RSE Young Academy of Scotland is a truly interdisciplinary forum which we hope will harness your talents in new and stimulating ways, to address the big questions facing society today and in the future. The challenge for you all is to ensure that the voice of the Young Academy is heard and that it has impact and influence in Scotland and beyond.

I wish you every success in taking forward this new venture.

THE SPEAKERS

Shami Chakrabarti

Shami Chakrabarti has been Director of Liberty (The National Council for Civil Liberties) since September 2003. Shami first joined Liberty as In-House Counsel on 10 September 2001. She became heavily involved in its engagement with the "War on Terror" and with the defence and promotion of human rights values in Parliament, the Courts and wider society.

A Barrister by background, she was called to the Bar in 1994 and worked as a lawyer in the Home Office from 1996 until 2001 for Governments of both persuasions.

Since becoming Liberty's Director she has written, spoken and broadcast widely on the importance of the post-WW2 human rights framework as an essential component of democratic society.

She is Chancellor of Oxford Brookes University, a Governor of the British Film Institute, and a Visiting Fellow of Nuffield College, Oxford, in addition to being a Master of the Bench of Middle Temple. She was recently selected to be one of the six independent panel members investigating phone hacking as part of Lord Leveson's enquiry.



Professor Anne Glover

Professor Anne Glover was appointed Chief Scientific Adviser for Scotland on 1 August 2006. Her role is to further enhance Scotland's reputation as a science nation. Anne holds a Personal Chair of Molecular and Cell Biology at the University of Aberdeen. She is an elected Fellow of the Royal Society of Edinburgh, a member of the Natural Environment Research Council, and a Fellow of the American Academy of Microbiology.

Most of her academic career has been spent at the University of Aberdeen, where she has an active research group pursuing a variety of areas from microbial diversity to the development and application of whole cell biosensors (biological sensors) for environmental monitoring and investigating how organisms respond to stress at a cellular level.



Professor Steve Jones

Steve Jones is Emeritus Professor of Genetics at University College London, where he has worked for nearly forty years. He has a BSc, a PhD and a DSc from the University of Edinburgh, and honorary degrees from a variety of other institutions. He is one of the world's top half-dozen experts on the population genetics of land snails (and the other five agree). In recent years he has been much involved in the public understand of science, and has lectured directly to more than two hundred thousand school students. His books include *The Language of the Genes* (which emerged from the BBC Reith Lectures of the same title); *In the Blood* (a spin-off from a television series); and, over the past few years, several volumes that attempt to update the work of Charles Darwin for the general reader. The most recent, *Darwin's Island*, was published in the bicentennial year of 2009. He is now trying (with mixed success) to rewrite the Bible as a scientific textbook.



Dr Martin Parker

A composer, improviser and soloist with laptop, Martin's work focuses on encounters between computers, people and places. Based in Edinburgh, he has performed and collaborated internationally with theatre companies, symphony orchestras, visual artists and ensembles; recent projects include *Songs for an airless room*, an 'opera' for cinemas performed by Joby Burgess and Phil Minton.

Martin has been Artistic Director of Edinburgh's Dialogues Festival: www.dialogues-festival.org for ten years and is one third of free improvisation trio, Lapslap: www.lapslap.net.

Martin studied composition at the University of Manchester and completed a PhD in Composition at the University of Edinburgh in 2003. He is Academic Director of the University of Edinburgh's MSc in Sound Design: sd.caad.ed.ac.uk/mssc sounddesign

Some of his music is available on Ein Klang records: www.einklangrecords.com and www.leorecords.com



Kenneth Roy

Kenneth Roy was born in Falkirk and went into journalism as soon as possible (16 years old). He was the *Glasgow Herald's* youngest staff reporter, and founded *Scottish Theatre* magazine when he was 24. Kenneth joined BBC Scotland and was presenter of the nightly news programme, *Reporting Scotland*, for some years, as well as fronting current affairs and religious programmes. He left to set up one of the first independent local radio stations, West Sound. More recently, he has been a weekly columnist with *Scotland on Sunday* and later the *Observer*. In 2000, he founded the Institute of Contemporary Scotland and in 2002 the Young UK and Ireland Programme; both are still going strong. Kenneth has been editor of the *Scottish Review* (current affairs magazine) since 1995. He was columnist of the year in the British Press Awards in 1995.



GREETINGS FROM YOUNG ACADEMIES AROUND THE WORLD

The Global Young Adacemy (GYA)



Global Young Academy
The voice of young scientists around the world

On this wonderful occasion, the young scientists of the Global Young Academy (GYA) www.globalyoungacademy.org offer our heartiest congratulations and best wishes for much continued success. We look forward to working with the members of the RSE Young Academy of Scotland on projects of mutual interest to provide a voice for young scientists in Scotland and others around the world.

In addition, we hope your members will apply to the GYA to become active members and future leaders. In turn, we would like to offer our support, as a network of national young academies. We aim to coordinate the activities of national young academies, and thus improve the effectiveness of our activities. In summary, we welcome your ideas, your voices, and your spirited energy to join us in working on issues critical to young scientists.

Sincerely,

Gregory Weiss (USA) and Bernard Slippers (South Africa) – GYA Co-Chairs

Die Junge Akademie, Germany



Die Junge Akademie

"Welcome/congratulations" message, Greifswald/Berlin, 04.10.2011

Dear RSE Young Academy of Scotland,

Creating a forum for forward-looking people to engage with talented individuals beyond their own discipline or profession is always a great and marvellous experiment. Bringing together young researchers and professionals from different disciplines and occupations to me seems like an expedition into a vast land of thrilling and exciting questions – adventures are waiting: trials of differing terms, expressions and modes of speech, tribulations of never knowing enough, the danger of being absorbed by more and more questions... But a big reward will be provided at the end: a wider horizon than ever before.

Congratulations on this unique opportunity for an extraordinary journey and exchange! We wish you good luck, fascinating experiences and great new insights – and we are looking forward to exchanging ideas and working together with you, the RSE Young Academy of Scotland!

Martin Wilmking, Chairman of Die Junge Akademie, Germany

The Young Academy, The Netherlands



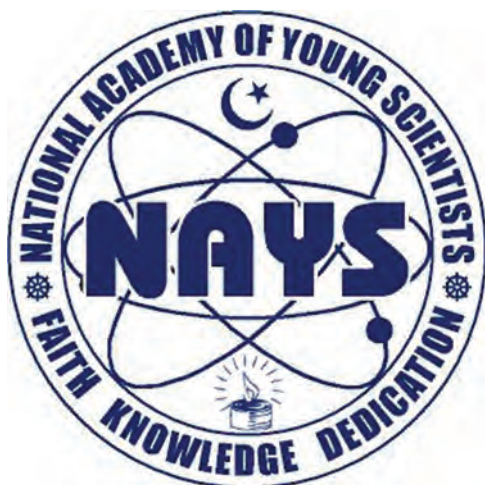
We are very happy that we can congratulate you on the establishment of the RSE Young Academy of Scotland.

With kindest regards,

Peter-Paul Verbeek
Chairman of The Young Academy, The Netherlands

Science and society develop by innovation. And innovation requires novelty, and youth. While existing generations mature, younger generations evolve, with new ideas, new ambitions, and new approaches. Therefore, it is of utmost importance to organize fruitful interactions between the experience and solidity of existing generations on the one hand, and the freshness and energy of the youth on the other. The worldwide establishment of 'Young Academies' within Academies of Science accomplishes exactly this. Independent from, though closely related to, these academies, Young Academies offer successful young scholars and scientists a place to meet and interact, to engage with the social roles of the arts and sciences, and to engage with science policy. The Dutch Young Academy therefore warmly welcomes the Young Academy of Scotland in the growing community of Young Academies. We wish you an energetic future, and we hope for many inspiring forms of collaboration.

National Academy of Young Scientists (NAYS) Pakistan



On the behalf of National Academy of Young Scientists (NAYS) Pakistan it is my pleasure to congratulate the first Academy of Young Scientists from Scotland. This is really a very good step as young academies are providing an opportunity to all the young scientists to get together on a platform, share their innovative ideas, show new ways for a bright future, opportunity for new collaborations among different institutions through young scientists, new scholarship opportunities, solving newly arising issues with collaboration, improving standard of life through collective efforts and making the thoughts to turn into reality. Young scientists are the future of every nation. There is a strong need of a platform to gather all the young scientists in every country and then there should be one main body to advice and give suggestions to young scientists in every aspect of research.

We wish you all the success in this effort and hope to have good collaborations with your academy in future.

Best regards

Aftab Ahmad

President

National Academy of Young Scientists (NAYS), Pakistan

The South African Young Academy of Science (SAYAS)

Congratulations on the establishment of the RSE Young Academy of Scotland from the founding members of the South African Young Academy of Science (SAYAS)!

SAYAS was officially launched on 27 September 2011, which makes us deeply aware of the great milestone that this represents – providing a voice for young scientists and professionals in Scotland.

The efforts of those who worked towards the inauguration of the RSE Young Academy of Scotland are acknowledged.

Congratulations to the newly appointed members of the RSE Young Academy of Scotland; your excellence is recognised!

Your new role includes an obligation of service and the opportunity to shape the strategic plan of the RSE Young Academy of Scotland in line with your proposed vision.

SAYAS members convey their best wishes to you all as you proceed on this exciting journey and look forward to future opportunities to work together.

Professor Jerome Amir Singh

Dr Caradee Wright

SAYAS Co-Chairs

The Young Academy of Sweden



To the RSE Young Academy of Scotland

The Young Academy of Sweden is very happy to be able to welcome a new member in the Young Academy family, this time in Scotland - congratulations! We wish you all the best for the future and hope that you will find as much inspiration and creativity within your academy as we have found in ours.

We truly believe that the young academy movement will create new and powerful tools to meet the future coming demands and challenges, and that young researchers and scientists are ready and willing to take part in tackling them. We also strongly argue that the young academy should be a place for fun and creativity, which will lead to new and exciting ideas that the society could benefit from.

We hope our young academies will have the chance to interact and collaborate in the future and once again, congratulations and we wish you all the best!

Helene Andersson Svahn

Chairman the Young Academy of Sweden

Young Academy of Scotland 2011



Rosalind Allen

Royal Society University Research Fellow and Proleptic Lecturer, School of Physics and Astronomy, University of Edinburgh

Rosalind Allen is a biological physicist who uses theoretical work and experiments to study how microbes – microscopic, single-celled living organisms – survive and grow in changing environments. Her research aims to understand how individuals organise themselves into complex ecosystems. She has worked at the School of Physics and Astronomy at Edinburgh University since 2006, initially as a Royal Society of Edinburgh Research Fellow and since 2009 as a Royal Society University Research Fellow. Rosalind obtained her first degree in Natural Sciences from the University of Cambridge in 1999, followed by a Masters in Chemistry at the University of Pennsylvania. During her PhD she studied water permeation of nanopores using computer simulations, with Jean-Pierre Hansen at Cambridge University. From 2003 to 2006 Rosalind was a Marie Curie Research Fellow in the group of Pieter Rein ten Wolde at AMOLF in Amsterdam, where she developed new methods for simulating rare events, including genetic switch flipping. From 2006 to 2011, Rosalind has led the StoMP research network, a UK-wide interdisciplinary group of microbiologists and physical scientists.



Sharon Ashbrook

Reader in Physical Chemistry, School of Chemistry, University of St Andrews

Sharon Ashbrook is currently a Reader in Physical Chemistry at the University of St Andrews. She is involved in all aspects of higher education, from scientific research to teaching and lecturing. She graduated in Chemistry from Hertford College, Oxford, in 1997, and subsequently stayed in Oxford to study for her DPhil. After postdoctoral research at the University of Exeter, she was awarded a Royal Society Dorothy Hodgkin Fellowship at the University of Cambridge, before moving to St Andrews in 2005. She has won both the Harrison Prize (2004) and the Marlow Award (2011) from the Royal Society of Chemistry (RSC) for her work on understanding structure and disorder in the solid state, using NMR spectroscopy and DFT calculations, and has published over 80 papers in this area.

She is Vice-Chair of the Tayside Local Section of the RSC and is heavily involved in outreach with local schools, through both the RSC and the RSE. As the Admissions Officer for Chemistry in St Andrews she also has a particular interest both in School Education and the transition from school to university.



Des Balmforth

Programme Manager, SELEX

Des Balmforth has a breadth of Programme Management experience over a wide range of defence products, customers and cultures. He has a keen interest in understanding how the people management and leadership aspects of project management contribute to project success and his current programme is the development of the radar for the Swedish Gripen NG fighter, a large collaborative venture between Selex Galileo and the Aeronautics and Radar divisions of SAAB.

Des graduated with Distinction from the University of Strathclyde in 1997 with an MEng in Mechanical Engineering with Financial Management and this combination of finance and engineering has proven invaluable in business. He is a Chartered Engineer and a member of the Association of Project Managers, as well as a member of the Selex Galileo Project Management Council, helping to govern the capability of project management in the business.

Des lives in Edinburgh and is married with 2 children. His main interest is sailing, racing at local level in the Clyde as well as enjoying extensive family cruising holidays around the west coast of Scotland. Windsurfing, cycling and snowboarding are also favourites.

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Kirsty Blackstock

Theme Leader, Socio-Economic Research Group, Hutton Institute

My research focuses on governance, particularly public and stakeholder participation in environmental policy making and implementation, and I have an associated interest in the use of 'tools' in decision making and evaluation processes. I am theme leader for our Society, Institutions and Governance group, part of the Socio-Economics research area.

My current research explores stakeholder and public participation; concepts of sustainability and interdisciplinary approaches to environmental planning and management. Projects include evaluating stakeholder involvement in the Cairngorms National Park and Scottish River Basin Planning Processes; uptake of management practices to mitigate Diffuse Pollution; farmer involvement in flood management; and using sustainability assessments in strategic planning. All these projects emphasise the role of deliberation and interaction of different forms of knowledge. I am particularly interested in research-practitioner partnerships (e.g. CATCH).

Through my contribution to the National Ecosystem Assessment, I am increasingly working on integrated assessment approaches to human-environmental interactions.



Rosalie Chadwick

Corporate Finance Manager, Corporate Finance, McGrigors

Rosalie Chadwick is a Partner at leading law firm McGrigors LLP, specialising in domestic and international corporate finance. Her professional career began at McGrigors in 2002 where she was assumed as its youngest Partner in 2008. She won the Legal Adviser of the Year award at the Deals & Dealmakers awards earlier this year. During her career she has spent a couple of years in industry with an international oil and gas company to lead their listing on the NYSE and acquisitions in the Former Soviet Union, and with private equity house West Coast Capital in a corporate finance role running a diverse range of their investments from biosciences and renewables to retail. Outside of work she is married to James and sport is a major feature. A former Scottish international rower, these days her pursuits are mainly on dry land as a keen but frustrated golfer and Scottish rugby supporter.



James Chalmers

Senior Lecturer in Law, School of Law, University of Edinburgh

James Chalmers is a senior lecturer in law at the University of Edinburgh, where he teaches criminal law and evidence. He is the author of a number of books in this area, including *Criminal Defences and Pleas in Bar of Trial* (2006, with Fiona Leverick), *Legal Responses to HIV and AIDS* (2008) and *The New Law of Sexual Offences in Scotland* (2010). His current research is focused on the practice of criminalisation by legislation, and a rational reconstruction of Scottish criminal law in light of comparative and theoretical perspectives.

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Paul Chapman

Deputy Director, Digital Design Studio, Glasgow School of Art

Dr Paul Chapman is Deputy Director of the Digital Design Studio (DDS) at the Glasgow School of Art where he has worked for the past two years. The DDS is a postgraduate research and commercial centre based in the Digital Media Quarter in Glasgow housing state-of-the-art virtual reality, graphics and sound laboratories. Previously Paul was Director of the Hull Immersive Visualization Centre and spent several years working as an offshore engineer in the oil, gas and diamond mining industries.

Paul holds BSc, MSc and PhD degrees in Computer Science. He is a Chartered Engineer, Chartered IT Professional and a Fellow of the British Computer Society.

Passionate about technology, Paul applies his experience to real-world problems in numerous disciplines. He has several years of managerial, project management and budgetary experience and has won a number of academic and industrial awards including the 2009 UK Industry Awards: IT Innovative Project of the Year.



Iain Chirnside

Executive Director, Brinker Technology

Iain Chirnside was part of the team that founded Brinker Technology, a spin-out company from the University of Aberdeen, which has commercialised innovative technology for leak sealing in pipelines and oil wells. Over the last decade, he has been instrumental in building a Scottish SME from start-up to revenues of over £4m and a major international profile.

Iain is currently responsible for the development and ongoing management of Brinker's product lines, and plays an integral part in the business through actively linking and grounding their commercial and technical focuses, advising at all levels of the organisation. He provides a blend of real-world entrepreneurial experience, knowledge and understanding of company start-ups and business development and a personal background of leadership in a growing Scottish SME which must think and act globally.

Iain has built his own bike and last year cycled it from Poland to Croatia.



Sarah Coulthurst

Principal Investigator & RSE Scottish Government Personal Research Fellow,
Division of Molecular Microbiology, University of Dundee

Sarah studied Natural Sciences (Biochemistry) at Queens' College, University of Cambridge. She then obtained her PhD Degree in molecular microbiology in 2005, working in the laboratory of Prof George Salmund, Dept. Biochemistry, University of Cambridge. Following a two-year post-doctoral position in Cambridge, she moved to the University of Dundee to work with Professor Frank Sargent. In Autumn 2009, Sarah established her own research group, as a Principal Investigator in the Division of Molecular Microbiology, College of Life Sciences, University of Dundee. She is supported by a Royal Society of Edinburgh / Scottish Government Personal Research Fellowship. Her research interests focus on understanding, at a molecular level, the ways in which pathogenic bacteria cause disease. More specifically, she aims to understand how opportunistic bacteria use a process termed 'protein secretion' to successfully infect and cause disease in humans and other organisms. To achieve this, her group uses a range of approaches, including molecular and cell biology, genetics, proteomics and biochemistry.

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Ineke de Moortel

Royal Society University Research Fellow, School of Mathematics & Statistics, University of St Andrews

Ineke De Moortel was born in Belgium, where she completed a Masters in Mathematics at the KUL (Catholic University of Leuven). Following a brief stay in St Andrews in the autumn of 1996 as an Erasmus exchange student, she returned as a PhD student in September 1997. On finishing her thesis in 2000, she was awarded a PPARC (now STFC) Fellowship. She currently is a Reader in Applied Mathematics and holds a Royal Society University Research Fellowship. She was awarded a Philip Leverhulme Prize in 2009 and the RAS Fowler Award in 2010.

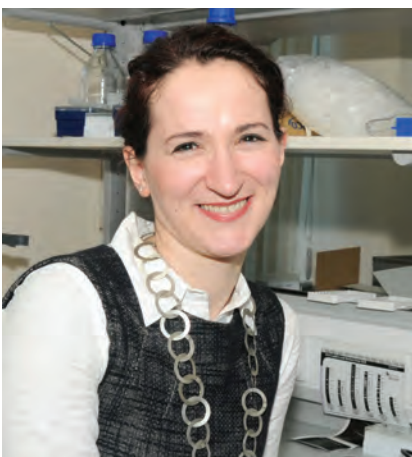
Her main research interests are the behaviour and interaction of waves and oscillations in the solar corona (the Sun's outer atmosphere), in particular the development of coronal seismology, which aims to deduce properties of the solar environment from the observations of waves and oscillations. Ineke is currently working on realistic, 3D numerical models of oscillating coronal magnetic loops. Over the last few years, satellite observations have shown an abundance of waves and oscillations in the solar atmosphere, which these numerical simulations are trying to match.



Lisa DeBruine

Senior Lecturer in Psychology, School of Psychology, University of Aberdeen

Lisa DeBruine is a research scientist in the School of Psychology at the University of Aberdeen. Her research combines theories from evolutionary biology and cognitive psychology with methods from experimental psychology, behavioural ecology and experimental economics, to explore how physical appearance affects social decision making. Her most prominent research investigates how people respond to facial resemblance and other potential cues of kinship. She is also interested in how the visual system learns about faces and what visual adaptation effects can tell us about the face processing system. Lisa is passionate about presenting scientific research to the general public. Her research is frequently featured in newspapers, magazines and science documentaries, and she has participated in numerous public science events, including the Royal Society of London's Summer Science Fair and French Science Week.



Mirela Delibegovic

RCUK Fellow, College of Life Sciences and Medicine, University of Aberdeen

Dr Delibegovic started her academic career as a University of Edinburgh graduate (1995–1999) in Pharmacology. This led her to postgraduate studies in Biochemistry at Dundee University (1999–2003), in the MRC protein phosphorylation unit, one of the leading places in Europe for biomedical research. She obtained the prestigious American Heart Association Postdoctoral Personal Fellowship, to further study causes and consequences of Type 2 diabetes at Harvard Medical School (2003–2007). In 2007, Dr. Delibegovic successfully obtained a five-year tenure-track RCUK Fellowship at the University of Aberdeen, where she established her own independent laboratory, leading a small research team. She has published her work in internationally peer-reviewed journals and obtained competitive externally-funded project grants, to fund research in her laboratory. Dr Delibegovic is also very passionate about public engagement in science and her outreach activities were recognized by the National Co-ordinating Centre for Public Engagement, as well as Vitae, in 2010. In addition, Dr Delibegovic is featured on the UKRC for Women in SET website as one of their success stories. She has recently acted as a mentor for a Scottish Science Baccalaureate student.

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Iain Docherty

Professor of Public Policy and Governance, Business School, University of Glasgow

Iain Docherty BSc PhD CMILT is Professor of Public Policy and Management at the University of Glasgow Business School. Iain's research and teaching addresses the interconnecting issues of public administration, institutional change and city and regional competitiveness, with particular emphasis on the structures and processes of local and regional governance, policies for delivering improved economic performance and environmental sustainability, and the development and implementation of strategic planning and transport policies. Iain also works with and acts as an advisor on strategic policy issues to a range of private sector, governmental and other organisations, including several in the UK, US, Canada and Sweden. He served as Non-Executive Director of Transport Scotland, the national transport agency for Scotland, from 2006 to 2010, and his other recent external appointments include membership of the UK Government Commission for Integrated Transport's Expert Academic Panel, and Expert Advisor to the Transport Infrastructure and Climate Change Committee of the Scottish Parliament.



Edward Duncan

Senior Research Fellow, Nursing Midwifery and Allied Health Professions Research Unit, University of Stirling

I conduct research to improve the quality and delivery of direct patient health care and to make a real difference to the lives of the people of Scotland and beyond. I routinely collaborate with a range of health and social scientists, people from art and design backgrounds, clinical specialists, and members of the public. I graduated with a BSc(Hons) in Occupational Therapy from Queen Margaret College, Edinburgh, and later gained a Postgraduate Diploma in Cognitive Behavioural Psychotherapy from the University of Dundee. I received my PhD following several years of clinical experience as an occupational therapist in mental health, and undertook a post-doctoral research fellowship at The University of Stirling. I am currently a Senior Research Fellow in the Scottish Government Chief Scientist Office's Nursing Midwifery and Allied Health Professions Research Unit, which is hosted jointly by The University of Stirling (where I work) and Glasgow Caledonian University.



Nigel Eccles

CEO, Hubdub Ltd

Nigel Eccles is the co-founder and CEO of Hubdub Ltd, a venture-backed gaming company with offices in Edinburgh, New York and San Francisco. In 2009, they launched FanDuel, which is the leading daily draft fantasy sports game in the US market. Prior to Hubdub, Nigel launched the Flutter.com betting exchange (acquired by Betfair) and re-launched the Betdaq betting exchange. Additionally, he was a consultant with McKinsey & Co for four years and was formerly on the management board of Johnston Press plc

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Daniele Faccio

Reader in Physics, School of Engineering and Physical Sciences, Heriot-Watt University

Daniele Faccio was born in London, 15/01/1973, and moved to Italy aged twelve. There he attended high school and University, obtaining in 1998 a degree in Physics, 110/110 *cum laude* from the University of Milano. He then returned to the UK and in 2001 obtained an MPhil from the Optoelectronics Research Centre, Southampton University. From 2001 to 2004 he worked as a research scientist in the optical telecommunications industry for Pirelli Labs (Milano). In 2003 he was visiting scientist at the Massachusetts Institute of Technology (Boston, USA), working on the development of next-generation optical telecommunication devices. From 2004 to 2010 Daniele was assistant professor at the University of Insubria (Como, Italy) where he carried out research on laser-matter interaction at high intensities. In 2007 he obtained a PhD in Physics from the University of Nice-Sophia Antipolis (France). He is currently (since November 2010) Reader in Physics at Heriot-Watt University.



Karen Faulds

Senior Lecturer in Bioanalytical Chemistry, Department of Pure and Applied Chemistry University of Strathclyde

Dr Karen Faulds is an expert in the development of SERRS and other spectroscopic techniques for novel analytical detection strategies and in particular bioanalytical applications. She received her BSc(Hons) in Forensic and Analytical Chemistry and her PhD from the University of Strathclyde. She embarked on two postdoctoral research positions at the University of Strathclyde before being appointed as a Lecturer in 2006 and promoted to Senior Lecturer in 2010. Dr Faulds has published a significant amount of peer-reviewed publications and has had joint funding in the region of 8 million euros from EPSRC, industry and governmental bodies. In 2009 she was presented with the Nexxus Young Life Scientist of the Year award and collaborates with a number of academics across the disciplines. She is also a founding member of Renishaw Diagnostics Ltd, a spin-out company from the University of Strathclyde formed in 2007, which attracted £5M in investment.



Ross Forgan

Postdoctoral Research Fellow, University of Glasgow

I was born in Edinburgh in 1981 and grew up in Scone, Perthshire. My interest in Chemistry was sparked during my school years at Perth Academy and I subsequently earned an MChem (Hons) degree (1st Class) from the University of Edinburgh in 2004. I stayed at the University of Edinburgh to complete a PhD under the supervision of Professor Peter Tasker in 2008, in the areas of inorganic supramolecular chemistry and ligand design, which also involved a six-month secondment to Massey University, Palmerston North, New Zealand. In October 2008 I became a Postdoctoral Research Fellow with Sir Fraser Stoddart at Northwestern University, just outside Chicago, where I investigated molecular machines, chemical topology and metal-organic frameworks. I was also involved in setting up a spin-off company in 2011 based upon some of my research and continue to contribute to its development. In October 2011 I moved to the University of Glasgow to become a Senior Research Fellow in the group of Professor Lee Cronin.

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Aileen Fyfe

University Lecturer School of History, University of St Andrews

Dr Aileen Fyfe is Lecturer in Modern British History at the University of St Andrews. She was born in Glasgow, educated at Cambridge, and spent a decade at the National University of Ireland, Galway, before returning to Scotland in 2010. She is a historian of science and technology, with particular interests in the communication of scientific knowledge. Her research has investigated how science has been popularised to a variety of audiences, from the Victorian working classes, to children and tourists. She is interested in non-textual forms of communication, such as museums and zoos, but the majority of her work has been on print culture and particularly on the history of science publishing. Her most recent book investigates the ways in which mid-nineteenth-century publishers incorporated new technologies into their business systems. She has served as treasurer of the British Society for the History of Science, and as chair of the Royal Irish Academy's committee on the history of Irish science.



Jane Gotts

International Director, Scottish Council for Development and Industry (SCDI)

Jane Gotts played a leading role in establishing BusinessClub Scotland, which exists to drive business engagement from Scotland's major events programme. She has overall responsibility for the strategic management and direction of the Club. Jane sits on both the Scottish Government's and Glasgow City Council's Economic Legacy Groups, to ensure that businesses across Scotland maximise the business legacy from the 2014 Commonwealth Games.

In her role as SCDI's International Director, she has the responsibility for developing and implementing the organisations International strategy. This includes working with the UK and Scottish Governments on an annual programme of trade visits. During her career at SCDI, she has led over 35 visits to markets in North America, Europe, the Middle East and Asia. Jane sits on the Board of Commonwealth Games Scotland, and has a degree in Politics from the University of Glasgow.



Alan Gow

Senior Research Fellow, Centre for Cognitive Ageing and Cognitive Epidemiology, University of Edinburgh

Dr Alan J. Gow is a Senior Research Fellow in the University of Edinburgh Centre for Cognitive Ageing and Cognitive Epidemiology. With a background in Psychology, his research focuses on the identification of lifestyle and psychosocial factors that predict successful ageing, primarily cognitive ageing. Alan is mainly interested in factors which are malleable, such as activity participation and exercise, social networks and support, and occupational characteristics and exposures. By being amenable to change, such factors are potential targets for interventions designed to reduce or delay the deleterious effect of ageing on cognitive abilities, and so have applied value in an increasingly aged society. Alan graduated with a BSc (Hons) in Psychology from the University of Edinburgh in 2002, and completed his MSc by Research (Psychology) the following year. He completed his PhD in 2007 under the supervision of Professor Ian Deary, funded by a RSE/Lloyd's TSB Foundation for Scotland Studentship.

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Tom Greggs

Professor of Historical and Doctrinal Theology, School of Divinity, History and Philosophy, University of Aberdeen

Tom Greggs is Professor of Historical and Doctrinal Theology at the University of Aberdeen, having previously been Chair of Systematic Theology at Chester University. A native of Liverpool, he was educated at the Universities of Oxford and Cambridge. He is the author of *Barth, Origen, and Universal Salvation* (OUP) and *Theology against Religion* (Continuum). Tom is also the editor of *New Perspectives for Evangelical Theology* (Routledge). He serves as secretary of the Society for the Study of Theology and as co-chair for Scriptural Reasoning at the American Academy of Religion. His essays have appeared in leading international journals and collections, and he has been guest editor of a number of journal issues. Tom was Arts and Sciences International Visiting Scholar and Visiting Professor in Religion at the University of Virginia in 2010. He is actively engaged in inter-faith work, and is a member of a consultation that meets in Jerusalem.



Jeremy Hall

Scottish Senior Clinical Fellow, Division of Psychiatry, University of Edinburgh

Jeremy Hall is Professor of Psychiatry at Edinburgh University and Scottish Senior Clinical Fellow. He is an Honorary Consultant Psychiatrist in General Adult and Liaison Psychiatry, at the Royal Edinburgh Hospital and the New Royal Infirmary of Edinburgh. He studied Biology as an undergraduate at Oxford University before completing pre-clinical medicine at the University of Edinburgh. He then joined the MB/PhD programme at Cambridge University, graduating MB/BChir with a PhD in Experimental Psychology in 2000. Following his house jobs he completed clinical training in Psychiatry in southeast Scotland. He joined Edinburgh University as a Clinical Lecturer in 2005 and gained an MRC Postgraduate Research Fellowship in 2007. In 2010 he was awarded a Scottish Senior Clinical Fellowship. His research focuses on how genetic and environmental risk factors alter the function of the brain to increase risk for major mental health problems such as depression, schizophrenia and personality disorders.



Faye Hammill

Professor of English, School of Humanities, University of Strathclyde

Faye Hammill is Professor of English at the University of Strathclyde, and has previously held posts at Cardiff and Liverpool Universities. She has a PhD in Canadian literature from the University of Birmingham. Her research is in the field of early 20th-Century North American and British literature; the keywords of her current work are 'sophistication', 'middlebrow' and 'nostalgia'. She leads the AHRC Middlebrow Network, a transatlantic research group, and her new AHRC-funded project, *Magazines, Travel and Middlebrow Culture in Canada 1925–1960* is a collaboration with the Canadian Writing Research Collaboratory, a digital humanities initiative at the University of Alberta. She has published four monographs, most recently *Sophistication: A Literary and Cultural History* (2010). She is an associate editor of the *International Journal of Canadian Studies/Revue internationale des études canadiennes*, an AHRC panellist and peer review college member and a Council for College and University English executive committee member.

Young Academy of Scotland 2011



Giles Hammond

RCUK Academic Fellow and Lecturer, School of Physics and Astronomy, University of Glasgow

Dr Hammond gained his PhD from the University of Birmingham in 1999, where he worked on the development of a cryogenic torsion balance used to place new short-range limits on putative forces coupling spin and gravity. Following this he took up a two-year appointment at the Joint Institute for Laboratory Astrophysics, Boulder, Colorado, where he worked on the development of active/passive seismic isolation systems for the Advanced LIGO gravitational wave detector upgrade. Dr Hammond returned to Birmingham during 2001–2007 as a research assistant working on the development of a 2nd-generation cryogenic torsion balance used to measure the Casimir force and inverse square of Gravity at test mass separations of a few micrometers. In 2007 he joined the Institute for Gravitational Research, University of Glasgow, where he is a Research Council UK Academic Fellow and Lecturer. His research interests focus on the development of fused silica suspension systems for 2nd-generation gravitational wave detectors, the development of techniques to study charge motion on the surface of insulators and the measurement of thermal noise in both room temperature and cryogenic systems.



Gareth Harrison

Bert Whittington Chair of Electrical Power Engineering, Institute for Energy Systems, School for Engineering, University of Edinburgh

Professor Gareth Harrison is Bert Whittington Chair of Electrical Power Engineering and Deputy Head of the Institute for Energy Systems at the University of Edinburgh. Originally from northwest England, he came to Edinburgh as an undergraduate to study Engineering. He continued to a Doctorate before being appointed as a Research Fellow in 2000. He was promoted to his current role in January 2011.

Gareth leads research activity across a wide area, including grid integration of renewable energy, renewable resource assessment, climate change impacts on electricity systems; and carbon footprints of energy systems.

Professor Harrison is a Chartered Engineer, a member of both the Institution of Engineering and Technology and the Institute of Electrical and Electronics Engineers and is an Affiliate of the Association of Chartered Certified Accountants.



Helen Hastie

Lecturer, School of Mathematical and Computer Sciences, Heriot-Watt University

Helen Hastie is a Lecturer in the Interaction Lab at Heriot-Watt University Computer Science Department. Her research there focuses on building and evaluating spoken dialogue and multimodal systems. On completion of her PhD from the Centre of Speech Technology Research at the University of Edinburgh in 2000, she held a Research Associate position at AT&T Research Labs, New Jersey, USA, where she received two patents for her work on multi-modal city guides. In 2003, she moved to work in the Artificial Intelligence lab at Lockheed Martin, also in New Jersey, where she was a lead member of engineering. On returning to the UK in 2008, she held a Research Fellow position at the University of Edinburgh on a Scottish Enterprise-funded project before moving to Heriot-Watt in October 2009.

Young Academy of Scotland 2011



Jennifer Hastie

Associate Team Leader, Institute of Photonics, University of Strathclyde

Jennifer Hastie is an Associate Research Team Leader at the Institute of Photonics, University of Strathclyde. The IoP is a commercially-oriented research unit with the objective to bridge the gap between university research and industry. Jennifer joined the IoP as a postgraduate student and was awarded her PhD for research on "High Power Surface Emitting Semiconductor Lasers" in 2004. She was subsequently awarded a five-year research fellowship supported by the Royal Academy of Engineering and the Engineering and Physical Sciences Research Council (EPSRC), during which she developed visible and ultraviolet semiconductor disk lasers. In May 2011 she was awarded a five-year Challenging Engineering grant to further this research and expand her group. She is a Senior Member of the Optical Society of America and currently serves on the technical program committee of the international OSA conference Advanced Solid-State Photonics.



Heather Haynes

Lecturer, School of Engineering, University of Glasgow

I am a Senior Lecturer in Sediment Processes (Civil Engineering) at Heriot-Watt University and one of the Directors of the Hydraulics Research Laboratory. My research focuses on uncertainty and process dynamics within river catchments, specifically targeting the engineering challenges of climate, anthropogenic and policy change. By using novel physical modelling (flumes) I harness the complexities of water-sediment-ecology interaction to improve engineering, restoration and remediation practice. Most recently I have employed magnetic resonance imaging (MRI) to quantify these interactions in 3D (and 4D) within opaque porous media such as river beds and filter systems. My collaborations include engineers, geoscientists, biologists, chemists, historians and MRI academics from universities and external consultancies. I am a Chartered Geographer, sit on the Research Committee of the British Society of Geomorphology and am active within the Telford Institute, encouraging pan-Scottish collaboration of engineer-based academics involved in flow-sediment research.



Catherine Heymans

Astrophysics Lecturer and European Research Council Fellow, Institute for Astronomy, University of Edinburgh

Catherine Heymans is a European Research Council Fellow and Astrophysics Lecturer at the University of Edinburgh. She specialises in observing the Dark Side of our Universe, witnessing the ongoing battle between Dark Matter's gravity bringing large scale structures together and Dark Energy's accelerated expansion of space stretching those same structures apart. She co-leads the Canada-France-Hawaii Telescope Lensing Survey and, with her team, is using this survey to test whether we need to go beyond Einstein with our current theory of gravity. Since completing her PhD at Oxford University in 2003, Catherine has held fellowships from the Max-Planck Institute and the Canadian Institute of Theoretical Astrophysics and when she is not busy unveiling the mysteries of the Universe or enthusiastically lecturing undergraduates, she can usually be found building sandcastles and paddling in the sea with her two small children.

Young Academy of Scotland 2011



Asif Ishaq

Policy Adviser, Safer Communities, Scottish Government

Asif Ishaq is a career civil servant renowned for his dynamism, original thinking and perseverance. He works in the Scottish Government's Safer Communities Directorate. His advice helps ensure Scotland has an effective contingency telecommunications system should public networks fail. His direct involvement in the purchase of a satellite communications system is set to deliver major benefits to the Highlands & Islands region by enhancing the area's ability to communicate with central government during emergencies.

In ten years working in the public sector, Asif has assumed key responsibilities, including in transport, where he facilitated the successful Parliamentary passage of the Airdrie–Bathgate Rail Private Bill. He also makes substantial contributions to the Business Directorate and raises awareness of the significant part played by ethnic minority businesses in Scotland. A Neuro-Linguistic Programming (NLP) practitioner, Asif is actively involved with the British Council in Jordan and helps disaffected youth in his community.



Rob Jenkins

Senior Lecturer, School of Psychology, University of Glasgow

Rob obtained his first degree in Cognitive Science from the University of Westminster and his PhD in Psychology from University College London. He then took up postdoctoral research positions, first at the Psychology Department of the University of Glasgow, and then at the MRC Cognition & Brain Sciences Unit in Cambridge. He was appointed Lecturer at the University of Glasgow in 2006. His research interests include face processing, visual attention, and social cognition. He has used a wide range of experimental techniques, including computational modelling, psychophysics and brain imaging, to investigate the cognitive processes and mental representations underlying these faculties. In 2008, Rob was awarded the BA Joseph Lister Prize for Science Communication.



Elham Kashefi

Lecturer & EPSRC Advanced Research Fellow, School of Informatics, University of Edinburgh

Elham Kashefi is a Lecturer at the School of Informatics of the University of Edinburgh, Associate Lecturer at the Telecom ParisTech, a CNRS Researcher on Leave, and an EPSRC Advanced Research Fellow. Elham received her BSc and MSc degrees in Mathematics from Sharif University, Tehran, Iran. In 1999 she joined Imperial College London as a Research Assistant and started her PhD in the field of Quantum Information Processing, which combines physics, mathematics and computer science. She was then awarded a four-year junior research fellowship at Christ Church College, Oxford and since then has been working in several academic institutes as a postdoctoral or long-term visiting researcher, including IQC (Canada), MIT (US), CNRS (France), NII (Japan) and IPM (Iran). Elham used to be a chess champion (and has now forgotten all the openings) but is still an active dance lover and ready for that adventure whenever her newborn baby permits her to do so.

Young Academy of Scotland 2011



Karen Lorimer

Research Fellow in Public Health, Public Health, Glasgow Caledonian University

Dr Karen Lorimer is a Research Fellow in Public Health at Glasgow Caledonian University, Institute for Applied Health Research. Specialising in sexual health, she has been driving forward a portfolio of work around social and behavioural dimensions of sexual health, methods for reaching hard-to-reach populations (e.g. young men, older people), and impact of technology on sexual behaviour and sexual health. Recent work on the effectiveness of HIV prevention interventions among men who have sex with men (MSM) has impacted on Scottish guidance for HIV prevention interventions among MSM, and contributed to discussions on European research priorities on HIV prevention, at the ECDC, Stockholm. Karen hopes her involvement with the Young Academy community to be driven by her strong desire to contribute to policy development specific to sexual health inequalities and to involve public engagement in her research and with the wider research agenda of this field.



David Lusseau

Marine Alliance for Science and Technology Scotland (MASTS), Senior Lecturer in Marine Top Predator Biology, School of Biological Sciences, University of Aberdeen

David has been travelling the world for the past fifteen years. He obtained his degree in the USA (Florida Institute of Technology) and his PhD in New Zealand (University of Otago). After an appointment as Killam Postdoctoral Fellow in Canada (Dalhousie University), he joined the staff at Aberdeen in 2007 now as part of the Marine Alliance for Science and Technology for Scotland. David works at the borders of life, social, and physical sciences trying to unify our understanding of the way individuals interact depending on the environment in which they live. His studies focus on social network evolution and inferring the consequences of behavioural decisions. He applies this information to provide advice on the management of human activities relying on wildlife populations. David is actively involved in the management of natural resources as a member of inter-governmental organisations and regularly advises on policies and management frameworks for sustainable development.



Arlene McConnell

Radar and Advanced Targeting Systems Engineer, Radar, SELEX

Arlene McConnell has worked as a Radar and Advanced Targeting Systems Engineer at SELEXGalileo for nearly three years, after graduating with first class honours from the University of Glasgow, where she studied electronics and electrical engineering. Prior to that, she completed an HND in automotive engineering and served with the Royal Air Force overseas as a Regiment Gunner. As part of the graduate development program at SELEXGalileo, she has worked on various projects, including: laboratory test and integration of a surveillance RADAR; laser reliability test design; and modelling and interface definition for the Raven ES05 Radar, which will be installed in Saab's Gripen Next Generation Fighter Aircraft. The challenging and innovative nature of this work, combined with her passion for engineering and sharing it with others, led to her recognition as this year's IET Young Woman Engineer of the Year and her selection for the Young Academy of the Royal Society of Edinburgh.

Young Academy of Scotland 2011



Neil McLennan

National Development Officer, Learning and Teaching Scotland

Neil McLennan has a number of key roles in supporting and challenging change in education. He is a Quality Improvement Officer (Education, Culture and Sport) for Aberdeen City Council, President of the Scottish Association of Teachers of History and President of the Enterprise Practitioners' Association. Recently Neil has also been on secondment to Learning and Teaching Scotland as the National Development Officer for Enterprise in Education with responsibilities for knowledge transfer, learner skill development, building employer and business links and embedding enterprise & entrepreneurial approaches across the curriculum. Previously a Head of History and Faculty Head, Neil regularly leads school leader and teacher in-service training courses and residential courses on a number of themes. His writing includes History guidelines for Enterprise in Education, a number of Curriculum for Excellence resources and project-managed education projects for SCND and PoppyScotland. His "Active History" textbooks, along with NQ textbooks, support learners across the country. Neil was awarded Professional Recognition for Enterprise in Education by the GTC Scotland. Neil also sits on a number of groups, including the Ministerial Working Group for Scottish Studies.



Catherine MacPhee

Professor of Biological Physics, School of Physics and Astronomy, University of Edinburgh

Cait MacPhee is a Professor of Biological Physics at the University of Edinburgh. She was originally trained in the biomedical sciences in Australia, before realising her true vocation and gradually making her way across to physics. She carried out a postdoc in Oxford and took up her first academic post in the Cavendish Lab in Cambridge before moving to Edinburgh in 2005. She has held a Royal Society Dorothy Hodgkin Fellowship, as well as a Royal Society University Research Fellowship. Her interests are in understanding the self-assembly of biological molecules, both to increase our understanding of the limits of life and for the design or assembly of new materials. Cait's group is interdisciplinary, with people coming from a wide variety of backgrounds. Her broader interests include promoting the participation and retention of women in the sciences.



Graeme Malcolm

Chief Executive Officer, M-Squared Lasers

Prof. Graeme Malcolm has been a pioneer of growth photonics companies in Scotland over the last 16 years. In 1992 he co-founded Microlase Optical Systems Ltd which rapidly became one of Scotland's most successful optoelectronics companies and was sold to a major US corporation. He has developed a number of important technologies across many end-use market sectors and has built strong collaborative alliances within the commercial sector and with several of Scotland's Universities. Currently he is Chief Executive Officer at M-Squared Lasers, a high-growth company developing new laser technologies and pioneering novel photonics solutions for a large number of industry sectors. Graeme is also a visiting Professor at the Institute of Physics at the University of Strathclyde in Glasgow.

Young Academy of Scotland 2011



Alexander Marshall

Senior Lecturer, Department of History, University of Glasgow

Dr Alex Marshall is a Senior Lecturer at the University of Glasgow. A historian by training, his interests include political economy, illegal drug trafficking, counter-insurgency, war and military conflict, and the modern histories of Russia, the Caucasus, Central Asia, and Afghanistan. He is fluent in Russian. His publications include *The Caucasus under Soviet Rule* (2010), *Afghanistan. How the West Lost Its Way* (2011) and *The Russian General Staff and Asia, 1800-1917* (2006). He is the author of numerous articles and sits on the editorial board of the journal *Small Wars and Insurgencies* and on the editorial team for the planned multi-volume publication *Russia's Great War and Revolution: The Centenary Project*. His current projects include a history of the Comintern and its legacy in Soviet foreign policy towards the Third World and a political economy of the modern international illicit drug trade.



Andrew Mearns Spragg

Founder & Chief Technology Officer, Aquapharm Biodiscovery

Dr Spragg gained a first-class honours degree in microbiology and PhD in marine biotechnology from Heriot-Watt University and developed the company whilst holding a Royal Society of Edinburgh Enterprise Fellowship in biotechnology.

Aquapharm is a leading marine biotechnology company pioneering the discovery and development of novel bio-chemicals from the biological diversity of marine microbes. The company is developing this chemistry as a potential new source of pharmaceutical drugs e.g. novel antibiotics & anti-inflammatory compounds as well as further high value products for use in other commercial sectors such as natural cosmetic ingredients, nutraceuticals and industrial applications.

Since founding the business, Dr Spragg has successfully raised over £10M in equity finance. Dr. Spragg is the recipient of the 2007 Gannochy Innovation Award from the Royal Society of Edinburgh for achievements in biotechnology & innovation. In 2008, Dr Spragg's entrepreneurial achievements were recognised through winning the Ernst & Young Entrepreneur of the year 2008 in Health Care for Scotland.



Jeffrey Murer

Lecturer on Collective Violence, School of International Relations, University of St Andrews

Dr. Jeffrey Murer's research explores the problems of group violence, ethnic conflict, and political terrorism, through the lens of collective identity formation. He analyses the social need to belong, and why that need is often accompanied by a parallel imperative to exclude. His focus has been on Central and Eastern Europe, investigating anti-Semitism and right-wing violence in Hungary, the ethnic conflicts associated with the wars in the Former Yugoslavia, and acts of terrorism in the Northern Caucasus region of the Russian Federation. Dr. Murer brings these lessons back to Scotland in attempts to improve community relations, prevent terrorism, and reduce violence within and directed at multi-racial, multi-ethnic, and complex communities. Most recently he led a three-year exploration of youth attitudes on politics, social activism, and the legitimacy of political violence.

Dr Murer is Lecturer on Collective Violence in the School of International Relations, a Research Fellow to the Centre for the Study of Terrorism and Political Violence at the University of St. Andrews, and a Scottish Institute of Policing Research Lecturer. Originally from Chicago, Dr. Murer came to Scotland in 2007.

Young Academy of Scotland 2011



Francisca Mutapi

Research Fellow, Institute for Immunology & Infection Research,
University of Edinburgh

I am an RCUK Research Fellow at the University of Edinburgh working on a neglected tropical human disease schistosomiasis (bilharzia/snail fever) caused by a helminth parasite. I conduct basic research (immunology, epidemiology, molecular biology) on the host-parasite relationship and translate the findings into improving intervention methods and their delivery in affected human populations. I was born and brought up in Zimbabwe. I studied at the University of Zimbabwe for my undergraduate degree in Biological Sciences and at the University of Oxford for my DPhil in Biological Sciences as a Beit Scholar. After my DPhil, I undertook a postdoctoral position at the Institute of Tropical Medicine in Antwerp, conducting fieldwork in Senegal. This was followed by a succession of lectureships in the UK (University of Oxford (Department of Zoology), Birkbeck College (Department of Microbiology) and University of Glasgow (Department of Clinical Veterinary Studies)). I then moved to the University of Edinburgh on an MRC Training Fellowship before taking up my current post.



Caroline Nichol

Lecturer, School of GeoSciences, University of Edinburgh

Dr Caroline Nichol studied Ecological Science at the University of Edinburgh and then pursued a PhD in remote sensing of forest physiology, also at the University of Edinburgh. Subsequently, she carried out postdoctoral research at the Max-Planck Institute for Biogeochemistry in Germany and Columbia University, based in Tucson, Arizona at the Biosphere-2 Centre. Following this, Dr Nichol was awarded a NERC Fellowship in the School of GeoSciences at the University of Edinburgh and took up her permanent Faculty position within the School. Dr Nichol's research crosses the fields of remote sensing, plant physiology and micrometeorology and her research utilises both aircraft and satellite remote sensing to understand how forests and other terrestrial ecosystems respond to climate change and how these ecosystems act as sinks for CO₂. Together with colleagues at Edinburgh, Caroline is also part of a new 'spin out' company called CarboMap Ltd, which will apply state-of-the-art science to the problem of measuring and mapping the world's forest carbon. Dr Nichol acts as Chief Scientific Officer (CSO) for CarboMap.



John Nicholls

Head of New Businesses, M-Squared Lasers

John Nicholls gained a PhD in physics (optical materials) in 1994 (Strathclyde). Following postdoctoral studies at CREOL in Florida, he was a founding member at Crystal Photonics Inc, a spin out from CREOL. John returned to Scotland to found Photonic Materials Limited (PML) in 1998. PML developed and commercialised crystal products for PET scanners, oil-well logging and fiber optics. John led PML through to exit by Saint Gobain and Schlumberger in 2005.

John subsequently joined Scoopt (new media business), facilitating strategic partner engagements and leading the M&A process that resulted in acquisition by Getty Images in March 2006. John then joined TMRI Ltd, the principal delivery and exploitation vehicle for the £50m TMRC collaboration involving Wyeth (now Pfizer), the four Scottish medical schools, associated NHS Boards and SE.

In June 2011, John joined M-Squared Lasers Ltd, an internationally leading photonics business developing enabling products for multiple high growth applications.

Young Academy of Scotland 2011



Cian O'Driscoll

Lecturer in Politics, Politics, University of Glasgow

Cian O'Driscoll joined Politics at Glasgow in 2007 as a lecturer in International Politics. He completed his PhD in 2006 at the University of Wales, Aberystwyth. Prior to this he studied at the University of Limerick, Dalhousie University, and the University of Oslo. Cian's first book, *The Renegotiation of the Just War Tradition* has recently been published by Palgrave-Macmillan (New York, 2008). He has also published a number of articles on the ethics of war, contributing to the *European Journal of Political Theory*, the *Cambridge Review of International Affairs*, *International Relations*, the *Journal of Military Ethics*, the *Journal of International Political Theory*, and *Millennium: Journal of International Studies*. In 2010, Cian was appointed the Snell Exchange Fellow to Balliol College, Oxford for Trinity Term 2010. While at Balliol, Cian commenced research on his current project which examines Ancient Greek and Roman pre-cursors to the just war tradition.



Chris O'Sullivan

Senior Project Manager, Mental Health Foundation

Chris O'Sullivan is 33, graduating in 2001 with a BSc (Hons) in Pharmacology from the University Of Aberdeen. He was active in the student movement, and after graduation spent a year as an elected sabbatical officer on the UK National Executive of the National Union of Students.

Returning to Scotland in 2003, Chris has spent his career to date in the Scottish third sector, working on public health and health promotion. He specialises in policy support, campaigns and knowledge transfer, working at a local, national and international level. Chris currently works for the Mental Health Foundation, a leading UK charity addressing mental health in the broadest sense, developing, influencing and putting into practice research and policy.

Chris is a keen photographer and writer, combining these interests with a daily photo blog, which he has kept for two years. Chris is also Chair of Trustees of Action on Depression, the leading Scottish charity for people affected by depression.



Ian Overton

Senior Scientist (Group Leader), Biomedical Systems Analysis, MRC HGU

I am a Senior Investigator Scientist and RSE Scottish Government Research Fellow in the MRC Human Genetics Unit at the University of Edinburgh. My group are applying data integration and machine learning approaches to develop probabilistic network models of gene function, as well as predictive algorithms (e.g. for cancer treatment regime selection). Key areas of interest are cell invasiveness, migration and survival, including systems-wide modelling of epithelial and mesenchymal phenotype switching. Epithelial/mesenchymal cell plasticity is fundamental in development (e.g. neural crest migration) and implicated in cancer progression as well as stem cell properties. More effective diagnosis and treatment of common human diseases is a core motivator. My work is inherently interdisciplinary and I have participated in a range of fruitful collaborations. I also enjoy public engagement, for example as an active STEM ambassador. Outside of science, I love spending time with my three-year-old son and playing music; happily, these sometimes coincide.

Young Academy of Scotland 2011



Gordon Pentland

Senior Lecturer in History, School of History, Classics & Archaeology, University of Edinburgh

Gordon was raised in Edinburgh and holds degrees from the universities of Oxford and Edinburgh. After obtaining his PhD, he was a Lecturer in European History at the University of York and a Leverhulme Early Career Fellow at the University of Edinburgh. He is currently a Senior Lecturer in History at the University of Edinburgh. His main research and teaching interests lie in the political and cultural history of Britain since the French Revolution. He has published widely on Scottish and British history in journals such as *Past & Present*, the *Historical Journal* and the *Scottish Historical Review*. His book *Radicalism, Reform and National Identity in Scotland, 1820–1833* won the Hume Brown Senior prize for the best first book in Scottish History. Gordon co-edits the *Journal of Scottish Historical Studies* and is a fellow of the Royal Historical Society. He is married with two sons and lives in Edinburgh.



Martyn Pickersgill

Wellcome Trust Senior Research Fellow in Biomedical Ethics, Centre for Population Health Sciences, University of Edinburgh

I am a sociologist of science, technology and medicine, and currently Wellcome Trust Senior Research Fellow in Biomedical Ethics, University of Edinburgh. To date, my research has focused primarily on the social dimensions of psychiatry, psychology, and the neurosciences. I also have active research interests in sociological approaches to bioethics and public health, and in the sociology of health-related enhancement. Following doctoral studies at the University of Nottingham, I moved to the University of Edinburgh as co-investigator of an ESRC research project on the sociology of neuroscience. I continued this work through a Newby Trust Fellowship, held at the Institute for Advanced Studies in the Humanities. Currently, I am based in the Centre for Population Health Sciences, where I am researching the co-production of moral discourse and clinical knowledge in psychology. I am part of the Manchester/Edinburgh Wellcome Trust Strategic Award in Biomedical Ethics, *The Human Body: Its Scope, Limits and Future*, and am a Wellcome Trust 75th Anniversary Public Engagement Ambassador. I have been a visiting scholar at Harvard University, the LSE, the Universities of Groningen and Manchester, and the National Institutes of Health.



Craig Ramsay

Programme Director, Health Services Research Unit, University of Aberdeen

Craig Ramsay directs the Health Care Assessment Programme within the Health Services Research Unit, University of Aberdeen. This is primarily a large programme of evidence syntheses and rigorous health care assessments of non-drug interventions. He has wide-ranging research interests in health services research with particular expertise in surgical trial evaluation, knowledge translation research and quasi-experimental study designs. He graduated with a BSc in Mathematics and Statistics from the University of Edinburgh in 1993. After receiving a Postgraduate Diploma in Information Systems from Napier University, he joined the Information and Statistics Division of the Common Services Agency. Since joining the Unit, he gained a PhD from the University of Aberdeen in 2000, and achieved a Personal Chair in Health Care Assessment in 2011.

Young Academy of Scotland 2011



Peter Reekie

Director of Finance and Structures, Finance & Structures, Scottish Futures Trust

Peter Reekie is Director of Finance and Structures and sits on the Board of the Scottish Futures Trust which is responsible for improving the value for money of infrastructure investment in Scotland. He has been involved with the development of SFT since its inception, initially as an advisor and then as employee 002, where he has seen the government-owned company grow from zero to a team of thirty five and £5.5m budget since early 2009.

Following a masters at the University of Oxford, Peter trained as a chartered civil engineer, initially down the sewers of Manchester. In the late 1990s, Peter increasingly worked in the growing field of UK public private partnerships, moving to the project finance team in a leading accounting firm and specialising in giving financial and commercial advice at the public / private interface.

He has led the early development of all SFT's innovative work on growing investment levels, including the national housing trust, tax incremental financing and options for Scottish Water. He currently leads on delivering a £2.5bn revenue-funded investment programme in partnership with public bodies across Scotland.



Jane Reid

Royal Society University Research Fellow, Institute of Biological & Environmental Sciences, University of Aberdeen

I am currently a Royal Society University Research Fellow at the University of Aberdeen, having previously worked at the Universities of Cambridge and British Columbia. My research focuses on population and evolutionary ecology; I aim to understand the environmental and genetic causes of variation in the size and location of wild animal populations, and to use this understanding to design effective management for populations of conservation concern. I use long-term data from wild bird populations in Scotland and elsewhere, combined with statistics, molecular genetic analyses and computer simulations, to understand the dynamics of wild populations. I combine my professional interest in ecological science with considerable enthusiasm for natural history, and for ornithology in particular. I am committed to communicating my science to the public and policy makers, and to involving the public in my research, and serve as a director of the Fair Isle Bird Observatory Trust.



Sinéad Rhodes

Senior Lecturer in Psychology, School of Psychological Sciences and Health, University of Strathclyde

Dr. Sinéad Rhodes is a Senior Lecturer at the School of Psychological Sciences and Health at the University of Strathclyde. She has been an active researcher in the area of memory and associated cognitive functioning in childhood and clinical disorders for the last 15 years. Sinéad has received grants (e.g. ESRC) to fund this research and has published numerous articles in high-impact journals. She also regularly disseminates her research findings within the media. Sinéad is highly involved with her professional body, the British Psychological Society, and is an elected member of their Press and Media Committee, Standing Conference Committee, and Developmental Section. She is the lead organiser of the BPS Developmental Section Conference to be held at Strathclyde in December 2012. Sinéad participated in the 2009 Crucible program.

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Will Shu

Lecturer in Microengineering, Department of Mechanical Engineering, Heriot-Watt University

Dr Will 'Wenmiao' Shu is a Lecturer in Microengineering at Heriot-Watt University, Edinburgh. Originally from China, he received his PhD in electrical engineering from Cambridge University Engineering Department and Nanoscience Centre. Then he worked as a postdoctoral research associate at Cambridge, developing micro- and nano- sensor devices. In 2007, he joined as a lecturer in the Department of Mechanical Engineering and School of Engineering and Physical Sciences of Heriot-Watt University. He is also jointly appointed by the Edinburgh Research Partnership (ERP) Joint Research Institute of Integrated Systems (JRI -IIS), in collaboration with Edinburgh University. More recently, he has been a visiting scholar at Stanford University. He has published over 20 peer-reviewed journal papers and conference proceedings, one book (monograph) and filed four patent/patent applications. He received the Agilent Technologies Award in 2001, a was a finalist winner of the 50 K Business Plan Competition at Cambridge University in 2004 and a Third Prize Winner of the Converge Business Plan competition in 2011. His research interests focus on applying micro and nanotechnologies for life sciences applications.



Craig Smith

Lecturer in Philosophy, Department of Moral Philosophy, University of St Andrews

Dr Craig Smith is a lecturer in Political Philosophy in the Philosophy Department at The University of St Andrews. Prior to this he was a British Academy Postdoctoral Fellow in the Department of Politics at the University of Glasgow. A graduate of Glasgow and Edinburgh Universities, he completed a PhD in Political Theory in 2003 before serving as a Lecturer at Stirling University. He has written a number of articles on liberal political theory and the Scottish Enlightenment, and is the author of *Adam Smith's Political Philosophy: The Invisible Hand and Spontaneous Order* (Routledge, 2006). He is the book review editor of the *Adam Smith Review* and is on the board of the Eighteenth Century Scottish Studies Society. His research interests include Political Philosophy, the History of Political Thought and Scottish Philosophy. He is currently engaged on research into ideas of civilization and civil society in the thought of Adam Ferguson.



James Smith

Professor of African and Development Studies, School of Social and Political Science, University of Edinburgh

Professor James Smith was educated at the University of Dundee and the University of the Witwatersrand, Johannesburg. He holds a personal chair in African and Development Studies and is Director of the Global Development Academy at the University of Edinburgh. In addition to this, he is a director of the Centre of African Studies and ESRC Innogen Centre at the University. He holds honorary or visiting positions in the UK, Europe and Africa and is a senior advisor to the DFID-ESRC Joint Scheme for Research on International Development. He has published widely on the relationships between science, technology, knowledge and international development, received research funding from DFID, the ESRC, the Microsoft Foundation and the Scottish Government, and advised many organisations on aspects of science and development policy. His most recent book publications are *Science and Technology for Development* (2009) and *Biofuels and the Globalization of Risk* (2010), both published by Zed Books.

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Kenny Smith

Lecturer, School of Philosophy, Psychology and Language Sciences, University of Edinburgh

Kenny Smith is a lecturer in the School of Philosophy, Psychology and Language Sciences, University of Edinburgh, with interests in the evolution of communication, human language and the human capacity for language. His research involves applying a combination of techniques from computer science and experimental psychology to investigate the evolutionary consequences of language learning: how social learning of language by individuals drives the cultural evolution of languages in populations, and how biological evolution might tune those social learning capacities in individuals. Kenny has an MA in Linguistics and Artificial Intelligence, an MSc in Cognitive Science and a PhD, all from the University of Edinburgh, and has held postdoctoral positions at Edinburgh and, until 2010, a lectureship in Psychology at Northumbria University. He lives in Pencaitland, in East Lothian.



Jane Stanley

Lecturer Music, University of Glasgow

Dr. Jane Stanley received a PhD in composition from the University of Sydney. Her teachers include Anne Boyd, Peter Sculthorpe, Ross Edwards, and Bernard Rands. In 2004-5 she was a Visiting Fellow at Harvard University and in 2006 she taught at MIT and Northeastern University. Her music has been performed by the Tasmanian Symphony Orchestra, the New Zealand Symphony Orchestra, Tanglewood Brass Ensemble, Continuum Sax, Duo Vertigo, Halcyon, Claire Edwardes, Niels Meliefste, and Simon Smith.

In April 2011, her *On Bright Air* for solo flute was premiered at the Arcomis International Flute Event in Cardiff. Upcoming commissions include a new work for Robin Michael and Huw Watkins (cello and piano).

Her research on the music of Elena Kats-Chernin was published in *Context* (University of Melbourne) in 2001. She is a member of New Voices at Sound and Music (UK). She has been a lecturer in composition and theory at the University of Glasgow since 2006. Jane was a participant in Scottish Crucible 2011.



Nicola Stanley-Wall

Lecturer, Division of Molecular Microbiology, University of Dundee

Nicola received her PhD from the University of East Anglia in 2000 and was an EMBO Long-term Fellow at the University of California at Los Angeles where she was based from 2001 to 2005. Following being awarded a BBSRC David Phillips Fellowship, she moved to the College of Life Sciences within the University of Dundee to establish her own research team. She is interested in how single-celled bacteria can act as a multicellular community to inhabit and exploit their environment. She uses a range of molecular biology techniques alongside mathematical modelling and high powered microscopy to achieve this. She is interested in science communication and currently has two long-term science communication projects on the go.

Young Academy of Scotland 2011



Christian Tams

Professor of International Law, School of Law, University of Glasgow

Christian J. Tams is Professor of International Law at the University of Glasgow. He studied law at universities in Germany (Kiel) and France (Lyon) before moving to Cambridge for his graduate studies (LLM, 2000; PhD, 2004). He has published or edited five books and published many articles on questions of international law, such as the prohibition against the use of force; military action against terrorists; the protection of foreign investments, and state responsibility. In addition to his academic work, he is a qualified German lawyer and has advised States in litigation before the International Court of Justice and the International Tribunal for the Law of the Sea. His hobbies include football and naval history/fiction.



Benjamin Tatler

Reader in Psychology, School of Psychology, University of Dundee

Ben has established an international reputation as a leading researcher in the natural approach to vision and visual psychology. A key role of vision is to provide information that allows us to complete our activities of everyday life, yet few researchers study vision in the context of natural everyday behaviour. Ben's work has revealed key insights into both why we look where we do and what we represent and remember about the world around us. He has published a wide range of articles on these topics and co-authored two books on the subject.

Ben is a Reader in the School of Psychology at the University of Dundee, where he runs the Active Vision Lab (www.activevisionlab.org) and Centre for Oculomotor Research (www.core-dundee.org). He is Associate Editor for the *British Journal of Psychology* and is on the editorial boards for *Perception* and *Visual Cognition*.



Nicole Tausch

Lecturer in Social Psychology, School of Psychology, University of St Andrews

Nicole Tausch is a social psychologist broadly interested in intergroup relations and conflict, prejudice and discrimination, and social perception. She obtained her DPhil at the University of Oxford in 2006 and completed a British Academy Postdoctoral Fellowship at Cardiff University in 2010. Nicole is currently a lecturer in social psychology at the University of St Andrews. Her present research examines psychological factors involved in participation in normative and non-normative collective action, in particular injustice and efficacy appraisals and the role of emotions such as anger and contempt, the psychological consequences of participating in normative and non-normative collective action, and the potential counter-productive effects of intergroup contact in achieving social change towards group equality. Nicole has published her work in journals such as *Journal of Personality and Social Psychology*, *Personality and Social Psychology Bulletin*, and *Psychological Science* and is recipient of the British Psychological Society's Award for Outstanding Doctoral Research Contributions to Psychology.

Young Academy of Scotland 2011



Job Thijssen

RSE/BP Trust Research Fellow, School of Physics and Astronomy,
University of Edinburgh

Job is currently a Royal Society of Edinburgh/BP Trust Research Fellow at the Institute for Condensed Matter and Complex Systems, University of Edinburgh, UK. His research focuses on developing novel soft materials for use in the fabrication of the next generation of batteries and fuel cells.

In 2007, he obtained a PhD in the group of Professor Alfons van Blaaderen at Utrecht University, the Netherlands. His Thesis describes the fabrication of crystals consisting of colloids, i.e. micron-sized particles, and their characterization using various microscopy and scattering techniques.

In 2011, he was elected to the Young Academy of Scotland, about which he has said: "It will provide a unique platform for tackling complex issues which require an interdisciplinary effort, for example the energy challenge and climate change. I am very much looking forward to the new collaborations that it will encourage and to becoming more active in science policy and public engagement."



David Toney

Chief Executive, Oxy-Gen Combustion Ltd

David Toney is the Chief Executive and founder of Oxy-Gen Combustion Ltd, a clean technology start-up company from the University of Dundee. A multi-award-winning company that specialises in reducing emissions from motor engines while also improving fuel consumption, Oxy-Gen is currently active in the automotive and power generation sectors. David has a Mechanical Engineering Degree from the University of Dundee and received a Royal Society of Edinburgh/Scottish Enterprise Enterprise Fellowship. He is a Member of the Low Carbon Vehicle Partnership Members Council and a participant in Innovation Working Groups and international industrial round tables on internal combustion engines. His experience includes development of new technologies, industrial partnerships and raising investment for new ventures.



Jano van Hemert

Project Manager, Technical, Optos

Dr Jano van Hemert (MSc 1998, PhD 2002; Leiden University, The Netherlands) is a project manager and academic liaison at Optos plc. His main area of research is in computer science and its applications. Since 2010, he has been an Honorary Fellow in the College of Science and Engineering of the University of Edinburgh in recognition of his leadership in the research programme of the UK National e-Science Centre supported by a prestigious EPSRC Platform Grant. Before that he held research associate and fellow posts at the National Research Institute for Mathematics and Computer Science (CWI) of the Netherlands, The Netherlands Organisation for Scientific Research (NWO) and the Vienna University of Technology. From 2005 until 2011 he was a visiting researcher at the Human Genetics Unit in Edinburgh of the UK's Medical Research Council.



Cliff Williams

Senior Scientist, New Projects Team, Ineos Technology

Graduating with BA in Chemistry in 1994, I went on to gain a DPhil (Oxon) in Synthetic Inorganic Chemistry in early 1998. This was followed by a year in Calgary, where I worked on perfluorinated organo-boranes and a further year in Oxford where I worked on single and multi-walled carbon nanotubes. From 2000, I worked for BP Chemicals on a new method of making ethylene, and in 2004 was moved to Grangemouth where I ended up as operations manager for a demonstration plant, with a similar capacity to the Glenfiddich Distillery. Since then I have been transferred to Ineos Technologies where I am part of a small team technically appraising new technologies, start-up companies and proposals. I also manage IP portfolios for several companies within the Ineos Group, as well as leading a group of chemists who are developing new technologies and products in-house.

I've been married for seven years to my wife (Cait) and we have two young boys. We live in central Edinburgh in what the boys call our "Castle."



James Wilson

Senior Lecturer in Population and Disease Genetics, Centre for Population Health Sciences, University of Edinburgh

Dr Jim Wilson is a population and disease geneticist at the University of Edinburgh who hunts for the genes which increase the risk of complex diseases like diabetes, heart disease, Multiple Sclerosis and osteoporosis. He leads a large study in his native Orkney, which has helped to find over 800 new susceptibility genes for these diseases. Dr Wilson is also a leading expert on the genetic history of the British Isles and was the first to identify genetic signatures of Viking, Irish and Pictish ancestry in Scotland. The patterns of human genetic variation from population to population and the degree of kinship among people are two further focuses of his research. He founded the genetic ancestry testing company, EthnoAncestry, and is engaged in science communication through public speaking, radio, television and a book, *The Scots: a Genetic Journey*.

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