The RSE hosts an Awards Reception every year, at which the achievements of all of its awardees are announced and celebrated. The event took place this year on Monday 7 September. Pictured are eight of the awardees, recipients of various awards, all from the University of Aberdeen. A full list of all the awardees is on pages 12–15 and further details of the evening can be found on the back page.

Also featured in this issue:

- Options for Scotland’s Gas Future
- Interview with Professor Sue Black
- Full list of RSE Awardees 2015
The Scottish Government has declared its ambition for Scotland to become a world-leading entrepreneurial nation. The Business Innovation Forum (BIF) of the Royal Society of Edinburgh welcomes this vision but recognises also that achieving it will require a fundamental shift in the mind set, skills and confidence of Scotland’s current, and future, workforce. Scottish universities have a pivotal role to play in shaping an innovative and dynamic workforce. Research funding bodies, public and private business support agencies and industry are also crucial actors. The BIF, therefore, established a Working Group to discuss the question of entrepreneurial education with stakeholders from across the ecosystem, starting a discussion on how to effectively deliver the key skills and experiences that will support Scotland’s students of today to be confident, entrepreneurially-minded leaders in the future.

The report of the Working Group, published in June 2015, set out a number of emerging recommendations that aim to ensure Scotland-wide access to three levels of entrepreneurial skills training:

- Enterprise education for everyone, to encourage basic business awareness, employability skills and a creative mind-set that will benefit students in all future career paths;
- Entrepreneurship education for those interested in applying these skills specifically to the creation of a new venture; and
- Skills for growth for entrepreneurs and business leaders who are ready to scale up an existing venture.

From the outset, it was clear that a joined-up approach is crucial to ensuring the consistency and quality of entrepreneurial skills and support across Scotland. The report therefore recommends the creation of an Entrepreneurship Education Forum, bringing together high-level representatives of academic institutions, public and private business support organisations and industry practitioners to oversee a comprehensive programme for the delivery of entrepreneurial education in Scotland, with the strong endorsement and support of the Scottish Government and Scottish Funding Council.

In addition, the report calls on universities to consider how they can best support all academic staff to understand the relevance and importance of enterprise education across the full curriculum, and to develop their capacity to introduce enterprise skills into courses. Increased engagement with non-academic lecturers, particularly those who have experienced both success and failure in entrepreneurial ventures, would have a particular impact on developing ambitious, confident students who will be more willing to take risks and seize opportunities in the future.

Universities have powerful potential to ensure that world-class leadership capacity and the ambitions for growth, which are crucial to achieving a step change in Scotland’s innovation economy, are embedded at the earliest stages of learning. Through their business schools, and in partnership with Scotland’s key support agencies and industry, universities should consider how to deliver such skills to emerging entrepreneurial leaders, both within the formal higher education sector and across Scotland more widely.

Options for Scotland’s Gas Future

In light of the significant recent public and political debate that has surrounded unconventional gas, and the process of hydraulic fracturing in particular, a working group of RSE Fellows, Young Academy members and other experts was convened to proactively produce an Advice Paper examining Scotland’s future options for sourcing gas. The Working Group included members from a variety of disciplines and backgrounds and was Chaired by RSE Fellow, Professor Rebecca Lunn. In June, Professor Lunn presented the findings of the paper to the Scottish Parliament’s Cross-Party Group on Science and Technology.

The paper analyses the four choices Scotland has available for sourcing the gas that it will require over the coming decades – demand reduction; import; onshore production; offshore production – and presents the benefits and risks associated with each.

In the Advice Paper, Options for Scotland’s Gas Future, the Working Group stressed the high level of reliance Scotland has on natural gas for both residential and commercial heating. Gas is further required for both electricity generation and as a chemical feedstock for the petrochemical industry. The UK currently imports over 50% of the gas it consumes and so to increase energy security in addition to meeting future demand, the UK may wish to increase domestic onshore or offshore production. Reducing the demand for gas across the country should also be considered, albeit in conjunction with one or several of the other options.

Scotland is also committed to meeting statutory climate change targets and any action that is taken must be consistent with these goals, in addition to addressing energy security, cost to the consumer and public acceptance. Sourcing more gas domestically would give Scotland greater control over environmental control measures such as carbon capture and storage.

Demand reduction is vital, but significant government investment would be needed to ensure extensive uptake by the public. It is also important that the positive effect demand reduction would have on fossil fuel consumption is not negated by simply moving heat demand from gas to electricity, as this could result in increased levels of fuel poverty and a higher electricity demand that Scotland would struggle to meet.

Importing would eliminate the adverse impacts of production on the Scottish public, but would serve to move them abroad; leaving Scotland without the ability to enforce strong regulation surrounding the environment and worker safety. Furthermore, this course of action leaves the UK reliant on other countries, with potentially very different values, for its energy and has a greater climate change impact due to transportation and pipeline leakage.

Irrespective of which option, or options, Scotland decides to take forward, it is imperative that it is done with the support of the Scottish public. The decision must be made following meaningful participation of a well-informed public. Major decisions over energy must be addressed at a societal level and not be imposed from above, nor left to individual communities to accept or decline on a case-by-case basis.

The Working Group, while wishing to avoid endorsing a particular course of action, made two recommendations:

1. The Scottish Government should consider investing funds to reduce the areas of large uncertainty, notably those surrounding health impacts and potential reserves.

2. Public participatory decision making should be used in reaching a verdict on which option, or options, Scotland takes forward.

Onshore production would improve energy security and allow Scotland to control regulation, but could cause disruption and face opposition from communities. Offshore production could improve energy security without disturbing communities, but may prove more expensive and potentially uneconomic. Both onshore and offshore industries suffer from large uncertainty over whether significant viable reserves in Scotland actually exist.

The Advice Paper can be found on the RSE website at: www.royalsoced.org.uk/cms/files/BriefingPaper15-01.pdf
Tuesday 27 October 2015 at 7 pm at Moffat Academy, Moffat

**RSE@THE HOLYWOOD TRUST – PUBLIC TALK**

**Gravitational-Wave Astronomy: Opening a New Window on the Universe**

**Professor Martin Hendry MBE FRSE**
Director, Head, School of Physics and Astronomy, University of Glasgow

Gravitational waves are ripples in the fabric of Space and time, predicted by Einstein and produced by the most violent events in the Cosmos: exploding stars, colliding black holes, even the Big Bang itself. Using a global network of giant laser interferometers – among the most sensitive scientific instruments ever built – astronomers are on the threshold of directly detecting gravitational waves for the very first time. Professor Hendry will describe the remarkable technology that underpins this exciting new field, and highlight the fundamental questions – about stars, galaxies, cosmology, perhaps even the nature of Space and time – that may be answered as we open this new window on the Universe.

Professor Hendry is the winner of the 2015 RSE Public Engagement Senior Prize: both he and the Innovator Prize winner will be presented with their medals at this event.

Wednesday 4 November 2015 at 6 pm

**MacCORMICK EUROPEAN LECTURE**

**Enlightenment: a matter of urgency**

**Professor Gunter Stock**
President, ALLEA (the federation of All European Academies)

The great societal challenges ahead of us, such as climate change and health, can only be tackled if we are able to combine all of our current knowledge and make this knowledge available in a quantitative and timely fashion. This is where modern Academies in Europe and around the globe can play an important role, to present civil society with options and alternatives based on current scientific knowledge and judgement. This is commonly known as scientific advice, but it can be alternatively expressed as modern enlightenment.

The annual MacCormick European Lecture is named after the late Professor Sir Neil MacCormick, in recognition of the contribution made by him to Scottish and European politics and the international work of the RSE.

Tuesday 1 December 2015 at 6 pm

**JAMES BLACK PRIZE LECTURE**

**Sleeping Sickness in Sub-Saharan Africa**

**Professor Peter Kennedy CBE FRSE**
Burton Chair of Neurology, University of Glasgow

Professor Kennedy will describe his work on a new oral drug, which promises improvement in the lives of the rural poor affected by human African trypanosomiasis – sleeping sickness. This killer disease, which occurs in 36 countries in sub-Saharan Africa, putting 70 million people at risk, is transmitted by the bite of the tsetse fly and is invariably fatal if untreated. The current treatment is excruciatingly painful and kills over 8% of people receiving it.

This lecture forms part of an RSE Ordinary Meeting and so will be preceded by Society business, such as Fellows signing the Roll.
Tuesday 8 December 2015 at 6 pm
at Moffat Academy, Moffat

JOINT LECTURE WITH THE
ROYAL INSTITUTE OF PHILOSOPHY

Scientific Generalisations: what’s so good
about missing out all generalisations?

Professor Nancy Cartwright
Professor of Philosophy at the Department of Philosophy, University
of Durham and at the University of California, San Diego (UCSD), USA

Scientific enquiry is about making
generalisations, we are told, about
making things look alike: a few short,
sharp general claims to deal with a
wealth of different cases. We get
them to look that way by blurring
the details, by distorting all the
instances that don’t fit the box.
This talk will discuss how we come
by general truths in science (not
by generalising) and explores some
of the pitfalls in getting back down
to concrete, especially when we want
to use science to build a laser or to
create a better social policy.
AcademiaNet: Your field of research is forensic anthropology, which is the analysis of human remains for medicolegal purposes. How did you become interested in this potentially gruesome discipline?

Professor Black: My very first job when I was 12 years old was in a butcher’s shop. So very early on I became comfortable dealing with blood, bone, muscle, flesh, offal and such things. Later I went to university to study biology, but I hadn’t a clue where that was going to go. In my third year I chose to do anatomy, where you dissect the human body from the top of the head to the bottom of the toes. I found that year just so utterly fascinating, to know not only what’s on the outside of the human but what’s on the inside.

My first exposure to forensic investigation was when a case came along that my supervisor at the time was looking at. You never quite know how you’re going to react to your first forensic case, but I found that it just fascinated me. It seemed a very natural progression from a butcher’s shop into an anatomy department dissecting room to a mortuary assisting the police.

AcademiaNet: After your postgraduate studies, you spent some time as a lecturer in human anatomy before taking up work identifying victims and perpetrators of conflicts for the Foreign and Commonwealth Office and United Nations. What made you transition from academia to fieldwork?

Professor Black: In some respects, it was simply because of a natural break in my academic career. Around that time I moved away from London back up to Scotland and took some time out to try to finish writing a very large textbook. And when something happens overseas, people don’t ask whether you can go out there in six months, they want to know whether you can go out on Friday. While I was writing the book, and didn’t have the full time academic demands on me, the cases started coming along.

AcademiaNet: One of your most notable projects during this time, for which you have been awarded an Order of the British Empire, was leading forensic anthropology in Kosovo after the Yugoslav wars. What role did you play in Kosovo?

Professor Black: I headed out to Kosovo not really knowing what to expect or for how long I would be out there. The British forensic team was the first team to go out to Kosovo after the troops had retreated, so we were very much on the periphery of what was still a war zone. We had huge military protection, there were still snipers in the area.

Although there was one unadulterated crime scene that we had to investigate, our main job in the early stages was to record as much information as possible to support any possible war crime cases. We were required to determine what we thought happened at an indictment site, and if what we thought had happened matched with what witnesses said happened, that would act as very strong evidence to support a war crimes case against someone like Milošević or Karadžić.

AcademiaNet: You mentioned about being exposed to snipers in Kosovo. Your fieldwork has also taken you to Sierra Leone and Iraq. Has your work ever felt dangerous?

Professor Black: When I was in Iraq, it was still very unstable. The military quarters were actually quite safe, but it was quite nerve-wracking when we had to venture out to the crime scenes. When we were in Sierra Leone, there was very high security because the rebel forces desperately wanted to get a hold of hostages. It would have been great if they could have got British hostages, because the British troops were stopping the rebels getting into Freetown. And there’s so much more psychological damage that you can do to a person and a country if your hostage is female rather than male. So you don’t ever take your security lightly, and you have to really trust the people who are around you. But it’s great fun.
AcademiaNet: You mentioned your research briefly. Teeth and bones spring to mind when considering how to identify a body, but your research is about using anatomical knowledge to develop new techniques for identifying people. What sort of approaches are you working on at the moment?

Professor Sue Black: The biometrics we’re working on at the moment are predominantly to do with identification of living people from the back of the hand. A lot of the case work that is coming in to us at the moment is child sexual abuse cases. This is one of the rare crimes where the perpetrator actually photographs themselves, or records themselves, in the act of committing the crime. As a result, parts of the offender’s anatomy – predominantly the backs of their hands – appear in the images.

The anatomical information that is embedded in the back of your hand is phenomenal. For example, the creases of the skin on your knuckles are different on every single finger and different across the two hands. If you look at the pattern of superficial veins on the back of your right hand, it will be different to on your left. If you’ve got freckles, if you’ve got moles, if you’ve got scars, if you’ve got birthmarks – they’ll all be individualistic in terms of their position.

When you start to add up multiple aetiological sources of information, it starts to become very very powerful in being able to identify an individual. About 82 percent of the cases that come to us result in a change of plea, because it is so very obvious when you start to look at detailed anatomy that your hands are just so identifiable.
Fellows Honoured

We offer our congratulations to our Fellows who recently have been honoured in the following ways:

Professor Ian Duncan CorrFRSE, Professor of Neurology, University of Wisconsin, Madison, has received the 2015 Lifetime Excellence in Research Award from the American Veterinary Medical Association (AVMA).

The award honours a veterinary medical researcher for accomplishments in basic, applied or clinical research throughout his or her career.

Professor Duncan’s work focuses on the development and disease of myelin, a material essential to the proper function of the central nervous system.

Professor Duncan was presented with his award at the 2015 Merial–NIH National Veterinary Scholar Symposium held 30 July–2 August 2015 at the University of California, USA.

Professor David Porteous OBE FRSE FMedSci, Chair of Human Molecular Genetics and Medicine at the Institute of Genetics and Molecular Medicine, University of Edinburgh, and his colleagues have been awarded the 26th Neuronal Plasticity Prize of the Fondation IPSEN.

Professor Porteous, Dr Mark Bear (Massachusetts Institute of Technology) and Professor Thomas Bourgeron (Institut Pasteur – CNRS) have received this award for their pioneering work in the domain of genes, synapses and psychiatric disorders.

The Prize was awarded on 8 July at the IBRO World Congress (International Brain Research) in Rio de Janeiro, Brazil.

Congratulations to our past President and Honorary Fellow, Sir Michael Atiyah and his wife, Lily, who celebrated their 60th (Diamond) Wedding anniversary on 30 July 2015.
The RSE and the National Natural Science Foundation of China (NSFC) have a formal agreement, established to support research collaborations between Scotland and China. Under the terms of this agreement, the RSE and NSFC organise an annual workshop on a topic of interest to both countries. This year, the workshop was held in Beijing, China on the topic of Sensors and Imaging.

The two-day workshop commenced on 24 August 2015 and the full title of the workshop was, *Sensors and Imaging Systems – Hyper spectral imaging technologies:* • Remote surveying of marine energy sites; • Land use monitoring; • Water body surveying including flood monitoring and prevention. Workshop participants presented their work in this area, had time to discuss their work with the other participants, and explored opportunities for collaboration. There were approximately eight participants each from Scotland and China.

The Beihang University (BUAA) hosted the workshop and facilitated a very successful event, with participants well matched from both sides, leading to excellent opportunities for collaboration. BUAA arranged a very enjoyable ‘cultural visits’ day to the Great Wall of China and the Thirteen Tombs of the Ming Dynasty (pictured).

Following this workshop, the intention is that participants will submit an application to the RSE–NSFC Joint Project Scheme to support a two-year research project in this subject area, based on the discussions that have taken place during the course of the workshop.

The Joint Project funding is designed to facilitate international collaboration between researchers based in Scotland and China. The NSFC provides a similar level of funding to the Chinese counterpart. The funding may be seen as seed money to enable further collaboration and funding in the future.

Further information on this Joint Project scheme and the application process is available on the RSE website at: www.royalsoced.org.uk/801_NSFC.html
RSE Young Academy of Scotland

Four years on since its establishment, the Young Academy of Scotland (YAS) is now a flourishing group of young leaders working for the benefit of society.

The YAS has nine working groups engaged in a variety of interdisciplinary projects.

The YAS has also now produced a five-year strategic plan, 2020 Vision, which identifies its forward-looking mission, along with its aspirations and priorities. 2020 Vision was launched at this year’s Annual General Meeting. Details of this meeting, as well as other projects which are engaging YAS members, follow.

Open Data: Rethinking Peer Review

On 18 June, the YAS Open Data Working Group held a seminar on the future of the scholarly publishing paradigm, entitled, Science Open: Rethinking Peer Review.

Dr Stephanie Dawson, CEO of ScienceOpen, a freely accessible internet research network, gave a presentation about her company’s vision of the future of scientific communication. While the seminar’s main focus was on Open Access and Post-Publication Peer Review, Dr Dawson considered many of the available traditional and new models for scholarly publishing. The event ended with a lively and productive dialogue on the way research is assessed in the scientific community.

Facilitating Group co-chair, Karly Kehoe (right) introduces 2020 Vision at the 2015 AGM

Pictured with Dr Stephanie Dawson (left) are Young Academy Scotland member, Dr Alexander Kagansky (centre) and Dr Martin Dominik, member of the Global Young Academy, at the reception following the Science Open: Rethinking Peer Review seminar.

For more information on these projects and other YAS activities, please visit the website: www.youngacademyofscotland.org.uk
Annual General Meeting

The YAS held its 2015 AGM at Heriot-Watt University on 26–27 August. The meeting also served as the internal launch of *2020 Vision*, its five-year strategic plan, and featured a presentation of the YAS's six core strategic themes: healthier; smarter; enterprising; sustainable; equal; and international. After the Facilitating Group introduced the strategic plan, working groups broke away to discuss how their plans align with these strategies.

The AGM also saw the introduction of a new working group on *Food and Drink*. This group will encourage engagement and collaboration with food and drink research in Scotland across universities and sectors, connecting academic researchers with the food and drink industry, public policymakers, charitable organisations and the general public. Their main activities will be to organise themed interdisciplinary networking events and collaborate with other organisations to develop public outreach projects. These events and projects will focus on key topics of current importance in relation to food in Scotland and beyond.

Rewrite the Headlines Workshop

One of the YAS’s activities is *Research the Headlines* ([http://researchtheheadlines.org](http://researchtheheadlines.org)), an interdisciplinary blog that explores how research is reported in the media. By looking at media coverage of research from an expert but independent position, the blog aims to give a better understanding of the research behind a variety of stories. Over the two years the blog has been running, 174 articles have been posted, and the site has received over 90,000 views.

*Research the Headlines* has been awarded funding from the British Academy (a Rising Star Engagement Award given to group co-chair, Dr Alan Gow) to launch *Rewrite the Headlines*. This is a competition aiming to engage young people in evaluating research reported in the media, helping them to understand the potential weak points in the pipeline between research and reporting and, in particular, to identify the responsibilities of both researchers and journalists in the process of knowledge dissemination. The aim of the competition is to engage young people in the critical consumption of research that may impact their lives. The competition will focus on primary school children (P5–7) in its first year. After a workshop from a researcher, the students’ task will be to take a news story related to research and ‘rewrite the headline’. Their task will also be involved in the competition. Their task will be to write a blog post very similar to those the Young Academy publishes.

*Rewrite the Headlines* was designed by Young Academy members after a series of pilot workshops for teachers and pupils in Scottish schools. The competition launched in September 2015. For more information, visit the blog ([http://researchtheheadlines.org/](http://researchtheheadlines.org/)) or follow the group on Twitter @ResTheHeadlines.
Scotland’s Research Talent and Innovation Talent

RSE Enterprise Fellowships
Highlands & Islands Enterprise (October 2015)

Alasdair Mort
Centre for Rural Health, University of Aberdeen
MIME: Managing Information in Medical Emergencies

Science and Technology Facilities Council (STFC) (October 2015)

Alexa Alexandrova
Department of Physics, University of Liverpool
D-Beam – Advanced Diagnostics for Changed Particle Beams

STFC & BBSRC (October 2015)

Peter Childs
Institute for Thin Films, Sensors & Imaging, University of the West of Scotland
NanoKick: A nanovibrational bioreactor for stem cell-derived bone grafts

BBSRC (October 2015)

Toby Mottram
School of Agriculture, Food and Environment, Royal Agricultural University, Cirencester
Integrated biosensor and sampler to improve cow fertility management

David I Roper
School of Life Sciences, University of Warwick
Innovation and Discovery in Bacterial peptidoglycan biosynthesis as a route to new antibacterial drugs

RSE Enterprise Fellowships
Scottish Enterprise (April 2015)

Salman Tahir
Edinburgh Technology Transfer Centre (ETTC), University of Edinburgh
Xi: cross-linking analysis software

Lysimachos Zografos
ETTC, University of Edinburgh
Parkure Ltd

Scottish Enterprise and Biotechnology and Biological Sciences Research Council (BBSRC) (April 2015)

Caroline Barelle
School of Medical Sciences, University of Aberdeen
Creation of a new biotech company based on novel therapeutic shark binding domains

Scottish Enterprise (October 2015)

Richard J Walker
CMOS Sensors & Systems Group, School of Engineering, University of Edinburgh
Photon Force Ltd

Colin Gray
School of Arts, Media and Computer Games, University of Abertay
The Podcast Host

Maneesh Varshney
Scottish Eco Innovation Unit (SEIU), University of Strathclyde
Resource Efficient Fish Feed Production to Support Sustainable Aquaculture

Timothy Willis
School of Informatics/Edinburgh Research and Innovation, University of Edinburgh
Tusi by Nautilus Beam – Text input on Wearable Tech

Lessells Travel Scholarships

Martyn McLaggan
BRSe Centre for Fire Safety Engineering, University of Edinburgh
Visiting: School of Civil Engineering, the University of Queensland, Australia
Prevention of fire spread through walls containing novel phase change materials

Alessandro Peloni
School of Engineering, University of Glasgow
Visiting: Department of Mechanical and Aerospace Engineering, University of Florida, USA
Study of solar-sail interplanetary trajectories via direct transcription method

Renaldi Renaldi
Institute for Energy Systems, School of Engineering, University of Edinburgh
Visiting: CanmetENERGY, Natural Resources Canada, Ottawa
Optimisation model validation of energy system with seasonal thermal energy storage

Katrin Skerl
Division of Imaging and Technology, Ninewells Hospital, University of Dundee
Visiting: Nightingale Laboratory, Duke University Biomedical Engineering, USA
Comparison of Shear Wave Elastography (SWE) and Acoustic Radiation Force Imaging in a Phantom Study

Keith Smith
Institute for Digital Communications, University of Edinburgh
Visiting: École Polytechnique Fédérale de Lausanne, Switzerland
Developing the framework of Signal Processing on Graphs in EEG functional connectivity for application towards the prediction of Alzheimer’s Disease.

Carnegie Caledonian Scholarship

Fraser Kenneth Coutts
Department of Electronic and Electrical Engineering, University of Strathclyde
Extension of Key Signal Processing Techniques to the Processing of Broadband Multi-Sensor Data
Cormack Vacation Research Scholarships

Daniel Carron
Mathematics & Physics, University of Dundee
Ultrasound observation, spectroscopy and wave modelling of events from the August 2015 Perseid meteor shower

Steven Kleinegesse
Blackett Laboratory, Imperial College London
Visiting: The Institute for Astronomy, University of St Andrews
The Missing-Baryons Problem

Kyle Martin
School of Physics and Astronomy, University of Glasgow
Thermal Broadening of EUV Spectral Lines from Solar Flares

Magdalena Menz
School of Physics and Astronomy, University of Glasgow
Investigation of Lyman-alpha radiation of solar flares

Amy Rankine
School of Physics and Astronomy, University of St Andrews
Studying the effect of varying alpha-enhanced abundances in full spectral fitting

Piazzi Smyth Research Scholarship (Cormack)

Chris Duckworth
School of Physics, University of Nottingham
Visiting: School of Physics and Astronomy, University of St Andrews
Galaxy Clustering and Bias in the SDSS-IV Extended Baryon Oscillation Spectroscopic Survey

RSE Personal Research Fellowship funded by Caledonian Research Fund (CRF)

Matthew R Livesey
Centre for Integrative Physiology, University of Edinburgh
Physiological function of human pluripotent stem cell-derived neurones and glia

CRF European Travel Fellowships – Visits to Europe

Lorenza Antonucci
Media, Culture and Society, University of West of Scotland
Visiting: European Social Observatory, European Trade Union Institute, Brussels
Exploring the new politics of inequality in the European Union

Bethan Benwell
Division of Literature and Languages, University of Stirling
Visiting: English Seminar, University of Basel, Switzerland
Healthcare Communication: Scottish and Swiss Perspectives

Fabrizio De Francesco
School of Government and Public Policy, University of Strathclyde
Visiting: Institut d’études politiques, historiques et internationales (IEPHI), University of Lausanne, Switzerland
The dynamics of non-proportionate policy response to the 2008–9 financial crisis: a comparative analysis of regulatory reform in six countries

CRF European Travel Fellowships – Visits to Scotland

Maurizio Arcari
Department of National and International Legal Sciences, Universita Milano, Italy
Visiting: School of Law, University of Glasgow
The Responsibility of UN-Mandated or Authorised Peace Support Operations for Human Rights Violations

Zoltan Balazs
Institute of Political Science, Corvinus University, Budapest, Hungary
Visiting: Centre for Ethics, Philosophy and Public Affairs, University of St Andrews
The Political in Aurel Kolnai’s Political Thought

Andreas Gofas
International European and Area Studies, Panteion University of Athens, Greece
Visiting: The Handa Centre for the Study of Terrorism and Political Violence, University of St Andrews
The Origins and Historical Evolution of Transnational Terrorist Waves

Christophe Guillotel-Nothmann
Institut de Recherche en Musicologie, Université Paris–Sorbonne, France
Visiting: Edinburgh University Library, University of Edinburgh
Instrumentalischer Bettlermantl. c. 1650 (Edinburgh University Library Special collections Dc.6.100/319). Electronic edition, terminology and intertextual networks

Emile Shemilt
Duncan of Jordanstone College of Art and Design, University of Dundee
Visiting: Department of Filosofia Comunicazione e Spettacolo (Philosophy, Communication and Entertainment), Università degli Studi Roma Tre
Celluloid Film Futures in Italy: Italy’s current and future capacity to sustain celluloid film practice.

Elaine Webster
Law/Centre for the Study of Human Rights Law, University of Strathclyde
Visiting: Leuven Institute for Human Rights and Critical Studies, Leuven, Belgium
Understanding Human Dignity in European Human Rights Interpretation

Falk Huettig
Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands
Visiting: Psychology, University of Edinburgh
The importance of prediction for language processing

Bjorn-Oliver Magsig
Helmholtz Centre for Environmental Research, Munich, Germany
Visiting: Centre for Water Law, Policy and Science (under the auspices of UNESCO), University of Dundee
Strengthening the International Legal Response to Water Scarcity and Conflicts of Use

Laura Movilla
Public International Law, University of Vigo, Galicia, Spain
Visiting: Strathclyde Centre for Environmental Law and Governance
Legal Proposals for the sustainable governance of transboundary aquifers.

Canan Ezel Tabur
Department of International Relations, Çukurova University, Adana, Turkey
Visiting: The Institute for Advanced Studies in the Humanities (IASH), University of Edinburgh
EU-Level policy-making on migration and development
Research funded by Scottish Funding Council

RSE Personal Research Fellowships

Christoph Busche
School of Chemistry, University of Glasgow
Incorporation of magnetically and redox active molecules in complementary metal–oxide–semiconductor (CMOS) devices

Christos Pliotas
School of Chemistry, University of St Andrews
Opening Mscl: a promising antibacterial target

Lilach Sheiner
Wellcome Trust Centre for Molecular Parasitolology, University of Glasgow
Dance with me? Mechanisms controlling mitochondrion – cell-cycle synchrony in Toxoplasma gondii

Arts & Humanities Small Grants

Patricia Allmer
History of Art, University of Edinburgh, Edinburgh College of Art
Lee Miller: Photography, Surrealism, and Beyond

Glyn Davis
School of Design, Edinburgh College of Art, University of Edinburgh
Visiting: Warhol Museum, Pittsburgh, USA
Andy Warhol’s Final Painting

Alistair Fair
Edinburgh School of Architecture and Landscape Architecture, University of Edinburgh

Stuart Gillespie
English Literature/ School of Critical Studies, University of Glasgow
Newly Recovered Classical Translations, 1600–1800: Online

Brian Hoyle
Film Studies, University of Dundee
Unfilmed Scottish Biopics

Pavel Iosad
Linguistics and English Language, University of Edinburgh
The phonetics and phonology of short vowels in Irish and Scottish Gaelic

Katarzyna Kosmala
School of Media, Culture and Society, University of the West of Scotland
Regeneration and Waterfront Heritage Zones in Northern Europe: Interdisciplinary and Cross-Institutional Research Network

Anna Vaninskaya
English Literature (School of Literatures, Languages and Cultures), University of Edinburgh
Scotland and Russia: Cultural Encounters Since 1900

Graham Jeffery
School of Creative & Cultural Industries, University of the West of Scotland
Network for Oratory and Politics (NOP)

Ernest Schonfield
School of Modern Languages and Cultures, University of Glasgow

Graeme B Wilson
Reid School of Music, Edinburgh College of Art, University of Edinburgh
Concurrent: exploring improvisation between performing arts practitioners

Elizabeth Robertson
English Language, University of Glasgow
Understanding the Senses: Past and Present

Fiona Macpherson
Department of Philosophy, University of Glasgow

Annette Kern-Stahler
Department of English, University of Bern

Arts & Humanities Networks

Peter Duff
Law School, University of Aberdeen
Evolution or Revolution: Scots Criminal Evidence Law in the 21st Century

Maria Economou
School of Humanities and Hunterian Museum, University of Glasgow
Scottish Network on Digital Cultural Resources Evaluation

Murray Pittock FRSE
Pro-Vice-Principal, University of Glasgow
Allan Ramsay and Edinburgh in the First Age of Enlightenment

Anna Vaninskaya
English Literature (School of Literatures, Languages and Cultures), University of Edinburgh
Scotland and Russia: Cultural Encounters Since 1900

Katarzyna Kosmala
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Fiona Macpherson
Department of Philosophy, University of Glasgow

Annette Kern-Stahler
Department of English, University of Bern
Research funded by Scottish Funding Council

**Arts & Humanities Small Grants**

**Justin Livingstone**  
School of Critical Studies, University of Glasgow  
*The Fiction of Exploration: Travellers in Africa and the Colonial Novel*

**Aideen M O’Leary**  
Celtic and Anglo-Saxon Studies, University of Aberdeen  
*Visiting: Department of Anglo-Saxon, Norse, & Celtic, University of Cambridge; the Warburg Institute Library, University of London  
Druidic Apocalypse and Church Reform in Mediaeval Ireland*

**Helen O’Shea**  
History, The Open University (Scotland)  
*The Scottish Contribution to Emergency Law and Order in the Post-War British Empire*

**Ruth Pelzer-Montada**  
School of Art, Edinburgh College of Art, University of Edinburgh  
*Scottish Printmaking at Large*

**Alasdair Raffe**  
School of History, Classics and Archaeology, University of Edinburgh  
*Scotland in Revolution, 1686–90*

**Margaret Stewart**  
Edinburgh School of Architecture and Landscape Architecture, Edinburgh College of Art, University of Edinburgh  
*Printed book* Lord Mar’s plans: architecture, landscape and constitutions, 1700–1732

**Lynn Whitaker**  
Centre for Cultural Policy Research, University of Glasgow  
*Understanding and Regulating Children’s ‘In-app purchasing’*

**Elizabeth Elliott**  
School of Language and Literature, University of Aberdeen  
*The Evergreen: A New Season in the North*

**David J Code**  
School of Culture and Creative Arts, University of Glasgow  
*Building a British Audiovisual Research Network (BARN)*

**Sally Foster**  
History and Politics, University of Stirling  
*Future Thinking on Carved Stones in Scotland*

**Hazel Hutchison**  
School of Language and Literature, University of Aberdeen  
*Women, Science, Narrative: Novel Perspectives on Female Experience in a Scientific Age*

**S Karly Kehoe**  
Social Sciences, Media and Journalism (History), University of Glasgow  
*Landscapes and Lifescapes: linking past rural development in the Scottish Highlands to its global context and its present-day legacies*

**Alexander Marshall**  
History, School of Humanities, University of Glasgow  
*Proxy Actors and Irregular Forces: The Past and Future of Warfare?*

**Jacqui Pestell**  
Department of Education, Royal Botanic Garden Edinburgh  
*The Scottish Nepalese Botanical Art Workshop and Exhibition Programme*

**Ingrid Mainland**  
Archaeology Institute, University of the Highlands and Islands  
**Mark Edmonds**  
Department of Archaeology, University of York  
**Dave Cowley**  
Royal Commission on the Ancient and Historic Monuments of Scotland
Current and past awardees are invited to present posters at the Reception. Dr Muhammad Sadiq, Division of Imaging and Technology (DIT) at the University of Dundee, was awarded a Scottish Enterprise Enterprise Fellowship in 2014 and displayed his poster on *Active Needle Technology for Safe Needle Interventions.*

Pictured on the front cover are recipients of various awards, (including four ‘Crucibilists’), all from the University of Aberdeen: Back row l–r: Hazel Hutchison; Alexandra Lewis; Elizabeth Elliott; Helen Dooley. Front row l–r: Amy Bryzgel; Aideen O’Leary; Heather Morgan; Wei Pang.

Fuller details of all this year’s projects are available in the Research Awards Reception Programme, which can be found on the RSE website at: www.royalsoced.org.uk/66_Publications.html

Scottish Crucible is an award-winning leadership and development programme for Scotland’s ‘research leaders of the future’. In its seventh year in 2015, it brought together 30 highly promising researchers from different institutions and disciplines. It culminated with the award of funding for collaborative projects through the Scottish Crucible Interdisciplinary Project Fund, the recipients of which were announced at the Reception. Nine of this year’s ‘Crucibilists’ were able to attend and are pictured with (on far left), Dr Ruth Neiland, Scottish Crucible Director, Professor Alan Miller FRSE and RSE President, Dame Jocelyn Bell Burnell. Further information is available at: www.ScottishCrucible.org.uk.

I–r Leighanne and James Calvey, Tim and Kirsti Willis. James held a Lessells Scholarship in 2012 and presented a poster entitled, *IntelliBike: monitoring the condition of cycling infrastructure.* Tim of the School of Informatics at the University of Edinburgh is about to commence a Scottish Enterprise Enterprise Fellowship with his development of an app for smartwatches called *Tusi – Text input on Wearable Tech.*