PRESS RELEASE

Monday 8 February 2016

Academic Excellence in Scotland Recognised with Announcement of RSE Prizewinners

Some of Scotland's most exceptional academic talent is being recognised as the Royal Society of Edinburgh (RSE) reveals its 2016 Prizewinners. These awards are presented to individuals at the height of their discipline, as well as those who are showing great potential in the early stages of their career. Representing areas as diverse as particle physics, entrepreneurship and race equality, they highlight the vitality and scope of Scotland's academic sector.

Professor Dame Jocelyn Bell Burnell, President of the RSE, commented, "I offer my warmest congratulations to this year's talented Prizewinners. They, along with previous recipients, help to advance 'learning and useful knowledge', which is also part of the RSE's remit."

Professor Iain Stewart, Professor of Geosciences Communication, School of Geography, Earth & Environmental Sciences, University of Plymouth, receives the RSE Senior Public Engagement Prize. He receives this accolade for his exceptional, wide-ranging public engagement through the medium of broadcasting and his work with school pupils and teachers. Professor Stewart is due to host an RSE and Irvine Bay public lecture at the end of February on the theme of "Scotland Rocks - a Tartan Tour of Planet Earth."

Dr Helen Bridle, Assistant Professor, School of Engineering & Physical Sciences, Heriot-Watt University, is awarded the RSE Innovator's Public Engagement Prize for her innovative and original contributions to public engagement as an ambassador for (young women) engineers and engineering. Her work, delivering the "Ingenious!" outreach scheme to schools and her publication in "Lab on a Chip" has led to increased public engagement activities across schools and science festivals.

Professor Anthony Doyle, SUPA, School of Physics & Astronomy, University of Glasgow, is awarded the RSE/Lord Kelvin Medal, a senior prize, for his outstanding contribution to the field of experimental particle physics and for his extensive public engagement activities. Through developing critical analysis methods, his work has led to major developments that have made the recent discovery of the Higgs Boson possible.

Professor Thomas Simpson FRS FRSE, Alfred Capper Pass Professor of Chemistry, School of Chemistry University of Bristol, receives the RSE/Sir James Black Medal, a senior prize, for his outstanding contribution to the biosynthesis of natural products as a pioneer in the interdisciplinary field of chemical biology.

Dr Asier Unciti-Broceta, PI/Group Leader, Cancer Research UK Edinburgh Centre, MRC Institute of Genetics & Molecular Medicine, University of Edinburgh, is awarded the RSE/Patrick Neill Medal, an early career prize, for his outstanding research work in biomedical technologies and innovative therapeutics through multi-disciplinary collaboration.

Dr Malcolm Macdonald, Reader of Space Technology, Department of Mechanical & Aerospace Engineering, University of Strathclyde, receives the RSE/Makdougall Brisbane Medal, an early career prize, for his outstanding research in the development and application of space mission systems to challenge conventional ideas and advance new concepts in the exploration and exploitation of space. Dr Macdonald is also a Member of the RSE Young Academy of Scotland.

Mr Adam Purvis, Founder and Director, Power of Youth, Edinburgh, receives the RSE/Henry Duncan Medal, an early career prize, for his outstanding work in promoting entrepreneurship across the globe to build a better world through business.

Dr Nasar Meer, Reader in Comparative Social Policy and Citizenship, Faculty of Humanities & Social Sciences, University of Strathclyde, receives the RSE/Thomas Reid Medal, an early career prize, for his ground-breaking research work on Muslim identities, race equality and nationalism. In addition to this, he has an outstanding record in media and public engagement. Dr Meer is also a current RSE Personal Research Fellow.

ENDS.

For more information, contact RSE Press Officer, Hannah Smith on 0131 240 2792, hsmith@royalsoced.org.uk

Notes to Editors

About the RSE
The Royal Society of Edinburgh is a leading educational charity which operates on an independent and non-party-political basis to provide public benefit throughout Scotland. Established by Royal Charter in 1783 by key proponents of the Scottish Enlightenment, the RSE now has around 1600 Fellows from a wide range of disciplines. The work of the RSE includes awarding research funding, leading on major inquiries, informing public policy and delivering events across Scotland to inspire knowledge and learning.

James Weir Foundation Support
The public engagement awards presented to Professor Iain Stewart and Dr Helen Bridle are supported by the James Weir Foundation.

PRESS RELEASE
Monday 30 March 2015

Academic excellence in Scotland recognised with announcement of annual RSE Prizewinners

Some of Scotland's most outstanding academic talent is being highlighted as the Royal Society of Edinburgh reveals its 2015 Prizewinners. The annual awards are made to pre-eminent individuals who have reached the pinnacle of their discipline, and those who are showing great potential in the early stages of their career.

In addition to the academic awardees is **Lord Smith of Kelvin**, who receives the Adam Smith prize, one of the Society's premier awards, for his business leadership and his outstanding contribution to public service, particularly the 2014 Commonwealth Games.

President of the RSE, Professor Dame Jocelyn Bell Burnell, said, "This year's recipients reflect the RSE's Enlightenment spirit and its continued remit to advance learning and useful knowledge. I offer my warmest congratulations to all of them all."

Professor Martin Hendry, Head of the School of Physics and Astronomy, University of Glasgow, receives the RSE Senior Public Engagement Prize for his exceptional and sustained track record on science engagement with the general public, schools, societies and science festivals throughout the world.

Professor Jason Reese, Regius Professor of Engineering and Deputy Head and Director of Research, School of Engineering, University of Edinburgh, is awarded the RSE/Lord Kelvin Medal, a senior prize, for his contribution to the field of engineering both within the UK and internationally, and for his commitment to public engagement in science.

Professor Iain McInnes, Director of the Institute of Infection, Immunity and Inflammation, University of Glasgow, receives the RSE/Sir James Black Medal for his outstanding contribution to the field of immunology through his work in establishing the GLAZgo Discovery Centre, which aims to create better medicines for patients.

Dr Tiziana Lembo, Research Fellow at the Institute of Biodiversity, Animal Health and Comparative Medicine University of Glasgow, is awarded the RSE/Patrick Neill Medal, an early career prize, for her breadth of expertise in veterinary medicine

including data analysis, zoonotic disease, and public and animal health in the developing world.

Dr Mhairi Stewart of the Wellcome Trust Centre for Molecular Parasitology, University of Glasgow, is awarded the RSE Innovator's Public Engagement Prize for her approach to using creativity as a tool for community engagement, particularly in creating collaborative activities between art and science.

Dr Stefan Hild, Reader in Experimental Physics, School of Physics and Astronomy University of Glasgow, receives the RSE/Makdougall Brisbane Medal, an early career prize, for his outstanding work in the field, and in recognition of his international profile. Dr Hild is also a Member of the RSE Young Academy of Scotland.

Dr Martyn Pickersgill, Wellcome Trust Senior Research Fellow in Biomedical Ethics, Centre for Population Health Sciences, University of Edinburgh, receives the RSE/Henry Duncan Medal, an early career prize, for his research work and leadership potential in medical sociology, science and technology studies, and empirical bioethics; and for his commitment to public engagement and the advancement of social sciences. Dr Pickersgill is also an inaugural Member of the RSE Young Academy of Scotland.

Professor Lee Cronin, Regius Chair of Chemistry at the School of Chemistry, University of Glasgow, has been awarded the BP Hutton Prize in Energy Innovation in recognition of his pioneering work to explore new routes to solar-fuels. He will deliver a lecture entitled 'Removing the Fossil from the Fuel' at the RSE on 20 April 2015.

ENDS.

For more information contact Jordan Ogg, on 0131 240 2792.

Notes to Editors

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PRESS RELEASE

Embargoed until midnight on 19 March 2014

Academic excellence recognised as RSE announces Royal Medals and Prizes

The Royal Society of Edinburgh is highlighting some of the UK's most outstanding academic talent with the announcement of its Royal Medallists and Prizewinners for 2014. These annual awards are given to pre-eminent individuals working at the present time, and range from those who have reached the pinnacle of their disciplines and are regarded as such internationally, to those who are showing great potential in the early stages of their careers.

Royal Medals are the most prestigious RSE award. The Society must receive the permission of Her Majesty The Queen to grant them and this year two are being awarded. One is going to **Professor Thomas W B Kibble** for his involvement in the research and discovery of the mechanism that gives mass to elementary particles. The other has been awarded to **Professor Richard G M Morris** for his pioneering work in neuroscience, which has raised the possibility of treatments to stem the global epidemic of dementia and cognitive decline.

The RSE is also pleased to give the James Clerk Maxwell Award in conjunction with the IEEE. This year's winner is **Sir David Payne**, Director of Optoelectronics Research Centre, Southampton, for his groundbreaking contributions to optical fibre technologies and their application to optical communications.

In addition to the above awards, are the RSE's annual Prizewinners. Each of this year's eight awardees currently work for Scottish universities. Together they demonstrate the breadth and vitality of Scotland's academic sector, taking in subjects as diverse as primate science, human genetics and artificial intelligence.

President of the RSE, Sir John Arbuthnott, said: 'One of the great privileges of my role is meeting the Royal Medallists and Prizewinners. These are our highest accolades. They reflect the Enlightenment spirit of the RSE's Royal Charter of 1783 and its remit to advance learning and useful knowledge. My warmest congratulations to all of this year's recipients.'

A full list of the 2014 Royal Medallists and Prizewinners, along with notes on each awardee, follows.

RSE ROYAL MEDALS 2014

The Council of the Royal Society of Edinburgh has received the permission of Her Majesty The Queen to award Royal Medals to the two individuals noted below.

Professor Thomas W B Kibble CBE FRS, Emeritus Professor of Theoretical Physics, Imperial College, for his outstanding contribution to the field of theoretical physics through his research and discovery, with others, of the mechanism that gives mass to elementary particles and which, in so doing, paved the way for unification of the weak and electromagnetic forces.

Professor Richard G M Morris CBE FRS FRSE FMedSci, Royal Society/Wolfson Professor of Neuroscience, University of Edinburgh, for his outstanding contribution to the field of neuroscience through his pioneering work on the identification of the synaptic basis of learning and memory in the mammalian brain, which has raised the possibility of treatments to stem the global epidemic of dementia and cognitive decline.

Tom Kibble was born in India but moved to Edinburgh in 1944 where he attended school and then the University of Edinburgh. He graduated with an MA in Mathematics and Natural Philosophy in 1955, followed a year later with a BSc in Physics. He continued with his PhD studies at the University of Edinburgh under the supervision of Rev Professor John Polkinghorne KBE FRS. Following the completion of his doctorate, Tom Kibble moved to California Institute of Technology for a year as a Commonwealth Fund Fellow. He returned to the UK in 1959 to take up a post as NATO Fellow at Imperial College of Science and Technology in London.

It was at Imperial College that Tom Kibble began the work that helped build today's Standard Model of elementary particle physics. Symmetry between electricity and magnetism enabled James Clerk Maxwell to unify these forces. Tom could see signs of symmetry between electromagnetism and the weak force responsible for radioactivity, but the photon that mediates electromagnetism and the W and Z bosons that mediate the weak force appear very different – the photon is massless, whereas the W and Z bosons are not. The symmetry is broken. In his 1967 paper, Tom Kibble showed that the symmetry-breaking mechanism, which gives rise to the Higgs boson, correctly gives masses to the W and Z, while leaving the photon massless. In doing so, he paved the way for unification of the weak and electromagnetic forces.

During the 1950s and 60s Tom Kibble became concerned about the nuclear arms race. A major issue was radioactive fallout from atmospheric testing, leading to the long and ultimately successful campaign to ban atmospheric nuclear tests. He joined the British Society for Social Responsibility in Science and became its Chairman from 1974 to 1977. He was also an early member of Scientists Against Nuclear Arms and Chaired it from 1985 to 1991.

Tom Kibble was elected a Fellow of the Royal Society in 1980. He was awarded the Hughes Medal of the Royal Society in 1981 and its Royal Medal in 2012. In 1984, the

Institute of Physics awarded him and Professor Peter Higgs the J J Sakurai Prize of the American Institute of Physics in 2010. He was created a Commander of the British Empire in 1998 for services to physics.

Richard Morris is an internationally recognized neuroscientist who has made several highly original contributions to the study of neurobiology of memory. He has developed areas of research that raise the possibility of developing treatments to stem the global epidemic of dementia and cognitive decline.

Richard Morris began his education at school in Washington DC before moving to Wiltshire. He studied Natural Sciences Tripos at the University of Cambridge before completing a PhD in the Laboratory for Experimental Psychology at the University of Sussex. Following a two year period when he worked for the British Museum and the BBC, as a researcher in science and features, Richard Morris moved to Scotland to take up a lecturing post at the University of St Andrews. In 1987 he was promoted to Reader at the University of Edinburgh where he has developed the Centre for Neuroscience. He is the Founder and Co-Director of Edinburgh Neuroscience.

Richard Morris is a pioneer in the development of spatial memory tests and his “watermaze” paradigm, or “Morris Maze”, for studying spatial learning is now globally used as the test of choice for the assessment of mammalian memory. His discovery of the requirement for N-methyl-D-Aspartate (NMDA) receptor involvement in the development of spatial learning was fundamental to the field and led to the development of the “Synaptic Plasticity and Memory” hypothesis, which is now recognized as the best account of how memories are initiated. His work has laid the foundations for the global effort into elucidating the mechanisms of memory processing and subsequent development of treatments for memory loss in dementia.

Professor Morris has worked tirelessly as an ambassador for Scottish and British neuroscience contributing to numerous advisory and strategy groups both nationally and internationally. He is also passionate about the public understanding of science and has supported the work of the education system to encourage and inspire young people to take an interest, and pursue careers, in science.

Richard Morris was elected a Fellow of the Royal Society of Edinburgh in 1994 and the Royal Society in 1997. He was a founding Fellow of the Academy of Medical Science in 1998 and was elected a Fellow of the American Academy of Arts and Sciences in 2005. He received the British Neuroscience Award for Outstanding Achievement in Neuroscience in 2002, the European Journal of Neuroscience Award for Achievement in Neuroscience in 2004 and the Zotterman Medal of the Swedish Physiological Society in 1999. He was created a Commander of the British Empire in 2007 for services to science.

RSE/IEEE/Wolfson, James Clerk Maxwell Award

This joint award was created in 2006 to recognise groundbreaking contributions that have had an exceptional impact on the development of electronics and electrical engineering or related fields.

This year's awardee, **Professor Sir David Payne CBE FRS FREng**, is Director of the Optoelectronics Research Centre at the University of Southampton. A world class pioneer of technology, his work has had a great impact on telecommunications and laser technology over the last forty years. The vast transmission capacity of today's internet results directly from the erbium-doped fibre amplifier (EDFA) invented by David and his team in the 1980s.

His pioneering work in fibre fabrication in the 70s resulted in almost all of the special fibres in use today including fibre lasers which are currently undergoing rapid growth for application in manufacturing and defence. David has made numerous leading contributions to many diverse fields of photonics and is widely acknowledged as an inventor of key components.

An original member of the Highly Cited Researchers (USA) he is honoured as one of the most referenced, influential researchers in the world. He has published over 650 Conference and Journal papers and is a frequent plenary and invited speaker at major international optics conferences.

As an entrepreneur David's activities have led to a cluster of 11 photonics spin out companies in and around Southampton. He founded SPI Lasers PLC, which has recently been purchased by the Trumpf Corporation of Germany for $40M.

He became a Commander of the British Empire in 2007 and was made a Knight Bachelor in the 2013 New Year Honours. In addition he has been awarded the top American, European and Japanese prizes in photonics. Recent awards include the Marconi Prize in 2008 and the 2007 IEEE Photonics Award, the first to be awarded to a person outside the USA. Most recently, in 2010, David received the AILU (Association of Laser Users) Award for his pioneering work with fibre lasers.

RSE PRIZES 2014

RSE/Lord Kelvin Medal (Senior Prize) to Professor Miles Padgett FRSE, Kelvin Chair of Natural Philosophy and Dean for Research, University of Glasgow, for his outstanding contribution to the field of optics through his pioneering work on orbital angular momentum, his promotion of a global community of researchers in this field and his commitment to the public engagement of science.

RSE/Sir James Black Medal (Senior Prize) to Professor Peter Kennedy CBE FRSE FMedSci, Burton Chair of Neurology, University of Glasgow**,** for his outstanding contribution to the field of tropical medicine through his pioneering work on human African trypanosomiasis (sleeping sickness) and Neurovirology.

Senior Public Engagement Prize to Professor Andrew Whiten FRSE FBA, Wardlaw Professor of Psychology and Professor of Evolutionary and Developmental Psychology, University of St Andrews, for his extensive, creative and unique forms of public engagement, particularly as founding Director of the “Living Links to Human Evolution” Research Centre at Edinburgh Zoo.

Innovator’s Public Engagement Prize to Dr Kevin O’Dell, Senior Lecturer, Institute of Biomedical and Life Sciences, University of Glasgow, for his outstanding contribution to public engagement through his skills in both genetics and communication to engage young adults with the world of genetics, particularly through his Zombie Science shows.

RSE/Patrick Neill Medal (Early Career Prize) to Dr Robert Ryan, PI and Wellcome Trust Senior Fellow, Division of Molecular Microbiology, University of Dundee, for his outstanding research work in the field of microbiology, particularly the translational aspects of his work to develop new biomarkers, diagnostics and potential treatments for cystic fibrosis patients.

RSE/Thomas Reid Medal (Early Career Prize) to Dr Katie Stevenson, Senior Lecturer in Late Medieval History, University of St Andrews, for her outstanding scholarly work on the cultural and political history of late medieval Scotland which has established her as a leading international expert in the field and for her commitment to knowledge exchange.

There were two equally worthy winners of the **RSE/Makdougall Brisbane Medal (Early Career Prize)** this year:

Dr. Per Ola Kristensson, Lecturer in Human Computer Interaction, School of Computer Science, University of St Andrews, for his outstanding research work and entrepreneurialism that intersects human-computer interaction, Artificial Intelligence and Machine Learning. Dr. Kristensson is also a Member of the RSE Young Academy of Scotland.

and

Dr. Catherine Cazin, Royal Society University Research Fellow and Lecturer, School of Chemistry, University of St Andrews, for her outstanding research work and breadth and depth of experience in her chosen field of homogeneous catalysis. Dr. Cazin is also a Member of the RSE Young Academy of Scotland.

ENDS.

For more information contact PR & Marketing Officer, Jordan Ogg, on 0131 240 2792.

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RSE PRIZE-WINNERS 2012

RSE Senior Prize-winners 2012

RSE/Sir Walter Scott Medal

Professor Tom Devine OBE FRSE HonMRIA FBA, Senior Research Professor in History at the University of Edinburgh, was awarded the RSE/Sir Walter Scott Medal, for his outstanding contribution to Scottish History. Professor Devine has made a prolific contribution to Scottish historical literature and brought Scottish history alive for audiences around the world. Frequently sought out to contribute to Scottish and UK media and learning festivals, he has also initiated projects of truly international ambition and significance, including founding and developing the Research Centre for Irish and Scottish Studies at Aberdeen, and the University of Edinburgh's Scottish Centre for Diaspora Studies.

RSE/Sir James Black Medal

Professor Geoffrey Gadd FRSE, Boyd Baxter Chair of Biology at the University of Dundee, received the RSE/Sir James Black Medal for his outstanding contribution to the growing field of geo-microbiology. His research has significantly advanced understanding in this field, which concerns the role of microbe and microbial processes in geological and geochemical processes. The winner of several international awards and fellowships, Professor Gadd's research is at the interface of microbiology, geochemistry, mineralogy and mathematics and he regularly contributes to outreach activities, meetings and lectures to both the scientific community and lay audiences.

RSE/Lord Kelvin Medal

Professor Colin McInnes FRSE, Professor of Engineering Science, University of Strathclyde, was awarded the RSE/Lord Kelvin Medal for his outstanding contribution to space systems engineering. Combining elegant applied mathematics with practical and often commercial space applications, Professor McInnes' work on orbital dynamics has played a leading role in the development of solar sail technology, offering the possibility of low-cost, long-distance space missions. His many international links have put Scotland firmly on the map as a leading centre for space engineering research.

Each of the senior Prize-winners will deliver a public lecture in Scotland as part of the RSE events programme and will receive their medals at these events. Details will be publicised on the RSE website when available. Prizes awarded to early career researchers will also be presented at these public lectures.

RSE Early Career Prize-winners 2012

RSE/Makdougall Brisbane Medal

This medal recognises excellent achievements of early career researchers in the physical sciences and was jointly awarded to two equally worthy individuals:-

Dr Sharon Ashbrook, Reader in Physical Chemistry at the University of St Andrews, and at the forefront of research into solid-state Nuclear Magnetic Resonance spectroscopy, for her outstanding scientific quality and leadership record and for her commitment to excellence in all areas of academic life;

and

Dr Rob Jenkins, Senior Lecturer, School of Psychology, University of Glasgow, who has made a number of significant contributions to the field of human face perception and social interaction, for his outstanding scientific creativity, the inter-disciplinary reach of his research and his passion for science communication.

RSE/Patrick Neil Medal

Dr Nicola Stanley-Wall, lecturer in the Division of Molecular Microbiology, University of Dundee, received the RSE/Patrick Neil Medal, the early career prize in the field of life sciences, for her outstanding research work, leadership skills and public engagement activities. Dr Stanley-Wall runs a highly successful research group at the university and her work in encouraging young people to take an interest in microbiology has included organising the two-day 'Magnificent Microbes' event at the Dundee Science Centre.

RSE Beltane Prize-winners for Public Engagement 2012

With these prestigious prizes the Royal Society of Edinburgh and Edinburgh Beltane aim to recognise and promote excellence in public engagement with research, fostering a culture in which researchers consider good communication an integral part of their work.

RSE Beltane Senior Prize for Public Engagement

Professor Tom Devine OBE FRSE HonMRIA FBA, one of Scotland's leading historians, was awarded the RSE Beltane Senior Prize for Public Engagement 2012 for his excellent engagement with the wider community in Scottish History. Professor Tom Devine is Personal Senior Research Professor in History at the University of Edinburgh. In previous roles, he has initiated projects of truly international ambition and significance, including founding and developing the AHRC Centre for Irish and Scottish Studies and the University of Edinburgh's Scottish Centre for Diaspora Studies. Professor Devine is a regular contributor to the RSE's events programme and delivered the 2011 RSE Annual Christmas lecture, which was webcast live around the world.

RSE Beltane Innovator's Prize for Public Engagement

Dr Nicola Stanley-Wall was the winner of the RSE Beltane Innovator's Prize for Public Engagement 2012 for her innovative engagement activities in Molecular Microbiology which exhibit potential for future developments. Dr Stanley-Wall is a lecturer in Molecular Microbiology at the University of Dundee where she also runs a highly successful research programme. She was recently elected to the RSE Young Academy. Examples of her work in public engagement include giving talks at secondary schools and helping to run the RSE Science Masterclasses at the University of Dundee. She is the co-ordinator of the two-day event "Magnificent Microbes" held at the Dundee Science Centre.

The RSE IEEE James Clerk Maxwell Award 2012

Professor Gerhard Sessler, Professor of Electroacoustics at Darmstadt University of Technology in Germany, was awarded the James Clerk Maxwell Award, which is supported by the IEEE and Wolfson Microlelectronics plc, for his work in revolutionising the modern microphone market twice in his career. Firstly when working at Bell Labs in the 1960's, he co-invented the first polymer electric condenser microphone and then again in the 80's when, with his colleague Dietmar Hohm, he designed the first microelectromechanical systems condenser microphone. These were introduced to the market in 2002 and are used in mobile phones, laptops, MP3 players and hearing aids.