Light Sources for Europe

LEAPS Launch Event Programme

LEAPS League of European Accelerator-based Photon Sources
# LEAPS Launch Event

**The Renaissance Hotel, Rue du Parnasse 19, Brussels**  
**Nov 13th 2017, 10.00–17.00**

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<td>10.30</td>
<td>Opening remarks</td>
<td>Hans Chang (Meeting Chair)</td>
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<td>Welcome and introduction to LEAPS</td>
<td>Helmut Dosch (Chair of LEAPS and Chair of the Board of Directors at Deutsches Elektronen-Synchrotron (DESY))</td>
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<td>EC perspectives</td>
<td>Robert-Jan Smits (Director General for Research and Innovation (RTD) at the European Commission)</td>
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| 11.15 | Short statements | Giorgio Rossi (Chair of the European Strategy Forum on Research Infrastructures (ESFRI))  
Carmen Vela (State Secretary for Research and Innovation, Ministry for Economy, Industry and Competitiveness (MINECO), Spain)  
Bruno H Moor (Ambassador, State Secretariat for Research and Education, Division International Cooperation in Research and Innovation, Switzerland)  
Sven Stafström (Director General of the Swedish Research Council) |
| 11.40 | Panel 1 - How can LEAPS push excellence in science? |  |
| 11.40 | Keynote | Francesco Sette (Director General of the European Synchrotron Radiation Facility (ESRF)) |
| 11.55 | Discussion | Francesca Calegari (Professor at the University of Hamburg and Head of the Attosecond Science Division at (DESY))  
Roger Falcone (Professor at the University of California, Director of Advanced Light Source (ALS) and incoming President of the American Physical Society (APS))  
Nønne Prisle (Associate Professor and Academy of Finland Research Fellow, University of Oulu)  
Gebhard Schertler (Professor and Head of the Division of Structural Biology and Membrane Proteins Paul Scherrer Institute (PSI))  
Hugh Simons (Assistant Professor, Technical University of Denmark) |
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| 14.00  | Panel 2 - How can LEAPS push innovation and industry in Europe? | **Keynote**  
Anna Sandström (Director of Science Relations, AstraZeneca)  
**Discussion**  
Lise Arleth (Professor and Head of Studies, Niels Bohr Institute, University of Copenhagen)  
Jean-Pierre Caminade (Scientific Officer of European Affairs at the Department of Large Scale Facilities of the French Ministry of Higher Education, Research and Innovation (MESRI))  
Michael Peiniger (Director of RI Research Instruments GmbH)  
Philip Withers (Professor, University of Manchester) |
| 15.00  | Coffee break                      |                                                                                                                                        |
| 15.40  | Panel 3 - What can LEAPS do for integration, sustainability and education? | **Keynote**  
John Womersley (Director General of the European Spallation Source (ESS))  
**Discussion**  
Edelgard Bulmahn (former German Minister for Education and Research, and Vice President of the Bundestag)  
Stefan Eisebitt (Director of the Max Born Institute and Chair of the German Committee on Research with Synchrotron Radiation (KFS))  
Rolf Heuer (President of the Council for Synchrotron Light for Experimental Science and Applications in the Middle East (SESAME))  
Krystyna Jablonska (Vice Chair of the European Synchrotron User Organisation (ESUO), Professor and Head of the Laboratory for X-ray and Electron Microscopy at the Polish Academy of Sciences)  
Irina Kuklina (Executive Director, International Centre for Innovations in Science, Technology and Education (ICISTE)) |
| 16.00  | Closing remarks                   | Helmut Dosch                                                                                                                             |
| 16.50  | Signing of the LEAPS Consortium Declaration |                                                                                                                                          |
| 17.00  | End                               |                                                                                                                                        |
Contributors

Hans Chang
ESFRI Chair
Meeting Chair

Hans Chang is a consultant on issues of national science policy, research infrastructures and funding agencies. He obtained his PhD in physics in 1972 and during 1975–1985, was Director of research policy at the Dutch Ministry for Education and Sciences. From 1985 to 2009 Hans Chang directed Fundamenteel Onderzoek der Materi (FOM, Fundamental Research of Matter), an umbrella organisation for both national physics laboratories as well as funding agency activities. From 2009 to 2015 he was Director General of the Royal Netherlands Academy of Arts and Sciences. After his retirement from the Royal Academy, he chaired an international peer review of the Ukrainian research and innovation system and was also involved in the mid-term evaluation of Horizon 2020. He currently chairs the ERC Working Group, Cubic Kilometre Neutrino Telescope (KM3NeT), and is involved in discussions about the Future of Fusion. Hans Chang was also co-founder and inaugural Chairman of the European Strategy Forum on Research Infrastructures (ESFRI) and former Vice-Chairman of the OECD Megascience Forum. He was a member and Chair of committees of the European Commission and also of the Global Science Forum.

Helmut Dosch
LEAPS Chair

Introduction to LEAPS

Helmut Dosch has been Chairman of the Deutsches Elektronen-Synchrotron (DESY) Board of Directors since 2009 and is also Vice-President of the Helmholtz Association in Germany. He studied physics at Ludwig-Maximilian University in Munich and was awarded a Feodor Lynen Fellowship from the Alexander von Humboldt Foundation to continue his studies at Cornell University. On returning to Munich, he headed a research group on phase transitions and critical phenomena on alloy surfaces from 1987 to 1991. After a guest professorship at the University of Mainz, he became Professor at the University of Wuppertal. In 1997, he was appointed Director of the Max Planck Institute for Metals Research in Stuttgart. He has earned international recognition for his research on solid interfaces and nanomaterials using synchrotron radiation and he is a member of several national and international advisory committees. For his pioneering research he has received several awards, including the Röntgen Medal and an honorary doctorate from the National Research Centre (NRC, also known as the Kurchatov Institute) in Moscow.
Robert-Jan Smits is Director General of Research and Innovation (RTD) at the European Commission. In this capacity he is responsible for defining and implementing EU policy and programmes in the field of research and innovation (with an average annual budget of €8 billion).

Robert-Jan Smits was one of the main architects and negotiators of Horizon 2020, the €80 billion programme for science and innovation (2014–2020). He has also been instrumental in the development of several initiatives in the field of European science and innovation such as: the European Research Council (ERC), the European Roadmap for large scale facilities, Public-Private Partnerships in research, the Innovation Union and the European Research Area (ERA). Robert-Jan Smits chairs several high-level committees such as European Research Area Committee (ERAC), the Steering Committee of the ERC Executive Agency (ERCEA), the Executive Committee of Global Initiative on Earth Observations (GEO) and joint science and technology committees with Europe’s key global partners.

He has received several awards for his contributions to European science and innovation, including an honorary degree from Edinburgh University, a life-time achievement award from EuroScience and the 2016 Academy Medal from the Royal Netherlands Academy of Arts and Sciences.

Robert-Jan Smits has degrees from Utrecht University in The Netherlands, Institut Universitaire d’Hautes Etudes Internationales in Switzerland and Fletcher School of Law & Diplomacy in the United States of America.

Giorgio Rossi is Professor of physics at the Università degli Studi di Milano, and he leads the APE (Advanced Photoelectric Effect Experiments) and NFFA group at CNR-IOM and Elettra in Trieste.

He performs research in surface and interface science, operating advanced synchrotron radiation beamlines and in situ growth laboratories that are open to academic as well as industrial users. He has coordinated the NFFA-Europe (Nano Foundries and Fine Analysis) European infrastructure since 2008. He chaired the Physical Sciences and Engineering Strategy Work group of European Strategy Forum on research Infrastructures (ESFRI) in 2013–2016, and has served as ESFRI Chair since 2016. He also serves as Chair of the GSO-G8+5 group on Global Research Infrastructures.
Carmen Vela has been the Spanish State Secretary for Research, Development and Innovation since January 2012. Before her appointment, she was the CEO of INGENASA, a biotech company based in Madrid, specialising in animal health. A biochemist with more than 30 years' experience in immunology, virology and related fields, Ms Vela has authored numerous publications and granted patent applications in the EU and the US. Among other responsibilities, she has been a member of the advisory group of PEOPLE (7th European Framework Programme) and of the external advisory committee of EUREKA. She was the former President of the Spanish Biotechnology Society and of the Spanish Association of Women Scientists and Technologists.

Welcome statement

Ambassador Bruno H Moor is presently Head of the Division of International Cooperation in Research and Innovation at the State Secretariat for Education, Research and Innovation, part of the Swiss Ministry of Economic Affairs, Education and Research.

He holds masters degrees in arts, economics and advanced studies, but concluded his studies in economics, theology, ethnology and international relations as well as in conflict research and conflict resolution during his post-doctoral training.

He is responsible for the Switzerland’s participation in the EU framework programmes for research and innovation and in the large international research infrastructure organisations.

With his expertise, he is actively involved in and responsible for various international councils and governing boards such as the European Research Area, CERN, ESS, ESO, E-XFEL and SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East).

During the Swiss EUREKA Chairmanship 2014–2015, he was appointed by the Minister of Economic Affairs, Education and Research to the position of Chairman of the EUREKA High Level Group.

Welcome statement
Sven Stafström received his PhD in theoretical physics from Linköping University (LiU) in Sweden in 1985. In 2000, he became Professor in Computational Physics at LiU, a position he still holds. His main research interests are in studies of charge transport in carbon based materials for electronic applications and he has published more than 220 papers in international science journals.

Sven Stafström has served as Director of Studies at the Department of Physics, Chemistry, and Biology (LiU), acting Dean at Linköping Institute of Technology, Director of the National Supercomputer Centre (NSC) and Head of the Department of Science and Technology at LiU. In 2010, he became Secretary General of the Swedish Research Council for Natural and Engineering Sciences, a position he held until he became acting Director General in November 2013. Since June 2014, he has been the Director General of the Swedish Research Council, a position which will finish in 2020.

Sven Stafström is also a board member of Fulbright Sweden, Vetenskap och Allmänhet (Science and Society), a member of the Advisory Council, Swedish Higher Education Authority and a member of the Council of European Spallation Source (ESS).

Francesco Sette has been the Director General of the European Synchrotron Radiation Facility (ESRF) since 2009. He holds a doctorate in physics from the University of Rome, and is considered to be a pioneer in research with synchrotron radiation. He spent eight years at the AT&T Bell Laboratories in Murray Hill (USA) and joined the ESRF in 1991. Twenty years ago, he co-invented the world’s first high energy resolution, high intensity soft X-ray source, which quickly found its way into many synchrotron light facilities throughout the world. Later, as a group leader at the ESRF, he developed a new generation of inelastic X-ray scattering beam lines, which made possible the study of atomic motions and electronic properties of condensed matter using X-rays. He has published more than 200 scientific publications in peer-reviewed journals.

He is fully involved in the operation and upgrade of the ESRF and in the establishment of the long-term strategic mission in the European and worldwide contexts of analytical large scale infrastructures dedicated to research on condensed matter, materials and living matter. He is actively promoting a global reflection and study for a new generation of diffraction limited high energy photon sources, required for the next steps in fundamental and applied discovery in areas such as energy, health and information technology research. He is presently leading the second phase of the ESRF Upgrade Programme, the ESRF Extremely Brilliant Source (EBS). The ESRF EBS consists of the construction of the first of a new kind of very low horizontal emittance and high brightness, high energy storage rings and of an ambitious programme of new instruments exploiting the new X-ray source.
Francesca Calegari received her PhD from Politecnico di Milano in 2009. She was a Postdoctoral Researcher with CNR-INFM until 2010 and with Politecnico di Milano until 2011.

From 2011–2016, she was a Staff Researcher at CNR-IFN and Adjunct Professor of Physics at Politecnico di Milano. In 2014, she was the visiting scientist at the Max Planck Institute for the Structure and Dynamics of Matter in Hamburg, Germany, and in the same year she was awarded a European Research Council (ERC) grant to investigate the role of electron dynamics in the photochemistry of biomolecules. In 2015, she was awarded a “special recognition to young women in Photonics” by the European Optical Society (EOS). Since August 2016, she has been appointed a Full Professor of Physics at the University of Hamburg and a Leading Scientist at DESY where she leads the Attosecond Science Division. She has published more than 60 peer-reviewed articles in international journals working on ultrafast laser science, atomic and molecular physics. The main focus of her research is to track and ideally control in real-time the electron dynamics occurring in systems with increasing complexity from simple molecules to molecules of biological interest and nanostructured materials.

Roger Falcone is a Professor of physics at the University of California, Berkeley and the Director of the Advanced Light Source (ALS) X-ray synchrotron facility. His research group uses high-energy lasers, short-pulse lasers, and X-ray free electron lasers (XFEL) to study the interaction of light with matter. Their work includes the use of powerful lasers to create matter under extreme conditions of pressure and temperature, and the use of ultrashort laser pulses to study chemical dynamics. Recent work includes the study of ionization under shock compression of matter at pressures up to a billion-atmospheres, and the study of new chemistry and structures such as the appearance of diamonds in highly compressed plastic. He chairs the advisory board of the Paul Scherrer Institute (PSI) and the faculty advisory committee of the Lawrence Hall of Science in Berkeley (a science centre focused on education), and serves on a variety of international advisory committees in the US, Asia, and Europe. He is the incoming president of the American Physical Society (2018), and is a fellow of the Optical Society of America, the American Physical Society, the American Association for the Advancement of Science, and the American Academy of Arts and Sciences. He has received the APS Dawson Award for Excellence in Plasma Physics (2015) and the APS Leo Szilard Lectureship Award (2005).
Nønne Prisle is an Associate Professor and Academy of Finland Research Fellow at the University of Oulu. She has a degree in theoretical physics and earned her PhD in atmospheric chemistry from the University of Copenhagen in 2009. She subsequently held Carlsberg Foundation and Academy of Finland postdoctoral fellowships at the Finnish Meteorological Institute and the University of Helsinki’s renowned Division of Atmospheric Science. During this time, she made research sabbaticals at Carnegie Mellon University, Uppsala University, and Georgia Institute of Technology. At MAX IV, she has taken a central role in the development of novel applications of synchrotron-based methods for atmospheric research. Nønne Prisle received a European Research Council starting grant and leads the synchrotron-based atmospheric research group in Oulu. Her research focus is atmospheric aerosols and clouds, their formation, chemistry, and climate impact. She has developed several theoretical frameworks to describe the roles of thermodynamic parameters in these processes and their implementations to global climate models, and designed experiments to verify the effects. She maintains strong ties to the atmospheric community through a wide portfolio of collaborations in Europe, US, and Asia. Nønne Prisle is now deeply engaged in further developing atmospheric research at MAX IV, through the University of Oulu as a coordinator of all Finnish activities at MAX IV and commissioning of the Finnish-Estonian Beamline for Atmospheric and Materials Science (FinEstBeAMS). Furthermore, she is also a spokesperson for atmospheric research at FinEstBeAMS, and a co-founder and coordinator of the Nordic Community for Synchrotron-based Atmospheric Research (NORDSTAR), serving as a multilateral access point for atmospheric researchers to engage MAX IV and other synchrotron facilities.

Gebhard Schertler investigates the structure and function of G protein coupled receptors (GPCRs). When the group was located at the MRC Laboratory for Molecular Biology (Cambridge, UK), it focused on 3D structural analysis by X-ray and electron crystallography and solved the atomic structures of several GPCRs (rhodopsin, beta adrenergic receptors). With this expertise, Gebhard Schertler successfully revealed the mechanisms of light-induced rhodopsin activation and agonist-binding to a GPCR. Since his move to the Paul Scherrer Institute (PSI) in 2009, Gebhard Schertler established an interdisciplinary research group on GPCRs, including crystallography, electron microscopy, NMR, biophysics, bioinformatics, and a platform for protein expression/purification/crystallisation. He is also responsible for biological applications on the Swiss Free-Electron Laser (SwissFEL) and is involved in the experimental setup and design of biology beamlines for optimization of both, biomolecular nanocrystallography and biological X-FEL imaging. He is also involved in the development of the innovation area at PSI, the Park INNOVAARE and has founded two spin out companies, leadXpro and InterAx. He leads the Department for Biology and Chemistry at PSI, is a member of the Board of Directors at the PSI, and is full Professor for Structural Biology at the ETH in Zürich, Switzerland.
| Hugh Simons  
| Assistant Professor, DTU  
| **Panelist**  
|  
Hugh Simons is an Assistant Professor at the Department of Physics at the Technical University of Denmark. He received his degree and PhD in Materials at the University of New South Wales. From 2013–2015, he was a Postdoctoral Researcher at the European Synchrotron Radiation Facility (ESRF), before completing a postdoctoral fellowship sponsored by the Danish Council for Independent Research at the Technical University of Denmark from 2015–2017. His research intersects materials science and microscopy through the development of novel X-ray and neutron-based methodologies for the quantitative, multi-scale 3D imaging of materials. In particular, he focuses on defects and interfaces in multifunctional oxides including piezoelectrics, ferroelectrics and multiferroics. Most recently, his work has developed and exploited Hard X-Ray Microscopy – a new concept for imaging 3D defect structures and their dynamics in bulk materials. This technique is to be the subject of a new flagship beamline at the ESRF, with which he plans to delve deeper into the structures that give materials their functions.

| Anna Sandström  
| Director Science Relations at AstraZeneca  
| **Keynote**  
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Anna Sandström is the Science Relations Director at AstraZeneca, a global, science-led, innovative biopharmaceutical business, with 59,700 employees of which 8,400 are in R&D. AstraZeneca annually invests about 22% of the revenue in R&D, in 2015 corresponding to $5.9 billion. Her role involves forging new R&D collaborations with academia, companies and third party groups and to contributing to life science polices in the EU and Sweden. She is a physicist by training, with a PhD in Molecular Biophysics from the Karolinska Institutet, which paved the way to positions with Swedish Government Agencies such as Vinnova and the Ministry of Enterprise and Innovation as well as the Royal Academy of Engineering Sciences.

Anna Sandström is board member of the Royal Institute of Technology, the MaxIV synchrotron X-ray source and the Drug Discovery and Development platform at the Science for Life Laboratory, and she also leads the R&D committee at the trade body SwedenBIO.
Lise Arleth received her PhD in Physics in 2002 from Risø National Laboratory and The Royal Danish Veterinary and Agricultural University in Denmark under the supervision of Prof Jan Skov Pedersen. She held a Postdoctoral fellowship at Los Alamos National Laboratory, New Mexico, from 2002 to 2003. Since returning to Denmark in 2003, she has held academic positions at first Risø National Laboratory, then the Royal Veterinary and Agricultural University, and since 2007 at University of Copenhagen. In 2011, she was appointed Professor with special obligations in scattering and synthetic biology at the University of Copenhagen, Faculty of Life Sciences, and in 2015 she became a Professor in Experimental Biophysics at the Niels Bohr Institute of Physics at the University of Copenhagen. Throughout her career, Lise Arleth has used solution small-angle scattering (X-rays and neutrons, i.e. SAXS and SANS) as her main techniques for investigating various self-assembled and colloidal samples at the molecular scale. Presently, Lise Arleth’s research group focuses on developing approaches for investigating membrane proteins under solution conditions. Almost all experiments are carried out at international large scale facilities (X-ray synchrotrons and neutron scattering facilities) in highly interdisciplinary and international scientific environments. Lise Arleth is strongly engaged in the European Spallation Source (ESS) and the MAX-IV Synchrotron projects. Since 2013, her group has also focused their activity on industry outreach within their research expertise area.

Jean-Pierre Caminade is Scientific Officer in charge of European Affairs at the Department of Large Scale Facilities of the French Ministry of Higher Education, Research and Innovation. He is a French representative of the H2020 Research Infrastructure Program Committee and of the ERIC Committee. He is also a National Contact Point for Research Infrastructures H2020 (2014–2020). As such, he has been involved in several ESFRI and OECD working groups devoted to innovation and long-term sustainability of research infrastructures. He was previously in charge of Partnership Management at the SOLEIL Synchrotron facility.
Michael Peiniger
Director Research Instruments

Michael Peiniger received his PhD in physics from the University of Wuppertal in 1989. In 1987 he joined the Siemens daughter company, Interatom GmbH, to grow a new business of radio frequency (rf) accelerators and special manufacturing projects for worldwide research labs and advanced technology industries. In 1994, he co-founded ACCEL Instruments GmbH, which bought out Research Instruments and has developed ACCEL as an entrepreneur and managing director since then. In 2007, ACCEL Instruments was sold to Varian Medical Systems, Inc, and since 2009, the rf accelerator and special manufacturing projects branch of ACCEL was run by RI Research Instruments GmbH, which is majority owned by Bruker Energy and Supercon Technologies, Inc.

Phil Withers
Prof U-Manchester, collaborations with Rolls-Royce

Philip Withers began his academic career at Cambridge University, and was later appointed Chair of The University of Manchester in 1998. He set up the Unit for Stress and Damage Characterisation using diffraction and destructive methods to map residual stresses in engineering components and materials. In 2008, he established the Henry Moseley X-ray Imaging Facility, complemented by beamlines at Diamond Light Source and the European Synchrotron Facility to follow degradation in 3D over time. In 2010, he was awarded the Royal Society Armourers & Brasiers’ Company Prize for his pioneering work on stress and damage characterisation using X-ray and neutron beams. In 2014, his facility was awarded the Queen’s Anniversary Prize in recognition of the impact, excellence and innovation in X-ray imaging.

Philip Withers has made a seminal contribution to our fundamental understanding of the performance of materials through his pioneering use of neutron, synchrotron X-ray and laboratory X-ray beams to provide new insights on behaviour, often in situ operando under demanding conditions. Furthermore, through his leadership of the BP International Centre for Advanced Materials and his role as Chief Scientist for the Henry Royce Institute for Advanced Materials, he has striven to deliver industrial impact as well as science and engineering excellence. He recently became the UK’s first Regius Professor of Materials and is now linking X-ray and electron imaging to enable the study of the same region of interest from the metre to the nanometre scale, coining the phrase ‘Correlative Tomography’.
John Womersley is Director General for the European Spallation Source (ESS), a new European intergovernmental laboratory under construction in Lund, Sweden. ESS will probe the atomic structure of materials and molecules using beams of neutrons, with a wide range of applications from engineering to the life sciences, and will start operation in 2022.

John Womersley previously held the position of Chief Executive of the Science and Technology Facilities Council (STFC), the United Kingdom’s funding agency for large scale science facilities and national laboratories, particle physics, nuclear physics and astronomy. He led the UK’s membership of the European XFEL, ESS, and the SKA telescope project, and established the Hartree Centre as a £300m joint project with IBM. A graduate of Cambridge and Oxford he has played a leading role in particle physics both in Europe and the US. John Womersley worked at Fermilab before becoming a scientific advisor to the Department of Energy in the US. He returned to the UK in 2005 to become Director of the Particle Physics Department at the STFC Rutherford Appleton Laboratory at a time when it was building and delivering vital components to CERN’s Large Hadron Collider. In time, John Womersley took on a broader role as Director of the Science Programmes Office and was then appointed Chief Executive in 2011. He has served on the councils of CERN and ESO, the Fermilab (FRA) Board and the board of AURA. John Womersley has chaired the European Strategy Forum on Research Infrastructures (ESFRI) and the European Commission’s Expert Group on Cost Control and Management in Large Research Infrastructures. John has also served on numerous review panels and boards as an expert including the Helmholtz Association and the Human Brain Project.

Edelgard Bulmahn was a member of the German Parliament from 1987 to 2017, successfully securing a direct mandate in every election without exception. She is a member of the Social Democratic Party of Germany (SPD) and has been a member of the Party Executive for almost 20 years. In the federal state of Lower Saxony, she served as Chairwoman of the SPD from 1998 to 2003. In the federal parliament, she chaired the Committee for Education, Science, Research, Technology, and Technological Impact Assessment in the 1990s and was elected spokeswoman for education and research for the SPD in the Bundestag. From 1998 to 2005, she served as German Federal Minister of Education and Research, and until 2009, she chaired the Committee on Economics and Technology. From 2009 to 2013 Edelgard Bulmahn was the SPD spokeswoman on the Subcommittee for Civilian Crisis Prevention, Conflict Management and Cross-Linked Action. Since 2009, she has served on the Committee for Foreign Affairs and the Subcommittee for Civilian Crisis Prevention, Conflict Management and Integrated Action. From 2013 to October 2017 she was Vice-President of the German Bundestag. She has been awarded an honourary doctorate.
Stefan Eisebitt studied physics at the University of Cologne, and continued his studies at the Research Center Jülich and at the University of British Columbia. He has been using X-rays from accelerator-based facilities throughout his scientific career, starting with storage rings and increasingly using X-ray pulses from free electron lasers in combination with laser light sources. He was a staff scientist at the Research Center Jülich, Stanford Linear Accelerator Laboratory, Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung m.b.H. (BESSY) as well as Helmholtz Zentrum Berlin, where he conducted fundamental research on a variety of nanomaterials using spectroscopic techniques and novel imaging approaches with coherent X-rays, pioneering the use of X-ray holography for nanoscience and in magnetism. Since 2008, he has held a professorship at the Technical University Berlin, and in 2012–2015 he was also a professor at Lund University. In 2015, he was Director of the Max Born Institute for Nonlinear Optics and Short Pulse Spectroscopy in Berlin. Stefan Eisebitt has also been the Chair of the German Committee Research with Synchrotron Radiation from 2014 to 2017, is a member of several advisory boards and has been chairing the Scientific Advisory Board of the European X-ray free-electron laser (XFEL) since 2015.

Rolf Heuer was Director General of CERN from January 2009 to December 2015. His mandate was characterised by the creation of the Large Hadron Collider in 2009, its energy increase in 2015, the discovery of the H-Boson and the geographical enlargement of CERN Membership. From 2004 to 2008, he was Research Director at the DESY laboratory, Germany. He is President of the German Physical Society and President of the Council of Synchrotron Light for Experimental Science and Applications in the Middle East (SESAME). He is Chair of the High Level Group of scientific advisors to the European Commission’s new Scientific Advice Mechanism (SAM). He has published over 500 scientific papers and is a member of several academies of science in Europe. He holds many honorary degrees, received the Grand Cross 1st class of the Order of Merit of the Federal Republic of Germany and was appointed Chevalier de la Légion d’honneur (Knight of the Legion of Honour) by the French Republic.
Krystyna Jablonska is Professor of physics and the Head of the Laboratory for X-ray and Electron Microscopy at the Institute of Physics, Polish Academy of Sciences. Since 1991 she has been involved in the organisation of the access of Polish scientists to the synchrotron facilities. Krystyna Jablonska was one of 20 scientists involved in the registration of the Polish Synchrotron Radiation Society (PSRS) in 1991. She is the member of the PSRS Executive Council (and was Chair from 2005–2011). Krystyna Jablonska also supports the open access to European synchrotron facilities for European users. In the Elisa and Calipso EU I3 projects she was Vice-Chair of the European Synchrotron Users Organization (ESUO). As a result of PSRS activity, a strong community of synchrotron radiation users has been created in Poland and the Polish synchrotron light source, SOLARIS, was built. Since 2007 she has been actively involved in the Working Group on the Scientific and Technical Issues (STI) for XFEL at XFEL STI as a Polish representative and was subsequently a member of the E-XFEL Scientific Advisory Committee (SAC). In the International Crystallographic Union Commission on XAFS she is acting as a Secretary to spread the knowledge about XAS among crystallographers. She has authored over 120 publications in the field of X-ray spectroscopy.

Irina Kuklina is the Executive Director of the International Centre for Innovation in Science, Technology and Education (ICISTE) in Moscow. She graduated from the faculty of psychology of Leningrad State University in 1991 to become a Scientific Fellow and Lecturer at Kazan State University, where she developed courses on small groups dynamics and introduced group methods in training for NGOs and private companies.

From 1995–1998, Irina Kuklina headed the International Projects Department at the National Bahai Office in Russia (in charge of the international socio-economic projects in Russia), then she was the Manager and Deputy Director of Science and Technology for the British Council in Russia.

From 2005 to 2007 Kuklina acted as an Advisor at the Foundation for Assistance to Small Innovative Enterprises (FASIE). As the Head of Scientific-Technological Expert Centre of the Russian Scientific Centre (also known as the Kurchatov Institute) she was an active member of the working group, elaborating the concept of long-term forecasting of scientific-technological developments of the Russian Federation up to 2025. From 2005 to 2008 she was an advisor to the Deputy Head of the RF Federal Agency for Science and Innovation and later an advisor to the Deputy Minister of Science and Education. Irina Kuklina now acts as an expert in International Councils and Working Groups, including the United Nations Industrial Development Organisation (UNIDO) Foresight Programme and Expert Council of the Russian Innovations Competition.

Since 2006, she has been an Executive Director at the International Centre for Innovation in Science, Technology and Education.
For further information please visit the LEAPS website or
email: info@leaps-initiative.eu

www.leaps-initiative.eu