New Research.
New Technology.
New Thinking.

ESOF 2006.ORG
Euroscience Open Forum

July 15th – 19th 2006
Munich, Germany

The 2nd pan-European interdisciplinary science meeting highlighting research and innovation

Programme
Sessions
Activities
Events
The Euroscience Open Forum 2006 wishes to thank the following Partners for their significant contribution:
NEW RESEARCH.

NEW TECHNOLOGY.

NEW THINKING.
Dear Participant,

It is of course normal for the organisers of a meeting to express their hopes at the outset that all will go well, and to make a few general statements about how significant the gathering will be.

ESOF reflects the sheer joy and fascination as well as the worries that science can bring. A meeting of this kind becomes truly great only if we all contribute to the dialogue. We hope that the debates at ESOF2006 contribute to turn Europe into something more than a politicians’ club and that being European will appear one day as more than just a mild statement about diversity of cultures.

A small step towards these aims is your participation in the Euroscience Open Forum. Your presence here is also a statement. Remember, you are also part of the story. This is your show! The success of ESOF2006 will be due to you all, and is of crucial importance to build up the new team spirit. That is the true aim of our gathering. It is the aim of all the members of Euroscience, and hopefully will one day become the aim of all Europeans.

Let our common success in Munich be a real milestone along that road.

Jean-Patrick Connerade
President of Euroscience
Chairman of the ESOF2006 Programme Committee
Welcome to the 2nd Euroscience Open Forum – Building on its outstanding success in Stockholm, ESOF is now established on the agenda of European science communication. It has entered the hearts and minds of scientists and created a novel approach for bringing cutting-edge research closer to the public. ESOF is a strong player in the process of creating the informed citizen who can follow the important decisions taken by the scientific establishment in a knowledge society.

Welcome to Munich – Munich has an excellent reputation as a city of Science. ESOF2006 Outreach Activities and the German national science week (Wissenschaftsommer) merge in Munich’s city centre to engage the public in scientific research, its processes and outcomes.

Welcome to the Deutsches Museum – For more than 100 years the Deutsches Museum serves as an independent platform for the dialogue between science and society. International exchange and openness are deeply rooted traditions. Thus, ESOF2006 and the place “where people fall in love with science and technology” fit together perfectly.

I am deeply indebted to all colleagues, partners and institutions for having accepted the tremendous task of organising and for supporting this great event.

I look forward to a stimulating, fruitful and memorable ESOF2006!

Wolfgang M. Heckl
Director General of the Deutsches Museum
Chairman of the ESOF2006 Steering Committee
ESOF2006 COMMITTEES AND TEAM

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Did you ever wonder why commerce and finance have a global vision, but science does not?
European science remains fragmented and confined by national ambitions regarding organisation and funding. This slows down and hampers the dynamics of European science. To make ourselves more competitive at a global level, we have to overcome these obstacles.

Euroscience is a pan-European ‘grass-roots’ association of individuals who aim to construct scientific Europe “bottom-up”.

The aims and objectives of Euroscience are:

- to strengthen the links between Science and Society
- to contribute to the creation of an integrated research area in Europe
- to influence Science and Technology policies
- to establish the Euroscience Open Forum as a platform for debate on Science and Technology

You like networking? → Join one of our regional sections near you or set up a new one!
You want to play an active part in science policy-making?
→ Join one of our work groups!

JOIN EUROSCIENCE, THE VOICE OF SCIENCE IN EUROPE!
How ESOF was born
For too long, Europe was lacking an independent arena for open dialogue on the role of all the sciences, including the humanities, in society. We have it now with the Euroscience Open Forum. The initiative was taken in 1999 by the researchers themselves: the Euroscience Open Forum was brought to life by Euroscience, a pan-European “grass-roots” organisation.

Euroscience recognised the need for an interdisciplinary, pan-European meeting place for open dialogue and the exchange of ideas.

The ESOF concept
Science and technology are becoming increasingly important as they concern and affect everybody. The Euroscience Open Forum is not an ordinary scientific conference, but a totally new concept. It consists of a Forum for discussion of topical issues, an embedded conference (with an exhibition) to showcase European achievements right across the scientific and technological spectrum, and an outreach programme.

The outreach programme consists of a large number of events and happenings throughout the ESOF host city, which are targeted to the public at large of all ages. At ESOF2004 in Stockholm, the outreach programme “Science in the City” attracted 11,000 visitors. At ESOF2006, the outreach programme is linked to the “Wissenschaftssommer”.

ESOF also serves as a young scientists’ forum, encouraging students, PhD-students and post-docs to share their experience and participate in debates about such subjects as the European Charter for Researchers, how to motivate young people to engage in scientific careers, and how the construction of the European Research Area enhances the prospects of young scientists.

ESOF’s aims are:
• Presenting scientific and technological developments at the cutting edge in all their variety from natural sciences to the social sciences and the humanities
• Stimulating the European public’s awareness of and interest in science and technology
• Fostering a European dialogue on science and technology, society and policy by offering a platform for cross-disciplinary interaction and communication on current trends and future roads for science and technology, their interaction with society and policy and the role of the public

ESOF’s European itinerary
The Euroscience Open Forum is held every other year, visiting the major scientific cities of Europe and bringing European science to the attention of all citizens.

The starting point of ESOF’s European journey was Stockholm, Sweden, in 2004. Two years later, ESOF’s itinerary brought the vent to Munich, Germany. And, after ESOF2006, the route will continue southwards : ESOF2008 will be held in the capital of Catalonia, Barcelona, Spain. ESOF’s exciting host cities reflect Europe’s cultural diversity. Thus, you will experience that the spirit of every Euroscience Open Forum is different…

ESOF’s success depends on you, too!
You can contribute to this open dialogue on all the sciences and on their role in shaping a knowledge-based society.

ESOF invites individuals and organisations to submit their best ideas in the form of proposals for the programme. The best of these proposals will be selected for the Forum by a Programme Committee of international standing.

You can also propose the next destination for ESOF’s travel plans. Euroscience has launched a call for bids to host ESOF2010. For further information, please contact us or visit www.euroscience.org, or the Euroscience exhibition stand at ESOF2006.
Stifterverband
für die Deutsche Wissenschaft

Siemens

Heisenberg

Köhler

What do these people have in common?
## Daily Overview of the Programme

**Saturday 15 July**

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### Friday 21 July

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«We cannot assume that the interaction of science and society will always be appropriate in our world. An ongoing dialogue between scientists, policy makers, media and the general public thus seems essential. Good conditions for the prosecution of science depend heavily on the relationship between science and society – contacts, mutual interest, understanding and confidence are key – and this is exactly what ESOF2006 aims for, by presenting European achievements across the entire scientific spectrum and bringing together scientists, policy makers, journalists and the public. We at the Robert Bosch Stiftung promoted the early development of ESOF and co-initiated ESOF2006 because we consider science to be the most significant resource available to help us build Europe’s future.»

Ingrid Wünning
Head of Science Department at the Robert Bosch Stiftung
Vice Chairman of the ESOF2006 Steering Committee

Join us at our Lounge in the Exhibition Area!

July 16, 2006
12.00 – 13.00
Robert Bosch Stiftung Lounge:
Programs for Science Journalists

Check out our new program »Journalists in Research« which offers sabbaticals in research institutes to experienced German science journalists.

Also see the highlights from our information trips to science sites in Eastern Europe and Russia. Learn more about this programme for German science journalists.

Foundation staff will be available for questions after the presentation and during the whole conference.

Contact:
Atje Drexler and
Rainer Höll

July 17, 2006
8.30 – 9.45
Session:
Success Stories from China
Forum am Deutschen Museum, Room »Antares«

12.00 – 13.00
Robert Bosch Stiftung Lounge:
Science in China

Get in touch with China’s strong research community and talk to three outstanding Chinese scientists from the fields of biotechnology, physics and medicine.

Contact:
Rainer Höll

July 18, 2006
12.00 – 13.00
Robert Bosch Stiftung Lounge:
Science and School

Learn more about Germany’s densest and largest network of schools and research institutes – initiated by the Robert Bosch Stiftung. Scientists present successful models of cooperation with schools programmes NaT-Working and Denkwerk.

Contact:
Rafael Benz and Atje Drexler

19.07.2006
8.30 – 11.15
Session: Latest Research on Cancer Therapy
Forum am Deutschen Museum, Room »Galaxis«

12.00 – 13.00
Robert Bosch Stiftung Lounge:
Research for Cancer Therapy

Discuss the latest news on cancer therapy with cutting-edge international researchers. Prospects, challenges and the boundaries of new developments like targeted molecular therapies are up for discussion.

Contact:
Michael Schwarz
The scientific programme of ESOF2006 includes over 70 seminars, symposia and workshops.

**Scientific Sessions**

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Plenary Lectures

Saturday 15 July  |  19.00 – 20.00
Deutsches Museum,
Luftfahrthalle

Opening Lecture:
A passion for precision

For more than three decades, the quest for ever higher precision in laser spectroscopy of the simple hydrogen atom has inspired many advances in laser, optical, and spectroscopic techniques, culminating in femtosecond laser optical frequency combs as perhaps the most precise measuring tools known to man. Applications range from optical atomic clocks and tests of QED and relativity to searches for time variations of fundamental constants. Recent experiments are extending frequency comb techniques into the extreme ultraviolet. Laser frequency combs can also control the electric field of ultrashort light pulses, creating powerful new tools for the emerging field of attosecond science.

Theodor W. Hänsch is Director of the Max-Planck-Institute for Quantum Optics and Professor of Physics at the Ludwig-Maximilians-Universität in Munich. He shared one half of the 2005 Nobel Prize in Physics with John L. Hall, for “contributions to the development of laser-based precision spectroscopy, including the optical frequency comb technique”.

Robert Huber
Department of Protein Crystallography
Max-Planck-Institut für Biochemie
Martinsried, Germany

Sunday 16 July  |  13.15 – 14.15
Deutsches Museum,
Luftfahrthalle

Plenary Lecture:
Proteins and their structures: from basic science to application

There has been a rapid development in protein crystallography methodology and instrumentation in the last 20 years, allowing the determination of very large and complex protein structures, particularly when combined with electron microscopy. These structures document an unlimited versatility and adaptability of the proteins’ architecture, but also reveal unexpected relationships. Structural determination allows us to understand the proteins’ binding specificities and catalytic properties (chemistry); their spectral and electron transfer properties (physics); and their roles in physiological systems (biology and medicine). They allow design and development of specific ligands of target proteins, opening novel ways for therapeutic intervention and for plant protection.

For more than thirty years (1971-2005) the German biochemist Robert Huber has been Director of the Max-Planck-Institute of Biochemistry in Martinsried, where his team developed methods in the crystallography of proteins. In 1988 he received the Nobel Prize jointly with Johann Deisenhofer and Hartmut Michel for the determination of the three-dimensional structure of a photosynthetic reaction centre.
Plenary Lecture:
Functional brain imaging: from molecules to morals

With the increasing application of functional brain imaging techniques at least two central questions have caught our attention. First, how are the signals detected by functional brain imaging produced? The signals that are detected are related to the “work” of brain cells, manifest as increased energy substrate utilization and blood flow. The question remains – which are the cellular and molecular mechanisms that are involved? Over the last decade, our group has identified some of these mechanisms which appear to involve non neuronal cells, such as glial cells, in coupling synaptic activity with glucose utilization, one of the signals detected by functional brain imaging techniques. Issues concerning the neuroethical implications of functional brain imaging are giving rise to concern.

What use can be made of such information; will it result in an intrusion into the life of individuals who are undergoing such examinations? There is a clear need for a discussion on the ethical implications.

Pierre J. Magistretti, is Professor of Neuroscience and Co-Director of the Brain Mind Institute at the Federal Institute of Technology. He has contributed significantly to the field of brain energy metabolism. He is the recipient of the 1997 Theodore-Ott Prize of the Swiss Academy for Medical Sciences. In 2002 he was awarded the Emil Kraepelin Professorship of the Max-Planck-Institute of Psychiatry in Munich. Between 2002 and 2004, he served as President of the Federation of European Neuroscience Societies (FENS).
One third of the electricity in Europe is currently produced via nuclear fission and the move to innovative reactor systems holds great promise. Yet, concerns about Iran’s nuclear programme and the recent reminder of the Chernobyl disaster are adding to existing public anxieties about the nuclear option.

As the clock ticks down on several Member States’ decision to renew nuclear infrastructures, this talk will address the pros and cons of nuclear fission reactors. Are they safe? Are they competitive? Are they environmentally friendly? Are they a viable energy option for Europe?

Plenary Lecture:
Nuclear Energy: a green option for Europe’s energy needs?

The European Union currently imports 50% of its energy and, going by the present trend, this may increase to 70% within just 20 years. The Kyoto deadlines on targets for CO2 emissions are quickly approaching while the rising economies of China and India are increasingly competing for limited energy sources. Current predictions are that fossil fuels will run out by 2050 and with nuclear fusion far away, can we rely on developments in renewables and hydrogen technology to carry us through?

One third of the electricity in Europe is currently produced via nuclear fission and the move to innovative reactor systems holds great promise. Yet, concerns about Iran’s nuclear programme and the recent reminder of the Chernobyl disaster are adding to existing public anxieties about the nuclear option.

As the clock ticks down on several Member States’ decision to renew nuclear infrastructures, this talk will address the pros and cons of nuclear fission reactors. Are they safe? Are they competitive? Are they environmentally friendly? Are they a viable energy option for Europe?

Following several high level scientific positions in the European Commission (Director at the Institute for Transuranium Elements 2000-2002, Deputy Director General of the Joint Research Centre JRC, 2002-2005), Dr. Roland Schenkel now is the Director General of the JRC. A nuclear physicist, Dr. Schenkel has published over 100 publications on topics such as actinide research and nuclear safeguards.

One third of the electricity in Europe is currently produced via nuclear fission and the move to innovative reactor systems holds great promise. Yet, concerns about Iran’s nuclear programme and the recent reminder of the Chernobyl disaster are adding to existing public anxieties about the nuclear option.

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As a consequence of these limitations, anti-viral therapies are an essential adjunct to vaccines in the effective management of an influenza pandemic. Anti-viral agents would first be used in both the management of infected individuals and for geographically targeted prophylaxis aimed at stemming the spread of the virus. However, should the pandemic strain spread further, anti-viral agents would be essential for the treatment of
Monday 17 July | 11.30 – 12.30
Deutsches Museum,
Luftfahrthalle

Plenary Lecture:
The history and future of the Universe

Cosmologists can now say that our Universe consists of 5 percent of matter like that of which we are made, 25 percent some other, still unknown, form of transparent matter, and 70 percent of a still mysterious form of dark energy, which controls the fate of the Universe. Each step in our growing knowledge imposes a developing appreciation of the failures of our direct and ‘common sense’ view of nature. Millennia of study by the greatest minds led, by the 16th century, to a Universe with Man at its head and its centre, with all Creation subject to Mankind’s desires – an approach still often evident in global planning. Precision large-scale science then arose, rapidly leading to Copernicus and Newton, and our eventual realisation that observation and analysis required a quite different description of reality. The ‘Copernican principle’, essentially states that any explanation for an observation or event which requires a special role for Man or a deity is wrong. This principle has since been applied with great effect, leading to the startling practical and conceptual successes of modern science and its technological offspring. Astrophysics has extended this Copernican discovery concept so far that we know that everything that we see in the Universe, and the very type of matter of which we are made, is an almost insignificant perturbation on a deeper and very different reality. Yet our present models enable us to describe much of the past history of the Universe, from its origin as an imperfect fluctuation in nothing, to the present when gravity has lost control of the fate of the Universe. We are able to consider why the laws of physics allow a Universe which supports life, and to consider possible far future.

Gerry Gilmore is Professor of Experimental Philosophy with the Institute of Astronomy at the University of Cambridge. His research is largely related to stellar populations, what matter really is, and where it is. Professor Gilmore is active on numerous astronomy related projects, such as Gaia, which is an ambitious plan to chart a three dimensional map of the Milky Way. He is also Chair of Opticon, which helps organize and administrate astronomical projects with member EU countries.

Gerry Gilmore
Institute of Astronomy
Cambridge University
United Kingdom

infected individuals, for post-exposure prophylaxis aimed at reducing transmission rates and for prophylaxis of essential services workers. A case study of Roche’s influenza antiviral Tamiflu® will be presented to highlight these issues.

Clustering occurs in diverse fields such as astrophysics, atomic and molecular physics, chemistry, molecular biology, solid-state physics, nuclear physics, plasma physics and technology. Do fundamental laws govern the behaviour and the properties of cluster systems at different scales? Could atomic clusters become the smallest devices or be used to make the smallest devices? Could atomic cluster isomers be manipulated to produce new materials and nanostructures? What is the difference between a nanocluster and a virus? What are the principles of self-organisation, self-assembly and function on the nano-scale? Are these principles different from those governing clustering of galaxies in the Universe?

Following several years of research at the A. F. Ioffe Physico-Technical Institute in St. Petersburg, Andrey Solov’yov is since September 2004 Professor at the Frankfurt Institute for Advanced Studies and Head of the Group ‘Theory of atoms, (bio)molecules and clusters, nano-science’. The theory group of Prof. Dr. Andrey V. Solov’yov focuses on studies of structure formation and properties of a diversity of molecular, nano- and mesoscopic systems as well as on the processes with their involvement.
Monday 17 July | 13.15 – 14.15
Forum am Deutschen Museum, Kino 1

Plenary Lecture:
Public-Private partnerships: an essential element for the European Research Area?

The European Research Area is no longer a dream but it has become our daily life reality. With the creation of the European Research Council, a new element in sponsoring research has come into European science policy. Personally, I am deeply convinced that this new element will contribute to a Europe-wide network of collaboration between academic institutions.

Together with the classical financing instruments of European organisations, there will also be a closer interaction with non-academic, in most cases industrial enterprises. This development will hence foster and enable the creation of clusters which will more and more assume regional, bi-national, and probably also tri-national character. Clusters in their true sense are trying to incorporate as much as possible elements of value creating chains which can only be achieved if scientific institutions with industrial partners will co-operate within such a cluster. Only by these public private partnerships, there will be successful product developments, application oriented science and finally even creation of products for the market. Co-operations between academic institutions of different origin work closely together both in research but also in the process of production.

Hence, public private partnership on top of public public partnerships has to be elaborated more extensively not only on a national but especially on a regional, I mean a European level. In order to facilitate the creation of those clusters, I believe that existing mental attitudes, legal frameworks and administrative rules have to be adapted as early as possible. In this presentation, examples will be shown how clusters of this type emerged in the United States, in Australia and in other parts of the world.

Professor Dr. Günter Stock studied medicine at the University of Heidelberg, where he also taught until 1983. He then joined the pharmaceutical company Schering AG and became Member of the Board in 1989. Since January 2006, he is President of the Berlin-Brandenburg Academy of Sciences and Humanities. Günter Stock is Professor at the Free University of Berlin. He is Member of the Board of the Schering Foundation and serves as Vice-President of the Max-Planck-Society and as Senator of the Deutsche Forschungsgemeinschaft.
Tuesday 18 July | 11.30 – 12.30
Forum am Deutschen Museum, Room Galaxis

Plenary Lecture:
EGEE: an e-Infrastructure for science

EGEE-II is a project that integrates national, regional and thematic Grid efforts to provide a seamless Grid infrastructure for the support of scientific research. The infrastructure supports distributed research communities, which share common Grid computing needs and are prepared to integrate their own computing resources and agree on common access policies. Several scientific disciplines as well as industry have already ported applications on the EGEE Grid infrastructure thus demonstrating the potential of Grid technology as a powerful new tool for science as well as other fields. The expanse of the infrastructure across approximately 40 countries provides access to a world class facility for groups in remote and developing areas. The talk will present the status of grids via the EGEE infrastructure and middleware, give an overview of the variety of applications already using the Grid and highlight how its use can be expanded to more fields and the potential impact in the future.

In November 2005 the computer scientist Bob Jones took on the role of Technical Director for the EU “EGEE”-project (Enabling Grids for E-sciencE). This follows on from previous experience in the grid “arena”, including his position as Technical Co-ordinator and later as Deputy Project Leader for the EU DataGrid project, the flagship Grid project of the European 5th Framework Programme.

Bob Jones
European Organization for Nuclear Research (CERN)
Geneva, Switzerland

Tuesday 18 July | 11.30 – 12.30
Forum am Deutschen Museum, Kino 1

Plenary Lecture:
Perspectives in chemistry: information, self-organization and adaption in chemical systems

Chemistry has developed from molecular chemistry, which has mastered the combination and recombination of atoms into increasingly complex molecules, to supramolecular chemistry; the harnessing of intermolecular forces for the generation of informed supramolecular systems and processes through the implementation of molecular information carried by electromagnetic interactions.

Supramolecular chemistry is actively exploring systems undergoing self-organization, that is to say, systems capable of spontaneously generating well-defined functional supramolecular architectures by self-assembly from their individual components, on the basis of the molecular information stored in the covalent framework of the components. This is read at the
supramolecular level through specific molecular recognition interactional algorithms, giving rise to programmed chemical systems.

Supramolecular entities and molecules containing reversible bonds are able to undergo a continuous change in constitution by reorganization and exchange of building blocks. This capability defines a Constitutional Dynamic Chemistry (CDC) at both the molecular and supramolecular levels. CDC introduces a paradigm shift with respect to constitutionally static chemistry. It takes advantage of dynamic constitutional diversity to allow variation and selection and thus adaptation. The merging of the features:

- information and programmability,
- dynamics and reversibility,
- constitution and structural diversity,
points towards the emergence of an adaptive chemistry.

Jean-Marie Lehn studied chemistry at the University of Strasbourg and gained his doctorate in 1963. In 1970 he was appointed Professor of Chemistry at the Louis Pasteur University in Strasbourg. He was elected to the Collège de France in Paris in 1979. He presently directs the Laboratoire de Chimie Supramoléculaire at ISIS in Strasbourg. In 1987 he was awarded the Nobel Prize for Chemistry, jointly with Donald J. Cram and Charles J. Pedersen, for the development and use of molecules with structure-specific interactions of high selectivity.

Sadik Al-Azm
University of Damascus, Syria

Tuesday 18 July | 11.30 – 12.30
Deutsches Museum,
Luftfahrthalle

Plenary Lecture:
Islam and the science-religion debate in modern times

For some time now sharp debates have been raging – both East and West – over such questions as:
Are Islam and secularism compatible?
Are Islam and democracy compatible?
Are Islam and modernity compatible?

The purpose of my lecture is, first to raise the equally important question, are Islam and modern science compatible? And, second, to explore the historical, epistemological, cultural and political issues involved in the act of posing the question at a time of what seems like an open, tense and dangerous confrontation between an “archaic” Islam, on the one hand, and a post modern West, on the other.

An attempt will be made to provide a critical analysis of the problems at hand and plausible answers to the primary question itself.

Sadik Al-Azm, recipient of the Leopold-Lucas-Preis and Erasmus Laureate (2004) is emeritus Professor of Modern European Philosophy at the University of Damascus. Professor Al-Azm obtained his PhD in modern European Philosophy from Yale University and has also taught at the American University of Beirut, Harvard, Princeton and the University of Hamburg. His research interests focus on the history of Western philosophy and contemporary Arab society, culture and thought and its relationship to the West.
The Internet links people all over the world.

You can find out during the Informatics Year – Science Year 2006 – what other things are possible thanks to informatics.

www.informatikjahr.de
Living with volcanic hazards

Although less frequent and dangerous than earthquakes, volcanic eruptions periodically cause tremendous disasters. However, scientific results achieved in the last decades have increased our understanding of volcanic hazards. A behavioural model can be developed for each volcano, and the type and energy of its future eruptions can be predicted. Eruptions and their impact can be simulated by physical modelling. Geophysical and geochemical signs that lead to eruptive reactivation can be recognised, and a timely alert for impending eruption can be issued. At Etna in 1991-1992 a lava flow was successfully diverted to protect threatened villages. If Vesuvius were to reactivate, a great explosive eruption would affect over 550,000 persons. An emergency plan has been established to protect the population, and a series of actions have been undertaken to reduce the number of residents in the most dangerous area.

Franco Barberi
Dipartimento di Scienze Geologiche
Università degli Studi Roma III
Rome, Italy

Plenary Lecture:
International terrorism and European security

Terrorism is not a new phenomenon and European countries are not unaware of terrorist activity, having had to deal with a number of domestic organisations in the past. Left-wing terrorism, which was a serious concern during the 1970s and 1980s, has mostly been neutralised and has not re-emerged. However, the terror attacks in Madrid (11 March 2004) and London (7 July 2005) have highlighted a worldwide threat, bringing European security issues to the forefront. The recognition that internationalisation of terrorism is increasing has enhanced co-ordination among the European institutional bodies. As the security environment is not clearly defined, the ‘enemy’ remains an abstract phenomenon that at times encompasses (or so it is claimed by certain security forces) economic refugees entering Europe.

Mary Bossis
University of Pireaus
Panteion University
Athens, Greece
Nanotechnology is a current buzz word that attracts the interest of scientists, engineers, enterprisers, media and the public. Nanotechnology and nano-science (N&N) deal with precise control of matter, often atom-by-atom, at extremely small length scales. Today’s transistors in microelectronics are already in the nano-size range (1-100 nm). Future medical biochips may contain tens of millions of diagnostic spots on a thumb nail. N&N may steer stem cells into desired tissues for repairing body and brain. The long-term threatening energy crisis may find solutions from nano-structured solar cells, energy storage devices and more efficient energy systems for industrial production. The nano-size range covers sizes from a few atoms to ‘large’ nanostructures, whose size is still only a small fraction of the diameter of a hair or a living cell. New functionality occurs because transport of electrons is faster and different, and quantum effects give rise to new phenomena. As with any new technology there may be adverse effects, e.g. safety and toxicity. Continuous communication with the public and the media about these aspects is therefore an important responsibility of the N&N society.

Bengt Kasemo has been Professor of Physics at the Department of Physics, Chalmers University of Technology in Gothenburg since 1983. He is a member of a number of organisations and boards, e.g. Royal Swedish Academy of Engineering Sciences, the Swedish Research Council for Engineering Sciences and the European Science Foundation programme on Gas Surface Dynamics.

The American biologist Linda B. Buck, scientific investigator at the Howard Hughes Medical Institute, is best known for her work on the olfactory system. Together with Richard Axel, she won the 2004 Nobel Prize in Physiology or Medicine for their landmark work on olfactory receptors. Dr. Buck is also a Member of the Fred Hutchinson Cancer Research Center and an Affiliate Professor at the University of Washington.
Plenary Lecture:
Unravelling the sense of smell

We have investigated how mammals detect odorant chemicals in the nose and how the brain translates those chemicals into odor perceptions. We found that odorants are detected in the nose by ~1000 different odorant receptors (ORs), which are used in different combinations to encode odor identities. In the nose, different ORs are found on different neurons. Neurons with different ORs are randomly interspersed in the nose, but they connect to OR-specific glomeruli in the brain’s olfactory bulb, creating a stereotyped sensory map. In the olfactory cortex, which receives signals from the bulb, we found another stereotyped map, but here signals from different ORs are mapped onto partially overlapping clusters of neurons and each neuron receives signals from a combination of ORs. Our recent studies indicate that cortical neurons integrate signals from an odorant’s combinatorial receptor code. This may represent a first step in the reconstruction of an odor image from its deconstructed features, which are carried by signals from combinations of ORs.

Linda Buck
Fred Hutchinson Cancer Research Center
Seattle/WA, USA

Plenary Lecture:
Strings, black holes and the end of space and time

Despite spectacular successes in understanding both the laws of elementary particles and the universe itself, fundamental physics is still confronted by important unsolved questions: What happened at the Big Bang? What goes on inside a black hole? What makes up the 96% of that energy in the universe that does not consist of the familiar particles and radiation? By combining theoretical computations with new experiments with both particle accelerators and satellites, physicists struggle to find answers to these Big Questions. Theoretically, string theory seems a promising route to combine all forces and particles into a unified framework to understand the small and the large. This ambitious and mathematically challenging theory suggests that in the end even the familiar concepts of space and time will disappear and will be replaced by something more fundamental.

Robbert Dijkgraaf
Institute for Theoretical Physics
University of Amsterdam
The Netherlands

Robbert Dijkgraaf is since 2005 Professor of Mathematical Physics at the University of Amsterdam. In 2003 he received the Spinoza Award for his research on string theory – the highest honour for scientific work in The Netherlands. Professor Dijkgraaf, who also studied painting at the Gerrit Rietveld Academie, is firmly engaged in enhancing the public awareness of mathematics and science, and bridging the gap with the arts and humanities.
Professor Angela Friederici studied German and Romance languages and literature, linguistics and psychology at the Universities of Bonn and Lausanne (Switzerland). She is the founding Director and scientific member of the Max-Planck-Institute for Human Cognitive and Brain Sciences in Leipzig, as well as Director of the Centre of Cognitive Science at the Centre for Advanced Studies University of Leipzig. She is furthermore Honorary Professor at the University of Potsdam and the Charité University Medicine Berlin. Since January 2006, she is Vice-President of the Berlin-Brandenburgische Akademie der Wissenschaften.

Andres Metspalu
Estonian Biocentre
Tartu University
Estonia

Wednesday 19 July | 13.15 – 14.15
Deutsches Museum, Luftfahrthalle

Plenary Lecture:
The neural basis of auditory language comprehension

One answer to the question "What does it mean to be human?" is certainly "The ability to process language." I will describe the neural network supporting language processing as well as the interplay between different subdomains responsible for the processing of grammatical structure, semantic meaning and sentence melody in adults and in early childhood. In the presentation I will compare the language faculty to music processing, another human specific ability, and demonstrate that these two skills are highly related.

Thursday 20 July | 13.15 – 14.15
Deutsches Museum, Luftfahrthalle

Plenary Lecture:
Genetics and biobanks in Europe: should we care?

Our genes play a fundamental role in determining our health and response to drugs. Common diseases are difficult to treat, but new tools in genetics, such as the human genome sequence, haplotype map, bio-informatics and biobanks, can help our understanding of these diseases. For example, women have a 5-7% lifetime risk of breast cancer, but if there is a mutation in the BRCA1 gene the lifetime risk increases to 80%. The same is true for colon cancers and many other diseases. In order to move from familiar cases (which cover only 3-5% of total cases) to sporadic cases we need a population-based approach using biobanks, of which there are several in Europe.
Combining Cultures

37 Free will vs. determinism?
37 The story tellers of science: architects of culture?
37 Award winning research in the social sciences
38 Ludwig II.: the visionary king of Bavaria
39 The modern view of man: a challenge for philosophy and theology?
39 Outstanding problems in mathematics: challenges or dead ends?
40 TAI-CHI: Tangible acoustic interfaces for computer-human interaction
40 Metaphors in science: friend or foe?
Deutsches Museum

Where people fall in love with science and technology

From the astrolab to the space lab. From mining to a walk-through human cell. Experience the fascination of technology and science at the Deutsches Museum.

Founded more than 100 years ago by Oskar von Miller, today’s Deutsches Museum is one of the world’s biggest and most important museums of science and technology.

Things happen at the Deutsches Museum: temporary special exhibitions highlight topical themes. Kids Kingdom gives 3 to 8-year-olds a fun introduction to the world of technology and science. Germany’s biggest museum library and a valuable special archive on the history of science and technology in Europe supplement the collection.

For more information visit www.deutsches-museum.de
Free will vs. determinism?

Sunday 16 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Solaris

Free will is a focus of debate between the natural and the social sciences. Recent advances in the understanding of brain mechanisms subserving decision-making and action-control have led neuroscientists and psychologists to question whether free will can be considered a crucial characteristic of the human mind and brain. Social scientists and philosophers tend to insist on free will as a fundamental and indispensable ingredient of the human condition. Are these two viewpoints irreconcilable or is there a mid-point?

Wolfgang Prinz (Organiser & Participant)
Max-Planck-Institute for Human Cognitive and Brain Sciences
Leipzig, Germany

The social construction of free will

Martina Hahne (Co-Organiser)
Max-Planck-Institute for Brain Sciences
Leipzig, Germany

Nancy Mushall (Co-Organiser)
Max-Planck-Institute for Brain Sciences
Leipzig, Germany

Wolf Singer (Co-Organiser & Participant)
Max-Planck-Institute for Brain Research
Frankfurt am Main, Germany

Neurobiology and the concept of free will

Ansgar Beckermann (Participant)
Philosophy Department
University of Bielefeld
Germany

Neurobiological findings and free will: a philosophical perspective

Tim Shallice (Participant)
Cognitive Neuropsychology and Neuroimaging Lab
London, United Kingdom

Freedom of the will: from cognitive mechanisms to conscious experience

The story tellers of science: architects of culture?

Sunday 16 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Helios

Science transforms culture. Societies tend to see science as a source of economic wealth, rather than as a source of cultural richness. This is why we need a bridge between the culture of science and the wider culture, to build up a tradition of storytelling dealing with science. Bridge-building already takes place inside each country as cultural endeavours that take up themes raised by scientific research. Some important points of discussion: Which fields of science are the most likely to fundamentally change the way we see ourselves in the near future? Which cultural issues will they raise? What are appropriate ways to tell these stories to a European public? The workshop will present the results of a meeting of leading writers, scientists and artists, who tell the stories of science for their living, held on the eve of ESOF2006.

Stefan Klein (Organiser & Participant)
Berlin, Germany

Leonardo’s legacy: a European perspective on the stories of science

Tor Norretranders (Co-Organiser & Participant)
Hellerup, Denmark

The independent voice: why general culture needs the dissidents of science, but science seemingly doesn’t

John Casti (Participant)
Technical University of Vienna
Austria

Scientific facts, scientific fictions and the storytellers of science: how should science take part in culture?

Carl Djerassi (Participant)
Stanford University
Stanford/CA, USA

Science on stage: can science get attention and be part of the general culture?

Helga Nowotny (Participant)
Wissenschaftszentrum Wien
Austria

The new story telling on science: how the stories of science change as science changes

Award winning research in the social sciences

Sunday 16 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Luna

In this session European Young Investigator Awardees (EURYI Awards) from the social sciences are presenting their prize winning research. Their fields of expertise range from linguistics to demography. They will present latest data and findings on such diverse projects as “Determinants of health inequalities in ageing populations” (Singh-Manoux) or “Psychological Relativity – Comparison Processes in
Judgment, Behavior, and Affect” (Mussweiler). Started in 2003, the EURYI Award scheme enables outstanding young scientists in any area of scientific research, from any country in the world, to create their own research teams at European research centres.

**Wim Blockmans** (Organiser)
Netherlands Institute for Advanced Study (NIAS)
Wassenaar, The Netherlands

**Sjef Barbiers** (Participant)
Meertens Instituut
Royal Netherlands Academy of Science
Amsterdam, The Netherlands

**Thomas Mussweiler** (Participant)
Institut für Psychologie
Universität zu Köln
Germany

**Pasquale Pistone** (Participant)
Department of Austrian and International Tax Law
Vienna University of Economics and Business Administration
Austria

**Archana Singh-Manoux** (Participant)
Institut National de la Santé et de la Recherche Médicale (INSERM)
Saint-Maurice, France

**Robert B. ter Haar Romeny** (Participant)
Faculty of Theology
Leiden University
The Netherlands

**Wim Blockmans** (Organiser)
Netherlands Institute for Advanced Study (NIAS)
Wassenaar, The Netherlands

**Sjef Barbiers** (Participant)
Meertens Instituut
Royal Netherlands Academy of Science
Amsterdam, The Netherlands

**What are the limits of language variation in Europe?**

**Robert B. ter Haar Romeny** (Participant)
Faculty of Theology
Leiden University
The Netherlands

**Identity and migration: Christian minorities in the Middle East and in diaspora**

**Brian O’Neill** (Participant)
International Institute for Applied Systems Analysis (IIASA)
Laxenburg, Austria

**Climate change: should we wait to learn more before acting?**

**Thomas Mussweiler** (Participant)
Institut für Psychologie
Universität zu Köln
Germany

**What’s behind psychological relativity?**

**Pasquale Pistone** (Participant)
Department of Austrian and International Tax Law
Vienna University of Economics and Business Administration
Austria

**Languages and legal idioms**

**Archana Singh-Manoux** (Participant)
Institut National de la Santé et de la Recherche Médicale (INSERM)
Saint-Maurice, France

**Can intelligence explain social inequalities in health?**

**Ludwig II.: the visionary king of Bavaria**

**Sunday 16 July | 14.30 – 17.00**

**Forum am Deutschen Museum | Kino 1**

King Ludwig of Bavaria is often portrayed as having lost touch with reality, but is this actually true? His personal interest in science and technology and other aspects of his complex personality will be explored. He was among the first to appreciate practical applications of science, such as electric lighting in vehicles, telephones in the home, and to understand the architectural possibilities of steel structures. In politics, his opposition to militarism and nationalism and his unsuccessful efforts to keep Bavaria out of wars, both local and European, were far from unwise. Literary aspects of the ‘Ludwig Legend’ will be traced through his impact on European poetry (through Verlaine, Apollinaire, Cocteau and right up to contemporary works, with readings in English, French and German and the participation of contemporary writers). Virtual reality will be used to evoke lost and destroyed gardens and palaces of his period.

**Jean-Patrick Connerade** (Organiser)
Euroscience
Strasbourg, France

**Wolfgang M. Heckl** (Co-Organiser)
Deutsches Museum
Munich, Germany

**Chaunes** (Participant)
Société des Poètes Français
Paris, France

**Ludwig in French poetry and in Western literature (cont.)**

**Sophie Daull** (Participant)
Comedie Française
Paris, France

**Ludwig in French poetry and in Western literature: introduction**

**Gerd Hirzinger** (Participant)
Institute of Robotics and Mechatronics
Deutsches Zentrum für Luft- und Raumfahrt, Oberpfaffenhofen
Wessling, Germany

**Virtual wonderings through vanished castles**

**Sylvio Sal** (Participant)
Editions l’Age d’Homme
Lausanne, Switzerland

**Ludwig in French poetry and in Western literature (cont.)**

**Nick Norwood** (Participant)
Faculty of English
Columbus State University
Columbus/GA, USA

**Ludwig in French poetry and in Western literature (cont.)**

**S.K.H. Prinz Leopold von Bayern** (Participant)
Munich, Germany
The modern view of man: a challenge for philosophy and theology?

Monday 17 July | 8.30 – 11.15
Forum am Deutschen Museum | Room Gaia

The German neurophysiologist Emil du Bois-Reymond stated that “the functioning of the human mind cannot be explained by its physical conditions and never will”. His theory held good for more than 100 years. It seemed that all the constituents of man – personality, consciousness, acceptance of moral values, freedom, relations with mankind, the world and the absolute could not be defined or explained by the physical sciences. Therefore philosophers and theologians moved in this field without fear of coming into conflict with scientists and left to them the task of exploring nature. Coexistence of this kind has vanished. Human cognitive and brain sciences challenge all notions of personality, conscience, responsibility, freedom and ethics. Is the conception of man developed in the Western civilization therefore no longer valid? Can theology meet this challenge in an adequate fashion?

ARMIN RIEDEL (Organiser)
Catholic Academy in Bavaria
Munich, Germany

PETER NEUNER (Co-Organiser & Participant)
Institute for Dogmatics and Ecumenical Theology
University of Munich
Germany
■ Does Christian theology demand a dualistic concept of man?

DIETRICH DÖRNER (Participant)
Institute of Theoretical Psychology
University of Bamberg
Germany
■ Artificial intelligence – artificial souls? Is it possible to create human-like autonomous agents?

HANS FLOHR (Participant)
Institute for Brain Science
University of Bremen
Germany
■ Arguments for a naturalistic concept of mind

JULIAN NIDA-RÜMELIN (Participant)
Institute for Philosophy and Political Theory
University of Munich
Germany
■ Arguments against a naturalistic concept of mind

FRIEDO RICKEN (Participant)
Munich School of Philosophy
Faculty of Philosophy S.J.
Germany
■ The relationship of determination and human freedom

Outstanding problems in mathematics: challenges or dead ends?

Monday 17 July | 8.30 – 9.45
Forum am Deutschen Museum | Room Solaris

Throughout the last two centuries, mathematics has developed at an unprecedented pace. New territories have been explored thanks to the identification of new pertinent concepts and to the development of new tools, some of which are related to the advancement of technology. Interactions with other sciences have brought new challenges to mathematicians, who have developed techniques that have had unexpected and far-reaching impacts. This thrilling adventure remains largely unknown to many professional scientists, let alone the wider public. Key questions discussed in this session include: what are the outstanding mathematical problems? Did they and do they still play a key role in the development of the discipline? How can scientists and the public be informed of progress? Can stimulations from other disciplines and society play a role in their resolution?

JEAN-PIERRE BOURGUIGNON (Organiser)
Institut des Hautes Etudes Scientifiques
Bures-sur-Yvette, France

JAMES CARLSON (Participant)
Clay Mathematics Institute
Cambridge/MA, USA
■ The Poincaré conjecture: a century old puzzle about space, is it solved?
TAI-CHI: Tangible acoustic interfaces for computer-human interaction

Monday 17 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Antares

Following the use of vision and speech recognition for man-machine interactive interfaces, the next step is to transfer the human sense of touch into the computer realm. Tangible Acoustic Interfaces (TAI) rely on various acoustic-sensing technologies to detect the position of contact of users interacting with the surface of solid materials. With their ability to transform almost any physical object, flat or curved, into an interface, acoustic sensing technologies are a promising way to bring the sense of touch into the scope of computer interaction. An application of particular interest is the use of TAI for the design of novel musical instruments that match the feel and expressiveness of classical instruments. During the workshop, participants will be able to create music with an installation of sound-making objects.

Wolfgang Rolshofen (Organiser & Participant)
Institute for Mechanical Engineering
Technische Universität Clausthal
Clausthal-Zellerfeld, Germany
- Is in solid acoustic visible?

Alain Crevoisier (Co-Organiser & Participant)
Cedric Bornand (Participant)
Arnaud Guichard (Participant)
Centre d’Etudes et de Transferts Technologiques (CeTT)
Yverdon-les-Bains, Switzerland
- SenseWeb: a modular hardware platform for processing multimodal interfaces

Stefan Catheline (Co-Organiser)
Laboratoire Ondes et Acoustique (LOA, ESPCI)
Paris, France

Ying Sun (Participant)
Lejun Xiao (Participant)
Department of Electronic, Electrical and Computer Engineering
University of Birmingham
United Kingdom
- Progress in in-air passive and active acoustic source localization

Ming Yang (Participant)
Manufacturing Engineering Centre
Cardiff University
United Kingdom
- Tai-Chi makes daily life easier

Metaphors in science: friend or foe?

Tuesday 18 July | 17.15 – 18.30
Forum am Deutschen Museum | Room Helios

Metaphors seem to be useful and indispensable means to express scientific ideas. They are central to scientific thinking, are at the very roots of science and establish bridges to other knowledge-cultures. However, there are also obvious pitfalls to using metaphors. For example, the ‘book of life’ metaphor in molecular biology has no obvious explanatory power. Furthermore, metaphors transport not only intended analogies but also unintended ones. How can such pitfalls be avoided? Can linguistic analysis contribute to raising awareness about the use of metaphors and may it lead to their more fruitful use?

Marc-Denis Weitz (Organiser)
Deutsches Museum
Munich, Germany

Wolf-Andreas Liebert (Co-Organiser & Participant)
Universität Koblenz-Landau
Koblenz, Germany
- Everything under control

Manfred Laubichler (Participant)
School of Life Science
Arizona State University
Tempe/AZ, USA
- ‘Natural enemies’: metaphor or misconception?

Brigitte Nerlich (Participant)
Institute for the Study of Genetics, Biorisks and Society
University of Nottingham
United Kingdom
- The politics and ethics of metaphors: the case of Hwang Woo-Suk
Dealing with Disasters

42 Riding the storm: can science keep us in the saddle?
42 Treating phobias with virtual reality

DEALING WITH DISASTERS

42 Volcanism and mass extinctions: the modus operandi of a killer eruption
43 A fresh look at catastrophe management
44 Thinking beyond experience: how to prepare for mega-disasters?
Riding the storm: can science keep us in the saddle?
Sunday 16 July | 8.30 – 11.15
Forum am Deutschen Museum | Kino 3

The last two years have been marked by a significant number of natural disasters, such as floods, hurricanes, earthquakes and tsunamis. Such extreme natural events can change the life and economic development of countries within minutes and throw them back for decades. They constitute a pending danger for vulnerable lifelines and infrastructure such as water supply and reservoirs, pipelines and power plants. The larger the magnitude of the event the less likely it is to happen, but the damage caused increases rapidly, and so does the cost of protection against it. The symposium will discuss the origins, predictability and consequences of extreme natural events, and analyse the impact of geohazards on society.

AIKH ISMAIL-ZADEH (Organiser & Participant)
International Union of Geodesy and Geophysics (IUGG) GeoRisk Commission Geophysikalisches Institut Universität Karlsruhe Germany
- Introduction – the role of science in preventive disaster management of extreme natural events

VLADIMIR KOSSOBOKOV (Participant)
International Institute of Earthquake Prediction Russian Academy of Sciences Moscow, Russia
- Earthquake prediction: principles, implementation, perspectives

HORMOZ MODARESI (Participant)
Bureau de Recherche Géologiques et Minières (BRGM) Orléans, France
- Integrated global observation strategy for disaster reduction

JOHN PATERSON (Participant)
School of Law University of Aberdeen United Kingdom
- Disaster risk management and governance

ANSELM SMOLKA (Participant)
Munich Reinsurance Company Germany
- Natural disasters and the challenge of extreme events – risk management from an insurance perspective

TREDEMANN WENZEL (Participant)
Geophysikalisches Institut Universität Karlsruhe Germany
- Extreme natural events: from science to preparedness

Treating phobias with virtual reality
Sunday 16 July | 17.15 – 18.30
Forum am Deutschen Museum | Kino 3

Virtual reality experiences that evoke anxieties are used in the treatment of phobias. They are less intimidating for the patient, quick to implement and provide the therapist with greater control of the stimuli with which the patient is confronted. Patients are exposed to the stimuli they fear, which helps to reduce the phobia. This is particularly important for populations with special needs. This session will present a virtual earthquake scenario that was used for treatment and training of Down syndrome children in Thessalonica, Greece.

IOANNIS TARNANAS (Organiser & Participant)
Peopleware – Creative Assistive Technologies Laboratory Thessalonica, Greece
- A virtual earthquake environment

RAY LATYPOV (Participant)
Virtusphere Technologies and Peopleware Initiative Thessalonica, Greece
- Virtusphere reality training

INGEGARD MALMROS (Participant)
Department of Clinical Neuroscience Karolinska Institute Visby, Sweden
- Psychophysiological measures and virtual reality

MARTIJN BOOSMAN (Participant)
E-semble Corporation Delft, The Netherlands
- DiaboloVR as a crisis simulator

ALBERT RIZZO (Participant)
Institute for Creative Technologies and School of Gerontology University of Southern California Los Angeles/CA, USA
- A virtual classroom for all seasons

BRENDA WIEDERHOLD (Participant)
The Virtual Reality Medical Center San Diego/CA, USA
- Real-time training for stressful situations

Volcanism and mass extinctions: the modus operandi of a killer eruption
Monday 17 July | 17.15 – 18.30
Forum am Deutschen Museum | Kino 2

Accepted wisdom is that the impact of a giant meteorite killed off the dinosaurs. The Cretaceous-Tertiary mass extinction coincided with a meteorite impact but also with major flood volcanism in the Deccan province of India. Both events had disastrous effects on the environment and both contributed to the biological crisis. In contrast, the massive ‘die-out’ at the Permian-Triassic boundary, when 95% of all marine species became extinct, coincides precisely with
the eruption of the enormous Siberian flood basalts. But there was no meteor impact. Clearly, not all eruptions lead to mass extinctions. Why is this so? Why did some, but not all, large-volume volcanic eruptions have a major impact on the environment? What is the modus operandi of a killer eruption?

Nicholas Arndt (Organiser)
Laboratoire de Géodynamique des Chaines Alpines (LGCA)
Université Joseph Fourier
Grenoble, France

Sverre Planke (Co-Organiser & Participant)
Volcanic Basin Petroleum Research
University of Oslo
Norway

Introduction

Alan Robock (Participant)
Department of Environmental Sciences
Rutgers University
New Brunswick/NJ, USA

Volcanic eruptions and the environment: the historic record

Andy Saunders (Participant)
Department of Geology
University of Leicester
United Kingdom

Large igneous provinces and mass extinctions: the geological record

Henrik Svensen (Participant)
Physics of Geological Processes
University of Oslo
Norway

Global climate change and mass extinctions caused by intrusive volcanism?

A fresh look at catastrophe management

Wednesday 19 July | 8.30 – 9.45
Forum am Deutschen Museum | Kino 3

Some disasters may be preventable. Vulnerabilities to their effects, however, are easier to predict. This whole topic of disaster prevention and warning is crucial to successful management of a crisis and needs further examination and development. In particular the interplay of natural and man made threats with social, economic and political factors in a complex emergency is a challenging mixture. Once a catastrophe has occurred correct identification of priorities and an accurate assessment of need are both crucial. The early responses can be indicative of both success in the emergency phase but also subsequent development choices. This early assessment is the critical enabling step and needs to be soundly based on evidence and experience. An unfortunate consequence of disasters is increased mortality in the affected population. There has been a public emphasis on the disposal of the dead often to the immediate detriment of infrastructure repair. The risks to public health posed by unburied dead need to be evaluated and assessed allowing a better allocation of scarce resources to be achieved.
Thinking beyond experience: how to prepare for mega-disasters?

Wednesday 19 July | 10.00 – 11.15
Forum am Deutschen Museum | Kino 3

How can we plan for disasters on a scale not previously experienced? Extreme events that have a large and long-term impact on society will show that preparations are usually inadequate. The economic and social impact of disasters is now greater because of concentration of population and assets. For example, a high-magnitude earthquake in Tokyo, would affect the world economy severely. Extreme events are critical elements in the evolution of many natural and human systems. Given the importance of mega-events and our ignorance about their causes and consequences we require more creative strategies for understanding extreme events, improved capacities in crisis management, and an open discussion in society involving scientists, decision makers and the public.

**Kim Edmunds** (Organiser)
Society of Apothecaries
London, United Kingdom

**Rowland Gill** (Participant)
Faculty of Conflict and Catastrophe Medicine
Society of Apothecaries
London, United Kingdom
- Disaster prediction and early warning

**Alan Hawley** (Participant)
Faculty of Conflict and Catastrophe Medicine
Society of Apothecaries
London, United Kingdom
- Immediate response to catastrophes

**Tim Healing** (Participant)
Faculty of Conflict and Catastrophe Medicine
Society of Apothecaries
London, United Kingdom
- Dealing with the dead

**Harald Mehl** (Participant)
German Remote Sensing Data Center (DFD)
Deutsches Zentrum für Luft- und Raumfahrt, Oberpfaffenhofen
Wessling, Germany
- Earth observation and crisis management

**Joanne Linneroth-Bayer** (Participant)
International Institute on Applied System Analysis
Laxenburg, Austria
- Appropriate policy responses to mega-disaster risks

**Bruno Merz** (Organiser)
GeoForschungsZentrum Potsdam
Germany

**Jochen Zschau** (Co-Organiser)
GeoForschungsZentrum Potsdam
Germany

**Mustafa Erdik** (Participant)
Department of Earthquake Engineering
Bogazici University Kandilli Observatory and Earthquake Research Institute
Istanbul, Turkey
- Megacities and earthquakes: example Istanbul
Scientific Sessions

Earth and Environment

46  A new look at the ocean
46  Green chemistry: a tool for socio-economic development and environmental protection
47  Back to the future of climate change
47  Digital Europe: be INSPIRED!
49  Biological invasions: a disaster for biodiversity?
49  Volcanoes of the deep sea
49  Life on the ridge: microbes, mining, management and more

EARTH AND ENVIRONMENT
A new look at the ocean

Sunday 16 July | 8.30 – 11.15
Forum am Deutschen Museum | Room Solaris

About 50% of the world population lives within 100 km from a coast and even more people depend on marine resources. The ocean plays an important role in climate regulation and change, and its biological and geological resources are important for future generations. However, overfishing, increasing water pollution and global climatic variations threaten the marine environment. Marine scientists have developed many new methods for the study of the ocean and coastal waters, including automated instruments on ferries, buoys and floating/gliding devices to answer various questions posed by transport, wind-farms, pipelines and recreation. This workshop will focus on the use and monitoring of the coastal zone and their potential benefits for industry and society.

Friedhelm Schroeder (Organiser)
Institute for Coastal Research
GKSS Research Centre
Geesthacht, Germany

Wilhelm Petersen (Co-Organiser)
Institute for Coastal Research
GKSS Research Centre
Geesthacht, Germany

Karen Wiltshire (Co-Organiser)
Alfred Wegener Institute for Polar and Marine Research (AWI)
Bremerhaven, Germany

Franciscus Colijn (Participant)
Institute for Coastal Research
GKSS Research Centre
Geesthacht, Germany
- New methods for marine research and monitoring: a chance for science and industry

Hans Dahlin (Participant)
Swedish Meteorological and Hydrological Institute (SMHI)
Norrköping, Sweden
- Initiatives for integrating marine European research: EurGoos, meeting the requirements of the users

Peter Ehlers (Participant)
Bundesamt für Seeschifffahrt und Hydrographie (BSH)
Hamburg, Germany
- Use of the marine environment for shipping, industry and society: approvals and regulations

David Hydes (Participant)
National Oceanography Centre
Southampton, United Kingdom
- How new technology and mathematics can enable us to understand man’s impact on the sea and the impact of the sea on man

Jacques Legrand (Participant)
Institut Français de Recherche pour l’Exploration de la Mer (IFREMER)
Technopole de Brest-Iroise
Plouzane, France
- Operational coastal oceanography: monitoring the general impact of human activities

Gerold Wefer (Participant)
DFG Research Center Ocean Margins
University of Bremen
Germany
- Discovery of the deep ocean: hi-tech instruments and fascinating phenomena

Green chemistry: a tool for socio-economic development and environmental protection

Sunday 16 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Antares

Green chemistry is the design, development, and implementation of chemical products and processes to reduce or eliminate the use and generation of substances hazardous to human health and the environment. The symposium will discuss the practical implementation of green chemistry. Is this scientifically viable at this stage of research development? Are industry and its management capable of taking up the challenge, both from economical and attitudinal points of view? Are politicians and institutions ready to encourage and support forward-looking but financially risky initiatives? What is the relation between green chemistry and the EU regulatory framework for chemicals (REACH)?

Pietro Tundo (Organiser & Participant)
Interuniversity Consortium Chemistry for the Environment (INCA)
Marghera, Italy
- Green chemistry world wide: a survey of recent developments

Alvise Perosa (Co-Organiser)
Interuniversity Consortium Chemistry for the Environment (INCA)
Marghera, Italy
Back to the future of climate change

Monday 17 July | 17.15 – 18.30
Forum am Deutschen Museum | Kino 3

Tackling uncertainty is a major issue in the political debate on climate change. Better models are required to provide a more robust scientific basis for climate policy. Paleoclimate data reveal, unambiguously, that the earth’s climate is not steady. Natural variations occur on timescales of a few years to many thousands of years. More specifically, the earth’s climate system is capable of exhibiting abrupt changes with large amplitudes over the time span of a few decades or less. The goal of this session is to review the most recent scientific highlights in the field of paleoclimatic research and to explain their implications. A specific aim is to evaluate the potential of climate models for prediction based on hindcasting.

Michael Schulz (Organiser)
DFG Research Center Ocean Margins
University of Bremen
Germany

Eystein Jansen (Co-Organiser & Participant)
Bjerknes Centre for Climate Research
Bergen, Norway
- How can knowledge of the past improve our ability to predict the future?

Richard Alley (Participant)
Department of Geosciences and EMS Environment Institute
Pennsylvania State University
University Park/PA, USA
- Abrupt climate change: inevitable surprises

Alessandro Annoni (Organiser & Participant)
Institute for Environment and Sustainability
Joint Research Centre
European Commission
Ispra, Italy
- INSPIRE: supporting the understanding of our environment

Massimo Craglia (Participant)
Institute for Environment and Sustainability
Joint Research Centre
European Commission
Ispra, Italy
- Key themes and discussion

Andrew Hudson-Smith (Participant)
Centre for Advanced Spatial Analysis
University College London
United Kingdom
- Building virtual worlds
Opportunities for Europe-wide Collaborations

The European Science Foundation (ESF) is the European association of 78 national research organisations in 30 countries, with offices in Strasbourg and Brussels, devoted to scientific research. The ESF covers all research areas: physical and engineering sciences; life, earth and environmental sciences; medical sciences; humanities; social sciences; space science; marine science; and polar science.

The mission of the European Science Foundation is to provide a common European platform for its Member Organisations in order to advance research and explore new directions for research at the European level.

This mission will be achieved via three approaches:

**SCIENCE STRATEGY**
providing high level and high quality foresight and advice on science, research infrastructure and science policy issues of European significance. The ESF achieves this with Forward Looks, a major contribution towards common Member Organisation strategies for European Research, and Exploratory Workshops.

**SCIENCE SYNERGY**
stimulating cooperation between researchers and Member Organisations, in order to explore new directions in research throughout Europe. This is achieved through ESF Research Networking Programmes, EUROCORES and ESF Research Conferences.

**SCIENCE MANAGEMENT**
underlining the vital organisational role that ESF can play in a European setting, via the European Young Investigator Awards (EURYI), European Cooperation in the Field of Scientific and Technical Research (COST) and Eurobiofund.

Cooperation, Partnerships and Building Relationships

The European Science Foundation has recently presented a new Strategic Plan for the coming five years, 2006-2010. Underpinning the Plan and every action proposed by it is the European Science Foundation’s mission to provide a common platform for its Member Organisations in order to advance European research and explore new directions for research at the European level.

The Plan envisions a collaborative approach to ESF’s activities, taking into account the distinct and often differing views and needs of the Member Organisations. The European Science Foundation will endeavour to work closely with Member Organisations and to develop partnerships with other organisations in Europe and the rest of the world in order to promote co-operation for the benefit of the European scientific community. The role of the European Science Foundation will be complementary to that of the European Research Council (ERC) by its focus on cooperation and coordination between its Member Organisations to promote researcher-led science in Europe.

A major goal is to develop the European Science Foundation’s optimal role and unique place in the European Research Area as the only organisation in Europe which brings together nearly all national research organisations and reaches beyond the current EU membership. The ESF Member Organisations together represent about 95 per cent of the total amount of money allocated to European research.

Instruments to Meet the Challenges

**ESF Exploratory Workshops**
Small, interactive group sessions, usually 1-3 days, aiming to open up new directions in research or to explore emerging research fields with potential impact on new developments in science.

For further information: [www.esf.org/workshops](http://www.esf.org/workshops)

**EUROCORES (European Science Foundation Collaborative Research)**
The scheme provides a flexible framework which allows national basic research funding organisations to join forces to support top class European research in and across all scientific areas.

For further information: [www.esf.org/eurocores](http://www.esf.org/eurocores)

**ESF Research Networking Programmes**
Long term networking activities bringing together nationally funded research groups, to address a major scientific or research infrastructure issue.

For further information: [www.esf.org/programmes](http://www.esf.org/programmes)

**European Young Investigator Awards (EURYI)**
These awards enable outstanding young scientists in any area of scientific research, from any country in the world, to create their own research teams at universities and other research institutions in Europe.

For further information: [www.esf.org/euryi](http://www.esf.org/euryi)

**Forward Looks**
The Forward Look is an instrument enabling Europe’s scientific community, in interaction with policy makers, to develop analyses of future research developments with the aim of defining research agendas.

For further information: [www.esf.org](http://www.esf.org)

**ESF Research Conferences**
This new scheme will provide the opportunity for the world’s leading scientists and young researchers, to meet for discussions at the highest level on the most recent developments in their fields of research.

For further information: [www.esf.org/conferences](http://www.esf.org/conferences)

**European CO-operation in the Field of Scientific and Technical Research (COST)**
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Biological invasions: a disaster for biodiversity?
Tuesday 18 July | 8.30 – 11.15
Forum am Deutschen Museum | Room Galaxis

The intentional and unintentional introduction of species from different biogeographic regions is called a biological invasion. This is considered to be a threat to global biodiversity, especially on islands and in ecosystems that were not much affected by humans. The session will address invasion pathways by different groups of organisms and their effect on a variety of terrestrial and aquatic ecosystems. The speakers will cover research into microevolutionary adaptive processes applying quantitative and qualitative genetics to biogeographic patterns of invasions.

Ingolf Kühn (Organiser)
Department Community Ecology
Centre for Environmental Research (UFZ)
Halle, Germany

Stefan Klotz (Participant)
Department Community Ecology
Centre for Environmental Research (UFZ)
Halle, Germany

Biological invasions: a European perspective

Dan Minchin (Participant)
Marine Organism Investigations (MOI)
Ballina Killaloe, Co Clare
Ireland

Predicting the risk on aquatic invasions: challenges for management

Wolfgang Nentwig (Participant)
Zoological Institute
University of Berne
Switzerland

Patterns of animal invasions

Volcanoes of the deep sea
Tuesday 18 July | 10.00 – 11.15
Forum am Deutschen Museum | Kino 2

Volcanoes of the deep sea reveals the astounding sights that lie 12,000 feet below the surface of the ocean, while delivering a real-life tale of mystery as scientists search for an animal that may be one of Earth's greatest survivors – an ancient species that is decorating the deep sea floor with its strange hexagonal trademark. The film propels audiences from the dramatic sea cliffs of Spain, through two oceans, into deep-sea sites dense with astounding life forms and even into space. The submersible Alvin drops into the depths to a world that looks like it came from the overheated imagination of a science fiction writer. With temperatures hot enough to melt lead, this alien world, is nevertheless real. It may hold the keys to understanding the nature of life on Earth. Ocean explorers from InterRidge will be on hand to answer questions after the film showing.

Kristen Kusek (Organiser)
InterRidge
Kiel, Germany and Cambridge/MA, USA

Life on the ridge: microbes, mining, management and more
Tuesday 18 July | 14.30 – 17.00
Forum am Deutschen Museum | Kino 2

Everyone's life depends upon the ocean. Understanding how the earth works starts with its largest seafloor feature: 40,000 miles of ocean ridge that wind through the ocean basins giving rise to the earth's crust. Arguably the earth's last great frontier, it is a challenging place to reach and study consistently: the water emitted from deep ocean volcanoes – 'black smokers' – is often hot enough to melt lead; the pressure is equivalent to some 50 jumbo jets sitting atop a human being; and the sulphur-rich chemicals would be toxic to life on earth, though they suit a surprising number of microbes and animals. What can we learn from these communities and the enzymes that enable them to function at such high temperatures? Are the black smokers a source of future mineral resources? How is deep sea
technology evolving? Ridge science is now in the political
limelight as certain areas are named marine protected areas
(MPAs), and scientists are now writing a code of conduct.
How will ridge scientists react to this?

Kristen Kusek (Organiser)
InterRidge
Kiel, Germany and Cambridge/MA, USA

Edward T. Baker (Participant)
National Oceanic and Atmospheric Administration
Seattle/WA, USA
Unseen volcanoes: recycling on the planetary scale

Antje Boetius (Participant)
Max-Planck-Institute for Marine Microbiology
Bremen, Germany
Life at the edge: microorganisms in extreme environments

Colin Devey (Participant)
Leibniz-Institut für Meereswissenschaften
Kiel, Germany
Writing the code of conduct: the future of ridge research

Chuck Fisher (Participant)
Department of Biology
Pennsylvania State University
University Park/PA, USA
Life at the edge: real animals in extreme environments

Chris German (Participant)
Department of Geology and Geophysics
Woods Hole Oceanographic Institution
Woods Hole/MA, USA
Robots of the deep: the future of deep-ocean exploration

Steve Scott (Participant)
Department of Geology
University of Toronto
Canada
Mining deep ocean metallic sulphides is closer
than you think
PARTICLES AND PLANETS

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Fusion research: bringing the sun down to earth
Sunday 16 July | 8.30 – 11.15
Forum am Deutschen Museum | Room Galaxis

Fusion research has advanced to a decisive point: With the international tokamak experiment, ITER, whose construction will start in 2006, the fusion programmes of Europe, Japan, the Russian Federation, the United States of America, China and South-Korea are approaching the first experimental reactor. ITER is intended to show that it is possible to gain energy from nuclear fusion reactions, as in the sun. For the first time a burning and net energy-producing fusion fire will be created. Alongside ITER, the reactor suitability of an alternative concept will be investigated with the Wendelstein 7-X facility, currently being built in Greifswald, Germany. To ignite the fusion fire, and tap into an almost limitless source of energy, the fuel has to be confined and thermally isolated in a magnetic cage and heated up to extremely high temperatures (more than 100 million degrees). What is the current status of fusion research? What are the challenges still to be met? What are the environmental implications? How will fusion power stations fit our future society?

Alexander M. Bradshaw (Organiser)
Max-Planck-Institute for Plasma Physics
Garching, Germany

Isabella Milch (Co-Organiser)
Max-Planck-Institute for Plasma Physics
Garching, Germany

Nadine Baluc (Participant)
Centre de Recherches en Physique des Plasmas
Ecole Polytechnique Fédérale de Lausanne
Switzerland
Materials: a key issue to fusion reactors

Thomas Hamacher (Participant)
Max-Planck-Institute for Plasma Physics
Garching, Germany
Socio economical aspects of fusion power plants

Günter Janeschitz (Participant)
Nuclear Fusion Programme
Forschungszentrum Karlsruhe
Eggenstein-Leopoldshafen, Germany
Key technologies for fusion

Thomas Klinger (Participant)
Max-Planck-Institute for Plasma Physics
Greifswald, Germany
The Wendelstein 7-X stellarator: an alternative concept

Jerome Pamela (Participant)
Joint European Torus (JET-EFDA)
Abingdon, United Kingdom
On the way to a burning fusion plasma: ITER and tokamak research in Europe

Clusters: from the nanoworld to neurons and clusters of galaxies
Sunday 16 July | 14.30 – 17.00
Forum am Deutschen Museum | Kino 2

Clustering manifests itself at different scales in the organisation of matter. A group of objects bound together by any force can be called a cluster. It may be a group of nucleons in nuclear matter, a group of atoms, of molecules, or of nanosize droplets on a surface or else a group of galaxies in the universe. In spite of the difference of scale they are similar. A liquid drop model accounts successfully both for nuclear fission and for the stability of charged nanoclusters. Clustering is important in many fields of science, for example, astrophysics, atomic and molecular physics, chemistry, molecular biology, solid-state physics, nuclear physics, plasma physics and wireless or computer networks. What are the fundamental laws governing the behaviour and the properties of cluster systems at different scales? Are atomic clusters potentially the smallest devices? Could one manipulate them to produce new materials and nanostructures? What is the difference between a nano-cluster and a virus?

Andrey Solov’yov (Organiser)
Frankfurt Institute for Advanced Studies
Johann Wolfgang Goethe University
Frankfurt am Main, Germany

Oleg Obolesky (Co-Organiser)
Frankfurt Institute for Advanced Studies
Johann Wolfgang Goethe University
Frankfurt am Main, Germany

Catherine Bréchignac (Participant)
Laboratoire Aimé Cotton CNRS II
Université Paris-Sud
Orsay, France
Clusters as precursors of nano-objects

Martin Greiner (Participant)
Corporate Technology Information & Communications
Siemens AG
München, Germany
Clustering in complex networks

Walter Greiner (Participant)
Frankfurt Institute for Advanced Studies
Johann Wolfgang Goethe University
Frankfurt am Main, Germany
Cluster phenomena in subatomic world

Klaus Schulten (Participant)
Beckman Institute for Advanced Science and Technology
University of Illinois
Urbana- Champaign/IL, USA
Clustering of function in biological cells

Stephen Serjeant (Participant)
Department of Physics
The Open University
Milton Keynes, United Kingdom
Clusters in astrophysics
There is no life without membranes since each living cell is enclosed by a biological membrane, which regulates the exchange of matter with the external environment. Artificial membranes also play a key role both in modern industry and medical therapy. Millions of people would suffer from contaminated water without membrane filtration. Reverse osmosis is today’s leading technology to generate drinking water from sea water. Developments in nanotechnology may produce breakthroughs in membrane design such as the integration of carbon nanotubes, greatly increasing their efficiency. It is possible to predict breakthroughs in fuel cell membranes, leading to advances in energy production. These prospects have led to an integrative activity within Europe.

- **Nanoengineered artificial membranes for a better life**
- **Sunday 16 July | 17.15 – 18.30**
- Forum am Deutschen Museum | Room Helios

Astroparticle physics deals with the smallest and largest structures in the universe, connecting quarks to the cosmos. Multi-messenger observations provide surprising insights into the universe and open new perspectives. Processes under extreme conditions challenge the validity of physical laws. New science at the intersections of astronomy, astrophysics, particle physics and cosmology is taking shape around the world.

- **Astroparticle physics: from quarks to cosmos**
- **Monday 17 July | 8.30 – 11.15**
- Forum am Deutschen Museum | Helios

- **Johannes Blümer** (Organiser & Participant)
  Institut für Kernphysik
  Forschungszentrum Karlsruhe
  Germany
  - The Pierre Auger Observatory: cosmic rays at the highest energies in the universe

- **Guido Drexlin** (Co-Organiser)
  Universität Karlsruhe
  Germany
  - Presentation of the report “Astroparticle Physics in Germany”

- **Georg Raffelt** (Co-Organiser & Participant)
  Max-Planck-Institut für Physik
  Munich, Germany
  - Astrophysics with neutrinos: news from the ghost particles

- **Steen Hannestad** (Participant)
  Department of Physics and Astrophysics
  University of Aarhus
  Denmark
  - Precision cosmology with neutrinos and dark matter

- **Werner Hofmann** (Participant)
  Max-Planck-Institut für Kernphysik
  Heidelberg, Germany
  - The galaxy in a new light: high-energy gamma astronomy

- **Josef Jochum** (Participant)
  Institute of Physics
  University of Tübingen
  Germany
  - Searching for dark matter: can we directly detect weakly interacting massive particles?

- **Karl Mannheim** (Participant)
  Institute of Physics
  University of Würzburg
  Germany
  - Cosmic particle physics

- **Christian Spiering**, (Participant)
  Deutsche Elektronen Synchrotron (DESY)
  Zeuthen, Germany
  - Telescopes for high-energy neutrinos in water and ice
How many homes for E.T.?

Monday 17 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Galaxis

Over 150 planets have now been detected outside the solar system. The direct detection of radiation emitted by one of these planets opens the possibility of better characterisation of the others. In addition, the geochemical composition of debris disks around young stars can be deduced. These disks are the birth places for new planets. The coming decade will provide information to place the solar system in context with the formation of planets and stars. The detection of life on another planet appears to be within reach. Searching for biomarkers in extra-solar planets is just starting. The interdisciplinary character of the chemistry of life and its evolution will be discussed. Can many of these planets support life?

Bruno Leibundgut (Organiser)
European Southern Observatory
Garching, Germany

Michel Mayor (Co-Organiser & Participant)
Observatoire de l’Université de Genève
Sauverny, Switzerland
- The quest for very low-mass-exoplanets

Malcolm Fridlund (Co-Organiser)
European Space Agency (ESA)
Noordwijk, The Netherlands

Lisa Kaltenegger (Participant)
Harvard-Smithsonian Center for Astrophysics
Boston/MA, USA
- Possible spectral signatures of life in planetary atmospheres

Anne-Marie Lagrange (Participant)
Laboratoire d’Astrophysique
Observatoire de Grenoble
France
- Direct detection of exoplanets

Rens Waters (Participant)
Astronomical Institute “Anton Pannekoek”
Amsterdam, The Netherlands
- The birth of planetary systems

Nanomaterials: small scale life-changers

Monday 17 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Galaxis

Imagine implanting biodegradable materials that can generate or repair human organs; using flexible plastic electronic newspapers every morning to download the daily news; and living and working in smart buildings with coatings that are able to regulate temperature and lighting automatically. Advances in nanomaterials will provide all these things and improve energy efficiency through both their application and their synthesis. Researchers in the field will present cutting-edge work and will be asked to imagine how their discoveries and novel materials might change life in the future.

Rachel Brazil (Organiser)
Royal Society of Chemistry
London, United Kingdom

Tajinder Panesor (Co-Organiser)
The Institute of Physics
London, United Kingdom

Neil Champness (Participant)
School of Chemistry
University of Nottingham
United Kingdom
- Molecular architectures: using chemistry to build the nanoworld

Peter Dobson (Participant)
Department of Engineering Science
Oxford University
United Kingdom
- Applications of nanoparticles

Michael Graetzel (Participant)
Swiss Federal Institute of Technology
Lausanne, Switzerland
- Nanomaterials for improved solar cells

Jöns Hilborn (Participant)
Department of Chemistry
Uppsala University
Sweden
- Challenges in tissue engineering

Peter Rodgers (Participant/Chair)
Nature Nanotechnology
London, United Kingdom

Johan Ubbink (Participant)
Nestlé Research Centre
Lausanne, Switzerland
- Exploring foods as supramolecular materials

Towards other worlds – extrasolar planets

Monday 17 July | 17.15 – 18.30
Forum am Deutschen Museum | Room Galaxis

The observational break-throughs in the search for planets around other stars happened in the 1990s. The observational focus is now shifting towards a better characterisation of these exoplanets, and towards the detection of lower-mass, earth-like planets around other stars. Ground-based extremely large optical telescopes (ELTs) and optical interferometers, and space-based missions like Corot, GAIA or DARWIN will greatly advance our knowledge on exoplanets. The ultimate aim is the identification of biomarkers (like ozone) in the atmospheres of Earth-like exoplanets, and hence the remote detection of extraterrestrial life. The speakers will describe how this might be done.
From string theory to cosmology

Tuesday 18 July | 17.15 – 18.30
Forum am Deutschen Museum | Room Antares

In contemporary theoretical physics, the leading candidate for a unified theory of gravity and the other fundamental forces is string theory or M-Theory. One of its predictions is the possible existence of macroscopically extended objects, cosmic strings, that can arise through a variety of mechanisms, or higher-dimensional “branes”. One of these mechanisms involves the Brane World concept, the idea that our observable universe is confined to a surface of three spatial dimensions in a higher dimensional space. (String theory is naturally formulated in a space-time of 10 or 11 dimensions.) Another involves the suggestion that some of the extra dimensions predicted by string theory may be compactified, that is to say, wound up into very small size. Cosmological strings may offer the best chance of finding observational support for string theory. Although recent observations with the Hubble space telescope have ruled out the exciting suggestion that cosmic strings have already been seen, there are several ways in which they might be detected in the near future, notably by observing the gravitational waves they emit.

Jean-Patrick Connerade (Organiser)
Euroscience
Strasbourg, France

Ana Achucarro (Participant)
Institute Lorentz for Theoretical Physics
Leiden University
The Netherlands
University of the Basque Country
Bilbao, Spain

Cosmology with strings attached

The hot science of gamma ray bursts

Tuesday 18 July | 17.15 – 18.30
Forum am Deutschen Museum | Room Galaxis

Gamma ray bursts are the signatures of the most energetic explosions so far seen in the universe. For a long time their true nature was a mystery but recently spectacular progress has been made in the difficult challenge of highly coordinated observation of very short lived events, and in the reconciliations of competing models with those observations. The panelists will examine not only the nature of these events but also explore the way in which this particular example of ‘hot science’ is practised: scientific competition, rapid response by observatories whose observing time is much sought after, and competition between theorists. These aspects all add to the colourful character of this discipline. The audience will be invited to question the panel about the science, the research culture and the issues of communication of ‘hot’ scientific results.

Philip Campbell (Organiser)
Nature
London, United Kingdom

Ralph Wieters (Participant)
Astronomy Institute
University of Amsterdam
The Netherlands

Julian Osborne (Participant)
Department of Physics and Astronomy
University of Leicester
United Kingdom

What happens to strings in our universe?
You’re an achiever and you’re passionate about your work. You have an inquisitive nature and want to make a difference. You understand the advantages of a small company compared to the opportunity and reach of a global organization. You wonder which environment will be best for unleashing your potential.

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Career options are flexible, with high-level development paths in both science and management. In all cases, our companies strive to empower employees in an environment that stresses integrity and excellence, placing an unparalleled focus on the needs of our customers and the well-being of our employees.
Europe has a long-standing tradition of excellence in research and innovation, and European teams continue to lead progress in many fields of science and technology. Research and knowledge are keys to our future and will deliver solutions to the problems we encounter every day. We are engaged in building Europe’s tomorrow, interpreting the concept of integration in a positive and forward-looking way in order to extend and strengthen the basis for European research.

Moving towards the creation of the European Research Area, a broad vision for better research in Europe, aimed at better co-ordination, more co-operation and improved complementarity of policies, programmes and financial contributions of all relevant actors and institutions is our focus.

The EU’s final objective is to contribute to the competitiveness of European Industry and to improve the quality of life of its citizens. One of the instruments used for the implementation of this policy is the multi-annual Framework Programme which helps to organise and financially support cooperation between universities, research centres, and industries - including small and medium-sized enterprises. An important cornerstone is the forthcoming 7th Framework Programme that is currently in the process of decision.

Websites: www.ec.europa.eu/research/index_en.cfm
          www.ec.europa.eu/dgs/research/index_en.html
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What do you expect from science?
Sunday 16 July | 11.15 – 12.15
Deutsches Museum | Luftfahrthalle

This is your chance to find out what leading European policy makers and scientists expect from science. We asked them to tell us their personal views about what science should deliver and how scientists can support their work better. Will you agree with their views? What role do you think science should play in public policy? Would you like to hear how they can support your work better? Join them for a lively discussion on what science means to all of us.

Salvador Barberá Sánchez (Participant)
formerly Ministerio de Educación y Ciencia
Madrid, Spain

Frieder Meyer-Krahmer (Participant)
Bundesministerium für Bildung und Forschung
Bonn, Germany

José Manuel Silva Rodríguez (Participant)
Directorate-General for Research
European Commission
Brussels, Belgium

Hans Wigzell (Participant)
Karolinska Institute
Stockholm, Sweden

Quentin Cooper (Participant/Moderator)
Bucks, United Kingdom

Risk and governance: characterizing and managing uncertainty
Sunday 16 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Terra

Modern societies are faced with the challenge of assessing the potential impacts of human interventions into the natural, social and cultural environment under condition of complexity, uncertainty, and ambiguity. Those interventions include new technologies, new diets, new consumer products, changes in landuse or other types of innovations. These assessments are the basis for policy decisions concerning regulatory actions, support, modifications or retrieval. Science has the task to provide knowledge about the risk and opportunities that can be linked to these activities; this knowledge should be framed in a way that policy makers can make prudent judgements about policy making needs. What kind of science advice is needed to meet this challenge? How can we deal with uncertainties and ambiguities inherent in all risk assessments? How can we include social and cultural consequences in the portfolio of assessments? These issues will be addressed by prominent risk researchers and risk managers.

Ortwin Renn (Organiser & Participant)
Abteilung für Technik- und Umweltsoziologie
Institut für Sozialwissenschaften
Universität Stuttgart
Germany
- A new approach to managing risks in a globalised, interconnected and plural world

Lutz Cleemann (Participant)
Allianz Center for Technology
Ismaning, Germany
- Managing technological risks and the role of international insurance companies

Christopher Bunting (Participant)
International Risk Governance Council
Geneva, Switzerland
- Application to the real world: from nanotech to Listerine®

Hans-Peter Meister (Participant)
Institut für Organisationskommunikation
Bensheim, Germany
- The role of civil society: stakeholder involvement and participation

Eskil Ullberg (Participant)
IKU
Uppsala, Sweden
- Corporate social responsibility and public-private partnerships

Scientists: objects of control or subjects of responsibility?
Sunday 16 July | 14.30 – 17.00
Forum am Deutschen Museum | Kino 3

Scientists play an important role in resolving ethical and legal issues associated with modern scientific research and its applications. Only when scientists take these responsibilities seriously will researchers gain the necessary trust from society. The speakers will discuss whether the existing codes and standards will suffice, to what extent scientists are subjected to external control and how the responsibility of scientists for their own actions relates to the decision-making competence of political and legal instances.

Ludger Honnefelder (Organiser & Participant/Moderator)
ALLEA in co-operation with Academia Europaea
Council of Swiss Academies of Science
Deutsches Referenzzentrum für Ethik in den Biowissenschaften (DRZE)
Bonn, Germany

Jürgen Mittelstrass (Co-Organiser & Participant)
Academia Europaea/Forum für Philosophie und Wissenschaftstheorie
Konstanz, Germany
- The dilemma of experts
The tasks and overall mission for research-intensive universities have become more diverse and competitive, with increased expectations to apply knowledge to meet relevant societal needs. In this highly complex context, rapid and bold decisions are often needed. Few European universities have the constitution and management philosophy to meet such demands. Politicians and governmental agencies cannot do this and are too slow. Simply put, there is no such thing as “central wisdom” or intelligence collected at any specific government level. To define relevant and appropriate goals and serve their mission European universities must become much more autonomous in order to be able to in the future control their destiny. Yet the format and function of European universities are largely governed and restricted by the political system. This was understandable when fixed governmental support completely dominated funding; but, in the future, increases will come from other university-initiated sources. Should universities therefore become more autonomous?

Carl Johan Sundberg (Organiser)
Karolinska Institute
Stockholm, Sweden

LUC WEBER (Participant)
Université de Genève
Switzerland
Steering Committee for Higher Education and Research (CDESR), Council of Europe
Strasbourg, France

University autonomy: a necessary, but not sufficient condition for excellence

HANS WIGZELL (Participant)
Karolinska Institute
Stockholm, Sweden

Modern universities in a complex world

Success stories from China

Monday 17 July | 8.30 – 9.45
Forum am Deutschen Museum | Room Antares

After the scientific and educational deadlock of the Cultural Revolution, China is now experiencing a true revolution in the field of science. The country is developing the sciences in the same remarkable and rapid way that it overhauled its economy. The Chinese government is investing heavily in everything from agricultural and transportation research to its ambitious space programme. China’s national science and technology congress has approved a new boost in research funding and a blueprint for science and technology development for the next 15 years. In Europe these developments are only now being realised. The session will exemplify the achievements – and difficulties – of the current and future Chinese situation using three short case studies presented by leading scientists from China.

Rainer Höll (Organiser)
Robert Bosch Stiftung
Stuttgart, Germany

Hu Gengxi (Participant)
Shanghai Institute of Biotechnology and Cell Biology
China

Protein biochips and the revolution in tumor diagnosis

Liu Ming (Participant)
Sichuan University
China

The state of evidence based medicine in China: evaluating acupuncture in a Cochrane systematic review

Zhan Mingsheng (Participant)
Wuhan Institute of Physics and Mathematics
China

The road to quantum computing
Key challenges for international security: how far do we go to protect ourselves?

Monday 18 July | 8.30 – 11.15
Forum am Deutschen Museum | Kino 3

Following the events of September 2001 and March 2004 in the US and Spain, security concerns have been at the forefront of European and international agendas. Several initiatives are in progress confirming the international commitment to address security concerns in general, and in particular direct threats ranging from terrorist attacks to the potential use of weapons of mass destruction. In parallel, there has been fast increasing commitment from the scientific, technological and industrial communities to assist the world to meet this challenge. This session will present perspectives on the challenge of preserving individual rights and freedoms whilst embracing security.

Delilah Al Khudhairy (Organiser)
Institute for Protection and Security of the Citizen (IPSC)
Joint Research Centre
European Commission
Ispra, Italy

Yael Shahar (Co-Organiser & Participant)
Interdisciplinary Center Herzlia
International Policy Institute for International Terrorism
Herzlia, Israel
- Science and security: new challenges, new actors and new responses

Clive Best (Co-Organiser)
Institute for Protection and Security of the Citizen (IPSC)
Joint Research Centre
European Commission
Ispra, Italy

Julian Ashburn (Participant)
International Biometric Foundation
London, United Kingdom
- The societal implications of the wide scale introduction of biometrics and identity management

Joaquim Nunes de Almeida (Participant)
Directorate General for Freedom, Justice and Security
European Commission
Brussels, Belgium
- Terrorism: the economics of security

Deniz Beten (Participant)
NATO Science Programme
Brussels, Belgium
- Environmental terrorism: the new frontier

Drug development, communication and the media

Monday 17 July | 10.00 – 11.15
Forum am Deutschen Museum | Room Solaris

The process of developing new drugs is extremely complicated, time consuming and expensive. There is a fierce competition among scientists to develop the next successful drug and companies all try to be the first to put it on the market. The media have a hard time trying to keep up with all different aspects of this complicated process. They keep a close watch on patient safety issues and there’s a vast amount of information that needs to be processed. But there is also competition among journalists in turning this constant flow of information into news. Furthermore, secrecy and transparency are always important issues – remember the recent debate on scientific publications concerning clinical data. Do the media get the big picture? In what ways can we improve interaction between pharma industry and media?

Frederik Wittock (Organiser)
Global Pharmaceutical R&D Communications Europe
Johnson & Johnson Pharmaceutical Research & Development
Beerse, Belgium

Seema Kumar (Participant)
Global R&D Communications Division
Johnson & Johnson, Pharmaceutical Research & Development
Raritan/NJ, USA
- Getting across is more difficult than it should be

Vivienne Parry (Participant)
London, United Kingdom
- Pharma bashing: an irresistible sport for the media?

Carl Johan Sundberg (Participant)
Karolinska Institute
Stockholm, Sweden
- The role of the scientist in science communication

Peter J. Tüll (Participant)
Visby, Sweden
- What are the interests of different stakeholders in drug development, communication and media?

Between business and bribery: how independent is science journalism?

Monday 17 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Solaris

A weekend in a luxury hotel, financed by a car company. A printable article, with the compliments of a pharmaceutical company. Expensive video material, free of charge, showing brand-new products made by a computer chip manufacturer: commercial enterprises try to use the media for their PR work in many ways. At the same time, increasing
numbers of journalists are not exclusively employed by newspapers, magazines or in broadcasting. Free-lancers, in particular, have to supplement their income by working for companies and science organisations. This frequently leads to conflicts of interest. Typical conflict situations for journalists were described in a survey carried out by the German Science Journalists’ Association (WPK): how do colleagues deal with tempting offers? Where do they draw the line between journalism and PR? And is there a code of conduct for independent journalism?

Lynda Lich-Knight (Organiser)
German Science Journalists’ Association / Wissenschafts-Pressekonferenz (WPK)
Bonn, Germany

Volker Stollorz (Co-Organiser)
German Science Journalists’ Association / Wissenschafts-Pressekonferenz (WPK)
Cologne, Germany

Peter Green (Participant)
AlphaGalileo Foundation
London, United Kingdom

Michael Lange (Participant/Moderator)
Cologne, Germany

Oliver Stohlmann (Participant)
Division of Corporate Media Relations
Europe-Africa-Middle East
Pfizer Inc.
Vienna, Austria

This Wachter (Participant)
Bern, Switzerland

Holger Wormer (Participant)
Department of Journalism
Dortmund University
Germany

More women in university science: realistic target or utopian fantasy?
Monday 17 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Luna

The proportion of women studying science subjects is rising. However women are far less likely to stay in research than their male colleagues. Work by the Athena Project and the Royal Society Chemistry over the last five years has examined reasons why women do not stay in UK academic chemistry. This session will review the current gender balance in the European academic science and in particular academic chemistry, present data on why women leave chemistry in the UK and present examples of good practice and good working environments in UK universities. The session will also examine examples of good practice and actions aimed at increasing the participation of women science in Germany and Spain.

Sean McWhinnie (Organiser & Participant)
Royal Society of Chemistry
London, United Kingdom

Womens’ representation in European academic chemistry

Caroline Fox (Co-Organiser)
Athena Project
London, United Kingdom

Factors affecting the career choices of female chemists

Petra Mischick (Participant)
Institute of Food Chemistry
Technical University Braunschweig
Germany

Gender equality in German science

Flora de Pablo (Participant)
Centro de Investigaciones Biológicas, CSIC
Madrid, Spain

Gender equality in Spanish science

Lesley Yellowlees (Participant)
Department of Chemistry
University of Edinburgh
United Kingdom

Good practice in UK university chemistry departments

Fishing from a bigger pool: excellent science needs women
Tuesday 18 July | 8.30 – 11.15
Forum am Deutschen Museum | Room Solaris

Attracting and retaining more women is vital for the future of European research. Nevertheless, European female students are still significantly underrepresented in engineering studies (less than 25%). Women all too rarely occupy posts of full professors in Europe. In this symposium some examples of positive actions will be illustrated and the subsequent debate will focus on their sufficiency/fairness. Are positive actions really positive in reality? Do positive actions for women discriminate against men? Does gender mainstreaming reinforce the position of women or would positive actions be more efficient?

Johannes Klumpers (Organiser)
Directorate-General for Research
– Women and Science Unit
European Commission
Brussels, Belgium

André Beraud (Participant)
Instituts Nationaux des Science Appliquées (INSA)
Centre des Humanités
Villeurbanne, France
Barbara Hartung (Participant/Moderator)
Gender Equality Department
Lower Saxony Ministry of Science and Culture
Hannover, Germany

Kari Melby (Participant)
Faculty of Arts
National Committee for Promoting Gender Mainstreaming in Higher Education and Research (NTNU)
Trondheim, Norway
- A debated case of positive actions

Dalia Satkovska (Participant)
Faculty of Physics
Vilnius University
Lithuania
- Women in exact sciences and high tech in the Baltic States

Robert Schaller-Steidl (Participant)
Federal Ministry for Education, Science and Culture
Vienna, Austria
- The programme

Maria Stratigaki (Participant)
Centre for Social Morphology and Social Science
Panteion University
Athens, Greece
- Introduction

Annette Williams (Participant)
UK Resource Centre for Women in Science, Engineering Technology (UKRC)
Bradford, United Kingdom
- Why a resource centre for women in science, engineering and technology in UK?

Volker Stollorz (Co-Organiser & Participant/Moderator)
German Science Journalists’ Association/Wissenschafts- Pressekonferenz (WPK)
Cologne, Germany
- Cycles of hysteria – why, when and how journalists push the panic button

Allan Mazur (Participant)
Maxwell Centre for Demography and Ecomonics of Aging
Syracuse University
Syracuse/NY, USA
- Bird flu: flight of the Condor or Chicken Little?

Erik Millstone (Participant)
Science and Technology Policy Research
University of Sussex
United Kingdom
- The media are tricky, but not always alarmist

Hans Peter Peters (Participant)
Forschungszentrum Jülich
Germany
- Journalistic risk construction: the difference between risks that concern and risks that kill

Dick Thompson (Participant)
World Health Organisation
Geneva, Switzerland
- Global warning – dos and don’ts of sounding the alarm

Michael H. Wappelhorst (Participant)
Directorate-General for Research
European Commission
Brussels, Belgium
- Pandemic planning – do the media influence research policy

Connecting brains and society: lessons learnt and future developments

Tuesday July 18 | 14.30 – 17.00
Forum am Deutschen Museum | Room Luna

At the first ESOF conference in 2004 The King Baudouin Foundation convened a workshop on the objectives and method concept of the European Citizens’ Deliberation on Brain Science; two years later, July 2006, we can present the outcomes of this innovative public deliberation experiment, supported by the European Commission, in terms of policy and method impact.

Tinne Vandensande (Organiser & Participant)
King Baudouin Foundation
Brussels, Belgium
- Outcome of “Meeting of Minds”: the citizens’ findings, recommendations and their policy impact

Lynda Lich-Knight (Organiser)
German Science Journalists’ Association/Wissenschafts-Pressekonferenz (WPK)
Bonn, Germany

False alarm or true warning: does media alarmism help?

Tuesday 18 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Gaia

Scientists often admit that political leaders’ awareness of certain risks only develops after public interest has been awakened by the media. Society’s perception of the media can be compared to the immune system which sounds the alarm when it detects anything new or unexpected. Even though the media do not identify the foreign or unexpected in every single detail they can differentiate roughly between known and unknown types of risk. Can the media’s notorious alarmism be helpful? What risks are involved? The workshop will present three case studies on media treatment of warnings. BSE, the ‘pill panic’ or the warning about a flu pandemic, are they successful or failed examples of a warning culture in the media?

Inez de Beaufort (Participant)
Department of Medical Ethics
Erasmus University Rotterdam
The Netherlands
- “Meeting of Minds” and ethics
Science journalism under the microscope
Tuesday 18 July | 17.15 – 18.30
Forum am Deutschen Museum | Kino 2

What kind of research results are newsworthy? Are journalists the most rigorous peer-reviewers? Do journalists really get the point? Do they have any role in scientific controversy? What are the constraints journalists are working under? How can the relationship between scientists and journalists be enhanced? This EUSJA-seminar (organised by TELI) will give some insight into the thinking and working conditions of science journalists, how they try to approach the ethics of independent and balanced reporting while writing thrilling stories.

HANS-JOACHIM NEUBERT (Organiser)
European Union of Science Journalists’ Associations (EUSJA)
Hamburg, Germany

BILL O’NEILL (Participant)
United Kingdom
■ Turning the rocks of science: what’s underneath?

HANS PETER PETERS (Participant)
Forschungszentrum Jülich
Germany
■ Deciphering science

KAIANDERS SEMPLER (Participant)
Stockholm, Sweden
■ Opening the doors to the labs

PETER WEINGART (Participant)
Institute for Science and Technology Studies (IWT)
University of Bielefeld
Germany
■ Unfrocking the scientific clergy

Life sciences governance: who are the experts?
Wednesday 19 July | 8.30 – 11.15
Forum am Deutschen Museum | Room Kino 2

Modern biology affects our understanding of life and poses moral and ethical questions. Does the promise of a cure justify any form of research? Who decides which research paths should be pursued, and which should not? In tackling these questions, parliaments and governments have habitually relied on scientific and professional experts. Who else is being consulted and what is their impact? Is there a ‘democratic void’? Who has expertise on social questions about life?

BARBARA PRAINSACK (Organiser)
Department of Political Science
University of Vienna, in co-operation with the Austrian Federal Pedagogical Institute in Vienna
Austria
Social science research depends on the collection and analysis of large arrays of data. Although the accumulation of social science data promises increasingly valid and reliable analyses and research findings, it also raises issues of privacy, confidentiality, trust and research ethics. Internationalisation requires databases to be shared, which exacerbates the problems. These issues concern both EU and U.S. researchers in domestic contexts and will pose both familiar and new problems as large scale international data bases containing individual or organisational micro-data, are established. This first EU-U.S. symposium will focus on two interrelated themes, the prospects for comparative empirical research at a global scale and the technologies that create such possibilities.
The Fabric of Science

68 Myths of science: glowing monkeys, wonder dogs and more
68 European science policy: gloomy forecast vs. bright horizons
69 The European Research Council: who are the movers and shakers?
69 Open Access: threat or blessing?
69 The future of research in Europe: the role of private donors and foundations
70 Euroscience Day
71 Peer review: scientific quality control or a flawed process?
71 From lasers to Tamiflu®: small science, big results
72 The scientists’ Europe: societies and professional associations – what are they up to?
73 What needs to be fixed in the European patent system?
73 Quality science journalism: is a new style needed?
74 The European Charter for Researchers: a new Magna Carta for science?
74 Can the European dimension in the research agenda be delivered?
Myths of science: glowing monkeys, wonder dogs and more
Sunday 16 July | 08.30 – 11.15
Forum am Deutschen Museum | Room Helios

What myths of science have emerged as a result of good science going bad during the process of science communications? How do such foibles affect public trust? What tips can scientists offer to reporters who may want to interview them, or to their peers in the scientific community? What tips can reporters offer to scientists, or to their peers in journalism? What challenges do reporters face, and what lessons have they learned? How is communication between scientists and the media handled differently in the United States versus Europe, and how do challenges to reporters and scientists vary in each region?

Ginger Pinholster (Organiser & Participant/Moderator)
American Association for the Advancement of Science (AAAS)
Washington DC, USA

Andreas Trepte (Co-Organiser)
Max-Planck-Gesellschaft
Munich, Germany

Cathy O’Malley (Co-Organiser)
American Association for the Advancement of Science (AAAS)
Washington DC, USA

Clive Cookson (Participant)
The Financial Times
London, United Kingdom

Julia Fischer (Participant)
University of Göttingen
Germany

Gerd Gigerenzer (Participant)
Center for Adaptive Behavior and Cognition
Max-Planck-Institute for Human Development
Berlin, Germany

Patrick Illinger (Participant)
Süddeutsche Zeitung
Munich, Germany

Rick Weiss (Participant)
The Washington Post
Washington DC, USA

European science policy: gloomy forecast vs. bright horizons
Sunday 16 July | 08.30 – 11.15
Forum am Deutschen Museum | Room Gaia

It is often argued that Europe faces an ‘innovation gap’ – a mismatch between scientific performance and innovation as measured by patent outputs or industrial R&D. Is the situation better than is generally assumed? This seminar will explore the assumptions on which these claims rest, in particular concerning links between science and innovation, and the empirical evidence across industries. European scientific publication has overtaken that of the US in terms of numbers, and is growing rapidly in terms of impact. How does this relate to changes in the governance of European science?

Patrice Laget (Organiser & Participant)
Institute for Prospective Technological Studies (IPTS)
Joint Research Centre
European Commission
Sevilla, Spain

Keith Smith (Co-Organiser & Participant/Chair)
Centre for Innovation and Governance
School of Management
University of Tasmania
Australia

Paul Desruelle (Co-Organiser)
Institute for Prospective Technological Studies (IPTS)
Joint Research Centre
European Commission
Sevilla, Spain

Stefan Kuhlmann (Participant)
Fraunhofer Institute for Systems and Innovation Research
Karlsruhe, Germany

Patrick Llerena (Participant)
Université Louis Pasteur
Strasbourg, France

Rikard Stankiewicz (Participant)
Robert Schumann Centre
European University Institute
Florence, Italy

The organisation of frontier science in Europe

The changing governance and organisation of European science
The European Research Council: who are the movers and shakers?

Sunday 16 July | 10.00 – 11.15
Forum am Deutschen Museum | Kino 2

The establishment of the European Research Council (ERC) to fund basic research at the European level has dramatically gained pace in recent months: The ERC concept and the EC proposal to create a specialized, autonomous agency funded through the EU Framework Programme have been endorsed by the EU member states, and 22 prominent scientists who will compose the ERC Scientific Council have been nominated. The role of this body will be to “determine the ERC’s scientific strategy and ensure that its operations are conducted according to the requirements of scientific excellence”. If these first concrete steps are welcomed by the scientific community, a series of issues still remain to be addressed which will determine the success, or otherwise, of the ERC. The recent agreement on the EU financial perspectives does not allow for a significant increase of research funds, which may restrict the budget available for the ERC and, hence, its scope and impact. The legal structure of the ERC, which will notably determine its level of autonomy with respect to the European Institutions, is still being debated among the Commission, the EU Member states and the European Parliament. But the major challenge lies on the shoulders of the members of the Scientific Council who will have to decide on the scientific policies, programmes and procedures so that the ERC becomes operational in January 2007.

Luc van Dyck (Organiser)
Initiative for Science in Europe (ISE)
Heidelberg, Germany

Jean-David Malo (Participant)
Directorate-General for Research
European Commission
Brussels, Belgium

Frank Gannon (Participant/Chair)
European Molecular Biology Organisation (EMBO)
Heidelberg, Germany

Fotis Kafatos (Participant)
Division of Cell and Molecular Biology
Imperial College London
United Kingdom

Wilhelm Krull (Participant)
VolkswagenStiftung
Hannover, Germany

Helga Nowotny (Participant)
Wissenschaftszentrum Wien
Austria

Open Access: threat or blessing?

Sunday 16 July | 17.15 – 18.30
Forum am Deutschen Museum | Room Solaris

Should traditional publishing be combined with open access (OA)? What are the issues facing institutions and researchers in implementing OA? At this symposium, experts and institutions committed to encouraging their researchers to provide OA to their research output will discuss: self-archiving as a supplement to rather than a substitute for publishing in traditional peer-reviewed journals; how self-archiving increases research impact; and the role of scientific institutions and funders and their policies in creating and filling the OA archives.

Hélène Bosc (Organiser)
Institut National de la Recherche Agronomique (INRA)
Nouzilly, France

Pierre Baruch (Co-Organiser)
Université Paris VII
France

Eberhard R. Hilf (Co-Organiser & Participant)
Institute for Science Networking
Carl von Ossietzky University Oldenburg
Germany
- Open Access self-archiving in physics: boosting science and industry

Stevan Harnad (Participant/Chair)
Centre de Neuroscience de la Cognition (CNC)
Université du Québec à Montréal
Canada
- The research impact rewards of Open Access self-archiving

Eloy Rodrigues (Participant)
University of Minho
Braga, Portugal
- Institutional Open Access self-archiving mandate and incentives at Universidade do Minho, Portugal

Alma Swan (Participant)
Key Perspectives Ltd.
Truro, United Kingdom
- The global picture of self-archiving: what is working, what is not, and what is needed for progress

The future of research in Europe: the role of private donors and foundations

Sunday 16 July | 17.15 – 18.30
Forum am Deutschen Museum | Room Luna

In a rapidly globalising and interdependent world new challenges and opportunities are arising for Europe. In order to successfully build the future European knowledge-based society it is essential to enhance the quality of the science base, to strengthen the structural dynamics of the respective research and innovation systems, and to support
frontier research in carefully selected areas. By combining risk-taking with a high degree of flexibility and a proven track record in quality assurance foundations can inspire, support, and encourage institutions as well as individuals to build or reconfigure their research environment, and to break new ground. It is against this background that the panelists will address new opportunities, e.g. in cross-border grant-making and long term capacity-building, major challenges involved in encouraging and implementing change, as well as some of the most relevant limits and limitations for foundations when it comes to achieving leveraging effects, or even lasting impacts on the future development of the respective research area.

**Wilhelm Krull** (Organiser & Participant/Chair)
Volkswagen Stiftung
Hannover, Germany

**Dan Brändström** (Participant)
Stiftelsen Riksbankens Jubileumsfond
Stockholm, Sweden

**Aldo Fasolo** (Participant)
Dipartimento di Biologia Animale e dell’Uomo
Università di Torino
Italy

**Stefan von Holtzbrinck** (Participant)
Verlagsgruppe Georg von Holtzbrinck
Stuttgart, Germany

**Manuel Nunes da Ponte** (Participant)
The Portuguese Centre for Excellence for Green Chemistry (REQUIMITE)
Universidade Nova de Lisboa
Portugal

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**Euroscience Day**

**Monday 17 July | 08.30-18.30**
Forum am Deutschen Museum | Room Terra

This day is dedicated to the ‘grass roots’ activities of the regional sections of Euroscience. The intention is to provide concrete examples of how the objectives of Euroscience can be realised by individual sections in their own respective regions. In particular, we have selected for presentation “hands on” science projects, which are currently under way in several regional sections with quite different socio-economic backgrounds. We will also address issues such as the Bologna Process and the implementation of the European Research Area, which are common to much of Europe, and we will consider how Euroscience can best influence European science policy on behalf of ordinary researchers. This session is open to all participants of ESOF, whether they are members of Euroscience or not. After the session, the General Assembly of Euroscience will take place.

**Jean-Patrick Connerade** (Organiser)
Euroscience
Strasbourg, France

**09.00 – 10.30**

**Frédéric Sgard** (Participant)
Euroscience Ile-de-France Section
Organisation for Economic Co-operation and Development (OECD)
Paris, France
- **Motivating youngsters for science**

**Didier Raboud** (Participant)
Euroscience Léman Section
Université de Genève
Genève, Switzerland
- **Hands on science: the Swiss experience**

**Stevan Jokic** (Participant)
Euroscience Serbia and Montenegro Section
Vinca Institute of Nuclear Sciences
Belgrade, Serbia
- **Hands on science: The South-Eastern Europe experience**

**10.30 – 11.00**

**Irina Eliseeva** (Participant)
Euroscience Russian Section
Sociological Institute of the Russian Academy of Sciences
St. Petersburg, Russia
- **Benchmarking Russian science and technology productivity**

**11.30 – 13.00**

**Vsevolod Borissov** (Participant)
Euroscience Russian Section
Research Institute of Economics, Policy and Law in Science & Technology
Moscow, Russia
- **The Bologna Process and its impact on European university research**

**Radu Damian** (Participant)
Euroscience Romanian Section
Technical University of Civil Engineering
Bucharest, Romania
- **The Bologna Process and its impact on European university research**

**Alexandre Tiedtke Quintanilha** (Participant)
Instituto de Ciencias Biomédicas “Abel Salazar”
University of Porto
Portugal
- **How the Lisbon-Barcelona process affects the Marie Curie programme**

**14.00 – 14.50**

**Enric Banda** (Participant)
Fundació Catalana per a la Recerca i la Innovació
Barcelona, Spain
- **Is Euroscience actually building the European Research Area?**
From lasers to Tamiflu®: small science, big results

Tuesday 18 July  |  08.30 – 11.15
Forum am Deutschen Museum  |  Room Antares

Small-scale fundamental research has advanced science and innovation enormously. Examples include lasers, restriction enzymes, RNAi and the structure of DNA. Much has been achieved by small groups driven by curiosity. However, are we in danger of rejecting this approach in favour of externally driven collaborative groups? Is large-scale applied research over-funded by governments when compared with fundamental research? Can fundamental research be identified by policy makers? Should we differentiate between fundamental and applied research? How can fundamental research be protected from political volatility and change? How does the public view basic research, which can seem too blue sky to be useful? What can we learn from previous examples of successful applications derived from basic research?

Andrew Moore (Organiser)
European Molecular Biology Organization (EMBO)
Heidelberg, Germany

Sandra Bendiscioli (Co-Organiser)
European Molecular Biology Organization (EMBO)
Heidelberg, Germany

André Goffeau (Participant)
Unité de Biochimie Physiologique
Université Catholique de Louvain
Belgium
Is the curiosity-driven researcher a dying breed?

Helga Nowotny (Participant)
Wissenschaftszentrum Wien
Austria
If it is research, the result will be knowledge: on current paradigm shifts, or selling them

Rino Rappuoli (Participant)
Chiron Vaccines
Siena, Italy
Science to apply: what industry needs and where it comes from

Jacques Remacle (Participant)
Unit F4 Fundamental Genomics
Directorate-General for Research
European Commission
Brussels, Belgium
One size does not fit all: the need for a good balance between small and large research projects in basic research

Andrew Webster (Participant)
Science and Technology Studies Unit
University of York
United Kingdom
Grasping the intangible: how basic research gives birth to economic value

Peer review: scientific quality control or a flawed process?

Monday 17 July  |  17.15 – 18.30
Forum am Deutschen Museum  |  Room Helios

The peer review process is acknowledged by the scientific community as the most effective way to ensure quality control in the publication of research findings. Without it, the publishing process would be arbitrary and perhaps be susceptible to influence. The onus would then be on the scientific community to distinguish meaningful results from background noise. Whilst it is accepted that peers are best qualified to detect mistakes in research methodology and also judge whether a unique advance in knowledge in the field has been made, the current system is far from perfect and some would argue that it can make or break your career. Do referees exploit the system to pursue personal agendas? How do referees judge quality? Do rival groups use it to gain access to privileged information and an unfair research advantage? Is so-called maverick science overlooked and do editors give undue preference to newsworthy research findings? Are editors too powerful? Is there a valid alternative model?

Seema Sharma (Organiser & Participant/Chair)
ScienceCareers.org (Next Wave)
Science Magazine
Cambridge, United Kingdom

Tracey Brown (Participant)
Sense about Science
London, United Kingdom
Separating good science from bad science

Andrew Sugden (Participant)
Science Magazine
Cambridge, United Kingdom
Peer review: keeping it simple

Chris Surridge (Participant)
Public Library of Science (PloS)
San Francisco/CA, USA
The oligarchy of science
The scientists’ Europe: societies and professional associations — what are they up to?

Tuesday 18 July | 08.30 – 09.45
Forum am Deutschen Museum | Kino 2

The role of professional associations of scientists in determining Europe’s strategy needs to be thought through. National associations and societies such as the RSC, the IOP, the DPG, the SFP, the BA, AFAS and very many others group thousands of members and take an active interest in national policies for science and education. Some are federated by subject to form groupings such as EuCheMS, the EPS, etc in which European strategy in a particular area of science is addressed. Recently, in the UK, a league of national societies from different areas of science was formed to develop a common European strategy. Meanwhile, Euroscience pursues European scientific issues at the European level. How do all the pieces of the puzzle fit together? Where are the blockages in science policy? Where should pressure for change be applied? What is the definition of a researcher anyway? Is the profession under threat in Europe? What common human rights issues do scientists face in their work?

JEAN-PATRICK CONNERADE (Organiser & Participant/Chair)
Euroscience
Strasbourg, France

DAVE GARNER (Participant)
School of Chemistry
Nottingham University
United Kingdom
■ The development of a UK European Science Policy Forum and the formation of EuCheMS

RAFFAELE LIBERALI (Participant)
Directorate-General for Research
European Commission
Brussels, Belgium
■ Why European scientists should federate their profession

GÉRARD TOULOUSE (Participant)
Physics Laboratory
Ecole Normale Supérieure
Paris, France
■ Ethical and cultural issues in Europe: Andrei Sakharov and his legacy

Swedish R&D at the Cutting Edge

The Four Swedish Research Councils Invite You to Luncheon Seminars

- Sunday, 16th. Hosted by Vetenskapsrådet
  Register-based research – Sweden’s competitive advantage.
  (Speaker not confirmed)

- Monday 17th. Hosted by Formas
  The Linnaeus Expedition – an adventure across seven continents.
  Mattias Klum, photographer and Folke Rydén, journalist and film producer.

- Tuesday 18th. Hosted by FAS
  The workplace in transition.
  Professor in Psychology Ulf Lundberg, Stockholm University.

- Wednesday 19th. Hosted by VINNOVA
  Traffic safety – how to prevent neck injuries (whiplash).
  Professor Per Lövsund, Chalmers University of Technology.

All seminars will take place in the Swedish stand 9/12 in the Exhibition Hall 12:30–13:15.
What needs to be fixed in the European patent system?

Tuesday 18 July | 10.00 – 11.15
Forum am Deutschen Museum | Room Helios

Patenting began over 200 years ago with the intention to create financial incentives to inventors, which in turn would improve innovation for the benefit of society. The patent system has undergone a marked development since and has overall served the industrial world well. However, there are signs of malaise due to several less optimal mechanisms and uncertainties concerning the interpretation and application of patent law both within and between countries. This causes problems and sometimes insurmountable challenges to inventors and companies, especially for those with limited financial resources. This session intends to identify the problems, diagnose the underlying causes and proposes a number of measures to fix the system. Issues and questions that will be brought up include the overwhelmingly strong case for a European patent due to varying infringement doctrines between European countries. Do patent law differences between EU & US drive companies to patent and possibly move operations to the US? Is the compulsory licensing only for the rich and powerful?

Carl Johan Sundberg (Organiser)
Karolinska Institute
Stockholm, Sweden

Sven Bostyn (Participant)
Institute for Information Law
University of Amsterdam
The Netherlands
De Clercq, Brants & Partners
Sint-Martens-Latem, Belgium

The unbearable pleasures of non-harmonisation

Joseph Straus (Participant)
Max-Planck-Institut für Geistiges Eigentum, Wettbewerbs- und Steuerrecht
Munich, Germany

The impact of a non-harmonised approach towards research and patenting in the area of stem cell technology

Li Westerlund (Participant)
Bavarian Nordic A/S
Kvistgården Denmark
Linköping University
Sweden

Access and competitiveness

Quality science journalism: is a new style needed?

Tuesday 18 July | 14.30 – 17.00
Forum am Deutschen Museum | Room Helios

We are becoming more dependent on science and technology, yet quality science journalism is losing space and time to trivial, trite and sensational news. Worldwide market pressures reinforce this trend; it is far more cost-effective to use news agency accounts of lurid and transitory events than to support staff reportage of serious and complex subjects. Is science coverage now reduced to simple headlines? Is science criticism becoming nonexistent? The demand for science information is increasingly satisfied by non-traditional media, such as websites, blogs and targeted publications. Do these trends threaten the survival of traditional science journalism? Or is the public now faster and more reliably informed? Do we need a new style of science journalism to revitalise the craft and recapture popular audiences?

James Cornell (Organiser & Participant)
International Science Writers Association
Tucson/AZ, USA

Bad news: the crisis in modern journalism

Deborah Blum (Co-Organiser)
Department of Journalism
University of Wisconsin
Madison/WI, USA

Bridging the gap: pictures and stories, blogs and communities to make the public scientifically literate

Rick Borchelt (Participant)
Genetics and Public Policy Center
Washington/DC, USA

The “frame game”: narratives of humility and the management of public trust

Wilson da Silva (Participant)
Cosmos Magazine
World Federation of Science Journalists (WFSJ)
Sydney, Australia

Bucking the trend: science as culture in magazines

Wolfgang M. Heckl (Participant)
Deutsches Museum
Munich, Germany

Is it all bad news? A scientist’s view of the popular press

Holger Wormer (Participant)
Journalism Department
Dortmund University
Germany

Modern science journalism: distinguishing between story-telling and telling fairy tales
The European Charter for Researchers: a new Magna Carta for science?

Tuesday 18 July | 17.15 – 18.30
Forum am Deutschen Museum | Room Luna

The adoption of the European Charter for Researchers and the Code of Conduct for their Recruitment are key milestones in addressing the issues around the retention of researchers. In acknowledging the potential of the Charter and Code to inspire this cultural change, this session will look into the actual process of applying the principles of the Charter/Code and discuss whether or not this process has generated an impact on national legislation frameworks, on funding mechanisms, on institutional practices. Will the adoption of this charter have the desired effect of raising the status of research as a career? Will it increase the profile of science amongst the public, and affect pupils taking critical career decisions?

Sieglinde Gruber (Organiser)
Directorate-General for Research
European Commission
Brussels, Belgium

Jean-Patrick Connerade (Participant)
Euroscience
Strasbourg, France
■ The European Charter and its potential to empower European researchers

Raffaele Liberati (Participant)
Directorate-General for Research
European Commission
Brussels, Belgium
■ Will the Charter help to make researchers free-movers in the European labour market?

Alexandre Tiedtke Quintanilha (Participant)
Instituto de Ciencias Biomédicas “Abel Salazar”
University of Porto
Portugal
■ How do we make sure the Charter really does shape the European research environment?

Can the European dimension in the research agenda be delivered?

Wednesday 19 July | 09.00 – 11.15
Forum am Deutschen Museum | Room Antares

A European dimension is today essential at both European and national levels for the development of new directions in basic research. Governments and research funding agencies no longer expect to take their decisions based on a purely national basis. In addition to the global nature of scientific endeavour, many research priorities span national and regional boundaries and an increasing number require coordinated approaches to funding. Using real examples from a range of disciplines, this session will develop from a view of the way in which science agendas are set by means of foresight or forward looking activities through to some of the ways in which these agendas can be achieved. Two methods of achievement will be presented; firstly the creation of collaborative research programmes, taking an example from the EUROCORES scheme to show scientific impact from a collaborative project and secondly the creation of a collaboration between organisations which enables outstanding young researchers to establish research teams working at the forefront of European science.

Neil Williams (Organiser & Participant)
European Science Foundation
Strasbourg, France
■ The EURYI scheme: a template for the future of transnational funding collaboration?

Svetlana Berdyugina (Participant)
Institut für Astronomie
Eidgenössische Technische Hochschule
Zürich, Switzerland
■ Excellence in Europe: solar and stellar magnetism

Antje Boetius (Participant)
Max Planck Institute for Marine Microbiology
Bremen, Germany
■ Achieving results in European science collaboration: biodiversity at ocean margins

Ruth Duncan (Participant)
Welsh School of Pharmacy
University of Cardiff
United Kingdom
■ Plotting the future: the nano-medicine forward look

Ian Halliday (Participant & Chair)
The Scottish Universities Physics Alliance
Edinburgh, United Kingdom

Svenje Mehlert (Participant)
European Science Foundation
Strasbourg, France
■ Establishing trans-national research programmes: the EUROCORES scheme experience
Ageing: is it all bad news?
Regularities of evolution at the unicellular level through the time
Autism: was it in Rainman’s genes?
Pandora’s box revisited: evolving patterns of infectious diseases

Living in the fast lane: can the biological clock keep up?
Gene trees of life: evolutionary supercomputing boosts medicine and ecology
Brain, mind, emotions – does gender matter?
The ethics of brain research
The latest research on cancer therapy
The ageing of the European population presents an important, immediate and unavoidable socio-economic challenge: by 2050 approximately one-third of the Union’s population will be over the age of sixty. Increasing numbers of older people are a testament to Europe’s social stability and advances in science and engineering. Great opportunities for social progress are created by this growing proportion of society possessing a wealth of experience and free time, yet there remain many barriers to such progress, including frailty, ill health and societal attitudes. The possibility of more healthy and independent lives for older people has been enhanced by recent scientific advances in understanding the ageing process. Accordingly, the Royal Society of Chemistry will hold a special symposium that will bring together leading experts from Europe and the United States to address questions such as, what are the social implications of our new understanding of ageing? What is the latest biochemical ageing research telling us about how and why our bodies age? How can the chemical sciences contribute to tackling problems associated with the ageing population? Do public perceptions of ageing research differ from those of scientists and, if so, how and why?

**Katherine Green** (Organiser)
Royal Society of Chemistry
London, United Kingdom

**Richard Faragher** (Co-Organiser)
School of Pharmacy and Biomolecular Sciences
University of Brighton
United Kingdom

**Claudio Franceschi** (Participant)
Department of Experimental Pathology
University of Bologna
Italy
- Human ageing and longevity: commonalities and peculiarities

**David Kipling** (Participant)
Department of Pathology School of Medicine
Cardiff University
United Kingdom
- Towards treatment of a human accelerated ageing disease

**Gordon Lithgow** (Participant)
Buck Institute for Age Research
Novato/CA, USA
- The new science of ageing: the hype and the hope

**Mone Spindler** (Participant)
Sheffield Institute for Studies on Ageing
University of Sheffield Elmfield
United Kingdom
- The diversity of anti-ageing therapies, their proponents and users

Evolutionary processes can be studied in unicellular organisms (Protists) as well as in more complex living things. Within the protists there are examples of convergent and parallel change, and of divergent evolution such as the separation of somatic and generative nuclei. Examinations of these beautiful examples of living thing can inform us of larger scale changes. Micropaleontology has a part to play in our understanding of alternative evolutionary paths. The session is devoted to protists’ unique nuclear characteristics, their unusual skeleton and the way in which these have changed with time.

**Valeria Mikhelevich** (Organiser & Participant)
Zoological Institute
Russian Academy of Sciences
St. Petersburg, Russia
- The main trends in the evolution of Foraminifera

**Mike Kaminski** (Co-Organiser & Participant)
Department of Geological Sciences
University College London
United Kingdom
- The evolution of the agglutinated foraminifera

**Vladimir Nikolaev** (Co-Organiser & Participant)
Botanical Institute
Russian Academy of Sciences
St. Petersburg, Russia
- The origin and the early evolution of the diatom algae

**Marina Afanasieva** (Participant)
Paleontological Institute
Russian Academy of Sciences
Moscow, Russia
- Main directions of the evolution of the Radiolarian skeleton

**Eduard Amon** (Participant)
Institute of Geology and Geochemistry
Ural Department
Russian Academy of Sciences
Ekaterinburg, Russia
- The nature of time: Radiolarian ecology and evolution stages

**Claudia G. Cetean** (Participant)
Department of Geology
Babes-Bolyai University
Napoca, Romania
- The evolution of the agglutinated foraminifera
Autism: was it in Rainman’s genes?

Sunday 16 July | 17.15 – 18.30
Forum am Deutschen Museum | Kino 2

Autism is a debilitating mental disorder that is still stigmatised in today’s society. It typically appears during the first three years of life and affects about 0.15% of all children. Autism is characterised by social detachment, abnormal language development, abnormal and often repetitive behaviours, and in many cases also by mental retardation. In rare cases, patients have savant skills in mathematics, music or the arts. Twin studies show that autism is one of the most heritable mental disorders known. This indicates that autism is largely genetic in origin and that a relatively small number of genes may be involved in causing the disease. The symposium will define the frontier of autism research at the clinical, genetic and molecular levels. It will suggest that autism is a neurodevelopmental disorder caused mainly by the dysfunction of genes regulating the formation and function of nerve cell networks in the brain, rather than by social factors.

Kerstin Mauth (Organiser)
DFG Research Centre Molecular Physiology of the Brain
Göttingen, Germany

Nils Brose (Participant)
Department of Molecular Neurobiology
Max-Planck-Institute for Experimental Medicine
Göttingen, Germany
- Nerve cell dysfunction in autism

Thomas Bourgeron (Participant)
Institut Pasteur
Paris, France
- The genetics of autism

Christopher Gillberg (Participant)
Department of Child and Adolescent Psychiatry
University of Gothenburg
Sweden
- Clinical characteristics and treatment of autism

Pandora’s box revisited: evolving patterns of infectious diseases

Monday 17 July | 14.30 – 17.00
Forum am Deutschen Museum | Kino 2

Infectious disease is the major cause of death worldwide and each year new infectious agents appear. What mechanisms lead to the development of new infectious agents? Genetic mechanisms and human behaviour strongly influence the development of new pathogenic variants. What are the basic mechanisms leading to resistant microbes?

Jörg Hacker (Organiser & Participant)
Institute for Molecular Infection Biology
University of Würzburg
Germany
- Evolution of pathogens causing infections in the hospital

Living in the fast lane: can the biological clock keep up?

Monday 17 July | 17.15 – 18.30
Forum am Deutschen Museum | Room Antares

Our biological clocks divide us into early birds or night-clubbing ‘owls’. The symposium will address the genetic basis of this clock, what happens to us when the clock goes wrong in disease, and the implications of biological rhythm in a society that rushes around the globe and stays open all hours.

Alison Abbott (Organiser)
Nature
Munich, Germany

Russell Foster (Participant)
Division Neuroscience
Imperial College School of Medicine, Charing Cross Hospital
United Kingdom
- The biological clocks in schizophrenics

Martha Merrow (Participant/Chair)
Department of Behavioural Biology
Rijksuniversiteit Groningen
Haren, The Netherlands
- The genetics of our biological clock

Till Roenneberg (Participant)
Department of Medical Psychology
University of Munich
Germany
- Social jetlag: the mismatch of our social and biological clocks

Eus van Someren (Participant)
Netherlands Institute for Brain Research
Amsterdam, The Netherlands
- Disturbed biological clocks in the demented elderly
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- cooperates on a regular basis with German institutes and foundations such as Wissenschaftskolleg zu Berlin, VolkswagenStiftung and Robert Bosch Stiftung

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Box 5675, SE-114 86 Stockholm, Sweden
The inference of evolutionary relationships between organisms is of fundamental importance for understanding biology, and recent years have witnessed a dramatic increase of data and methods in this field. However, inferred relationships apparently vary depending on the characteristic selected for comparison. Large collections of gene and protein sequences now exist, representing many organisms. Several methods and models are available for reconstructing phylogenetic trees from gene sequences. How does this work, which methods should be used? Major computer resources are necessary to construct a gene tree of life in acceptable time. Which problems do exist? How far can we go with today’s hard- and software technology? Apart from explaining organism’s phylogenetic relationship a gene tree enables the grouping of organisms defined by its branching points. Are gene trees useful in deriving good classification systems of contemporary organisms? What is the impact of a well founded gene tree on diagnosis and therapy for microbial disease, what on exploring diversity and function of microorganisms in nature? Answers and major breakthroughs in evolutionary science, supercomputing, medical and ecological microbiology will be presented.

**Gene trees of life: evolutionary supercomputing boosts medicine and ecology**

**Tuesday 18 July | 14.30 – 17.00**  
Forum am Deutschen Museum | Room Solaris

- **Harald Meier** (Organiser & Participant)  
Lehrstuhl für Rechnertechnik und Rechnerorganisation/Parallelrechnerarchitektur  
Technische Universität München, Informatik  
Garching, Germany
- **Gene trees of life: an introduction**
- **Michael Ott** (Co-Organiser & Participant)  
Institut für Rechnertechnik und Rechnerorganisation/Parallelrechnerarchitektur  
Technische Universität München, Informatik  
Garching, Germany
- **Unleashing supercomputing power for reconstructing huge phylogenetic trees**
- **Arndt von Haeseler** (Participant)  
Center for Integrative Bioinformatics  
Max F. Perutz Laboratories (MFPL)  
Vienna, Austria
- **Phylogenies from genes: an overview**
- **Wolfgang Ludwig** (Participant)  
Lehrstuhl für Mikrobiologie  
Technische Universität München  
Freising-Weihenstephan, Germany
- **Phylogeny inference: the conserved core of the genome**
- **Karlheinz Trebesius** (Participant)  
University of Applied Sciences Munich  
Germany
- **Proceedings in medical microbiology by gene tree related techniques**

**Brain, mind, emotions: does gender matter?**

**Tuesday 18 July | 14.30 – 17.00**  
Forum am Deutschen Museum | Kino 3

The public interest in neurosciences presently focuses on the conscious workings of the brain. A substantial part of the human brain, however, is concerned with the unconscious where emotions, instincts and predispositions are embedded. Scientists have recently become aware that gender is relevant to this kind of research. The symposium explores the area between social and biological conditioning of emotions. By contrasting positive (joy, lust) and negative feelings (fear, anxiety, trauma) the relevance of gender can be established. These results advanced scientific understanding may provide a basis for the treatment of certain mental illnesses.

- **Doris Janshen** (Organiser & Participant)  
Essener Kolleg für Geschlechterforschung  
University of Duisburg-Essen  
Germany
- **Negative emotions in the context of social-medical gender studies**
- **Dieter Bingmann** (Co-Organiser & Participant/Chair)  
Institut für Physiologie  
Universitätsklinikum Essen / University of Duisburg-Essen  
Germany
- **Michael Forsting** (Participant)  
Institut für Diagnostische und Interventionelle Radiologie und Neurologie  
University of Duisburg-Essen  
Germany
- **Positive emotions in the functional MRT: are they gendered?**
- **Arlie Hochschild** (Participant)  
Sociology Department  
University of California at Berkeley  
Berkeley/CA, USA
- **Culture, gender and positive emotions**
- **Gert Holstege** (Participant)  
Department of Anatomy and Embryology  
University of Groningen  
The Netherlands
- **The representation of orgasm in the brain of men and women**
- **Jaak Panksepp** (Participant)  
Department of Psychiatry  
Bowling Green State University  
Toledo/OH, USA
- **Conclusions from the point of view of the affective neurosciences**
**The ethics of brain research**

**Tuesday 18 July | 17.15 – 18.30**  
Forum am Deutschen Museum | Kino 3

Current developments in neuroscience hold great promise for improving our understanding of how the brain works in relation to behaviour, consciousness and brain diseases and will eventually help to reduce human suffering. Scientists and the public need to be aware of the potential consequences of advances in brain research that may have the capacity to alter the brain and mind. These concerns have generated the concept of ‘neuroethics’ – the ethics of brain research. This symposium will outline cutting-edge science and ask how scientists, policy makers and the public can best exploit brain research.

**Elaine Snell** (Organiser)  
European Dana Alliance for the Brain (EDAB)  
London, United Kingdom

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**The latest research on cancer therapy**

**Wednesday 18 July | 8.30 – 11.15**  
Forum am Deutschen Museum | Room Galaxis

Cancer is one of the leading causes of death. According to the WHO more than 11 million people are diagnosed with cancer every year. Surgery, radiation and chemotherapy have long been the dominant treatments. Substantial technological progress is driving a new era of cancer-related diagnostics and therapy. Considerable research effort is being put into the development of new anticancer drugs, aimed at having specific and predictable effects on tumour cells and fewer side-effects. In this seminar, the latest progress in cancer research is highlighted. Prospects, challenges and the boundaries of new developments are described. An emphasis is put on targeted molecular therapies, anticancer vaccines and the role of pharmacogenomics in cancer research.

**Michael Schwarz** (Organiser)  
Robert Bosch Stiftung  
Stuttgart, Germany

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**Career Programme**

82 Peer review: the process unveiled
82 Pretzel with the Prof
83 Junior Faculty as a power in research policy-making
83 Bringing science to the people
83 Where have all the good brains gone? The international migration of scientists
84 Top five scientific career paths
84 Fun and games with media communication
84 Standing on the shoulder of giants: mentor-inspired genius
85 Sponsoring international mobility of young researchers: opportunities and orientation
85 Job interview workshop
86 North/South, West/East divide: how to get young researchers together
Peer review: the process unveiled
Sunday 16 July | 8.30 – 11.15
Forum am Deutschen Museum | Room Selene

This introductory seminar on peer review is targeted at scientists in the earliest stages of their career (mainly doctoral and postdoc level) and will provide them with valuable insights: the perspectives of both the reviewer and the reviewed in manuscript and grant proposal evaluation will be presented. The first half will be of a more general nature, discussing why peer review has become the standard quality check mechanism in scientific publishing and research funding and how the quality of a paper, proposal or review can be assessed. The second part will deal with specific aspects including different models of peer review, differences between disciplines, research programmes and journal scope. In order to make the seminar as interactive as possible, some material on the seminar will be made available online some time prior to ESOF2006 via the website of the seminar organiser www.waysnet.org.

Daniel Mietchen (Organiser)
World Academy of Young Scientists (WAYS)
Budapest, Hungary

Gaël Mainguy (Co-Organiser)
World Academy of Young Scientists (WAYS)
Budapest, Hungary

Guntram Bauer (Participant)
Human Frontier Science Program Organization
Strasbourg, France
- Review of grant proposals for international collaborations

Jean-Patrick Connerade (Participant/Moderator)
Euroscience
Strasbourg, France

Michael B. Jackson (Participant)
School of Biological Sciences
University of Bristol
United Kingdom
- Peer review – what is it and why should you get involved?

Ulrich Poeschl (Participant)
Max-Planck-Institute for Chemistry
Mainz, Germany
- Collaborative peer review

Karl Ziemelis (Participant)
Nature
London, United Kingdom
- Review of scientific manuscripts

Pretzel with the Prof
Sunday 16 July – Wednesday 19 July
12.30 – open end
Science Biergarten

Pretzel with the Prof is a unique opportunity for young scientists and students attending ESOF2006 to meet renowned scientists in a casual atmosphere. In the Science Biergarten, during lunch break and around a basket of typical Bavarian pretzels, some of the ESOF2006 plenary lecturers will be happy to answer all questions young people might have about their personal experience in science, job history, science careers, or follow up hot themes of the ESOF2006 lectures and sessions. Pretzel with the Prof will take place daily during the scientific programme of ESOF2006, with different participants. The number of attendees is limited to 10 per Prof. Pre-registration on-site at the conference office (Room Aurora, Ground Floor) is required.

Additions or changes to the schedule will be posted on the message board in the Young Scientists’ Corner located on the Ground Floor next to the elevators.

Sunday 16 July | 12.30 – open end
Science Biergarten
David Reddy
Andrey Solov’yov

Monday 17 July | 12.30 – open end
Science Biergarten
Gerry Gilmore
Bengt Kasemo

Tuesday 18 July | 12.30 – open end
Science Biergarten
Mary Bossis
Robbert Dijkgraaf
Bob Jones
Jean-Marie Lehn
Andres Metspalu

Wednesday 19 July | 12.30 – open end
Science Biergarten
Sadik Al-Azm
Karolinska Institute has developed a Junior Faculty Programme that offers career development for junior researchers who hold a PhD but not yet a tenure position. This programme has proven to be a successful tool in strengthening junior researchers as a group and influencing decision makers. This session will describe how the programme influenced policy making at the university as well as governmental level. It will also discuss a report from the League of European Research Universities on the number of post-docs, their conditions and the career resources for post-docs at universities across Europe. Additionally, an EU perspective on policy-making will be discussed.

**Anna Persson** (Organiser)
Career and Recruitment Unit
Department of Research and Postgraduate Education
Karolinska Institute
Stockholm, Sweden

**Elisabet Akesson** (Participant)
Neurotec
Karolinska Institute
Stockholm, Sweden

**Georges Bingen** (Participant)
Directorate-General Research
European Commission
Brussels, Belgium

**Katarina Bjelke** (Participant)
Department of Research and Postgraduate Education
Karolinska Institute
Stockholm, Sweden

**Judit Wefer** (Participant/Chair)
Career and Recruitment Unit
Department of Research and Postgraduate Education
Karolinska Institute
Stockholm, Sweden

International co-operation and exchange of ideas are necessary for the advancement of science. However, there have always been countries who benefit from an influx of scientists (brain gain) and others who lose (brain drain). The most frequent migrational patterns are those from developing to developed countries, and also from the latter to the United States. However, in recent years new patterns of brain drain have emerged. Factors that have influenced migration include: the fall of the Iron Curtain; the enlargement of the European Union; the emergence of new players like China and India; and entry restrictions in the US in the aftermath of 9/11. The discussion will address the question of brain drain (or rather brain exchange?), the numbers of researchers involved, the factors influencing their movements and different approaches to (re)gain scientists.

**Anjana Buckow** (Organiser)
Research Training Groups and Research Careers Division
Deutsche Forschungsgemeinschaft (DFG)
Bonn, Germany
**Fun and games with media communication**

**Monday 17 July | 14.30 – 17.00**

Forum am Deutschen Museum | Room Gaia

Ever wondered how the headlines of newspaper articles are generated, why you should never say ‘no’ to a journalist, or why scientists and journalists are more similar than we think? In this workshop, scientists will get more than a glimpse into the world of media and public communication: they will re-create it themselves. Following introductory presentations and role-playing demonstrations, the hosts will engage the audience in interactive exercises that simulate situations such as: an interview with a tabloid journalist, writing for a tabloid or other newspaper, appearing on a radio/TV programme, communicating with the general public. As well as on-the-spot interviews by the hosts, participants will be asked to interview each other as if for a broadcast programme, and for a short piece written in tabloid style. The workshop does not require that all participants are actively involved in the interactive exercises: it will be revealing and educational merely to observe.

**Andrew Moore** (Organiser & Participant)
European Molecular Biology Organization (EMBO)
Heidelberg, Germany

- **The media: strange, but not strangers**

**Frank Burnet** (Participant)
Faculty of Applied Sciences
University of the West of England
United Kingdom

- **Taking science to people**

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**Standing on the shoulder of giants: mentor-inspired genius**

**Tuesday 18 July | 8.30 – 11.15**

Forum am Deutschen Museum | Room Selene

Over 20 organizations sponsoring innovative research programs for scientists under the age of 21 established the Network of Youth Excellence in 2005. The Network advances collaboration, facilitates student research conferences and exchanges, shares information, and supports establishment of new student research programs. This symposium will present several exemplary Network mentorship programs and projects from Croatia, Germany, Hungary, Korea, Romania, Serbia, USA, and other countries, focusing primarily on those requiring more imagination than resources. Some of the world’s most exciting mentoring programs developed in the midst of war, poverty, and other environments seemingly too treacherous to nurture young scientists. Ongoing initiatives and future plans will be discussed, and information to establish student research programs will be shared.

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**Top five scientific career paths**

**Monday 17 July | 14.30 – 17.00**

Forum am Deutschen Museum | Room Helios

Earning a PhD marks an end to academic training, but a starting point for a career in science. In this session, attendees will learn about five different popular pathways including Pharma, Biotech, Entrepreneurship, Law and Finance. Panelists who have taken different roads will share how they got to their current destination, lessons they have learnt along the way and they will offer a map for young scientists interested in following their footsteps. Attendees to this session will also receive a free six-month subscription to the online version of Nature.

**Patrick Phelan** (Organiser)
Nature
Munich, Germany

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**BEATE SCHOLZ** (Co-Organiser)
Deutsche Forschungsgemeinschaft (DFG)
Bonn, Germany

**GEORGES BINGEN** (Participant)
Directorate-General Research
European Commission
Brussels, Belgium
- **International mobility in the European Research Area**

**MARIO CERVANTES** (Participant)
Directorate for Science, Technology and Industry
Organisation for Economic Co-operation and Development (OECD)
Paris, France
- **International labour migration of highly qualified people**

**INGRID KRÜSSMANN** (Participant)
Deutsche Forschungsgemeinschaft (DFG)
Bonn, Germany
- **Brain exchange between Asia and the West: chances and challenges**

**BRIAN O’NEILL** (Participant)
International Institute for Applied Systems Analysis (IIASA)
Laxenburg, Austria
- **International mobility of highly qualified young researchers: a personal view**

**ALEXIS-MICHEL MUGABUSHAKA** (Participant)
Deutsche Forschungsgemeinschaft (DFG)
Bonn, Germany
- **International mobility in research careers: threats or opportunities?**

**JEANNE RUBNER** (Participant/Moderator)
Süddeutsche Zeitung
München, Germany

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**Andrew Moore** (Organiser & Participant)
European Molecular Biology Organization (EMBO)
Heidelberg, Germany
- **The media: strange, but not strangers**

**Frank Burnet** (Participant)
Faculty of Applied Sciences
University of the West of England
United Kingdom
- **Taking science to people**

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**Patrick Phelan** (Organiser)
Nature
Munich, Germany

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**Brain exchange between Asia and the West: chances and challenges**
programs provided. Encouraging talented young researchers will ensure scientists for the future. International co-operation among young scientists will create global solutions to shared problems, promote equitable use of knowledge, and develop synergy among countries.

**Peggy Connolly** (Organiser & Participant)  
Network of Youth Excellence  
Illinois Mathematics and Science Academy  
Illinois, USA  
- **Mentoring: wisdom of the ancients, odyssey to the future**  
- **Hungary’s glorious decade of young scientists**

**Myoung Hwan Kim** (Participant)  
Kim Institute for the Korean Gifted  
Kyungwon University  
South Korea  
- **Mentorship programme and science gifted education in Korea**

**Vigor Majic** (Participant)  
Petnica Science Centre  
Serbia and Montenegro  
- **Students as teachers: how to include all generations in gifted education**

**Eva-Maria Neher** (Participant)  
XLAB-Göttinger Experimentallabor für junge Leute e. V.  
Göttingen, Germany  
- **Mentoring: wisdom of the ancients, odyssey to the future**

**Dan Sporea** (Participant)  
National Institute for Lasers, Plasma and Radiation Physics  
Bucharest, Romania  
- **Guiding school students in the framework of “hands-on science”: the Comenius project**

**Sponsoring international mobility of young researchers: opportunities and orientation**

**Barbara Sheldon** (Organiser & Participant)  
Alexander von Humboldt Stiftung  
Bonn, Germany  
- **Sponsorship opportunities offered by the Alexander von Humboldt Foundation**  
- **How to find the suitable funding scheme and other useful information – the German Mobility Centre at the Alexander von Humboldt Foundation**

**Gisela Janetzke** (Participant/Chair)  
Alexander von Humboldt Stiftung  
Bonn, Germany  
- **Finding suitable funding schemes – introduction**

**Christiane Schmeeken** (Participant)  
Deutscher Akademischer Austauschdienst (DAAD)  
Bonn, Germany  
- **Sponsorship opportunities offered by the German Academic Exchange Service (DAAD)**

**Beate Scholz** (Participant)  
Deutsche Forschungsgemeinschaft  
Bonn, Germany  
- **Sponsorship opportunities offered by the Deutsche Forschungsgemeinschaft (DFG)**

**Shin Tanaka** (Participant)  
Center for International Research and Education  
Chiba University  
Japan  
- **Sharing mobility experience**

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**Job interview workshop**

**Tuesday 18 July | 14.30 – 17.00**  
Forum am Deutschen Museum | Room Terra

Do job interviews give you the creeps? Have you never been interviewed for a job? Do you have bad experiences from past interviews? We would like to offer junior researchers the chance to step into the shoes of the applicant and employer. In this interactive workshop we give them practical training that will help them understand the small print of communication in job interview situations. The participants will watch, prepare and take part of four different role plays: Interview in Academia, Pharmaceutical Industry, Generic Industry and Alternative careers. Contributors are professionals with experience from industry and alternative careers as well as from academia. The number of participants is limited to 50. Pre-registration on-site at the conference office (Room Aurora, Ground Floor) is required.

**Anna Persson** (Organiser)  
Career and Recruitment Unit  
Department of Research and Postgraduate Education  
Karolinska Institute  
Stockholm, Sweden

**Seema Sharma** (Co-Organiser)  
ScienceCareers.org (Next Wave)  
Science Magazine  
Cambridge, United Kingdom
North/South, West/East divide: how to get young researchers together

Tuesday 18 July | 17.15 – 18.30
Forum am Deutschen Museum | Room Selene

The workshop will focus on setting the common framework for co-operation between young researchers worldwide. Such co-operation should be established to face such problems as how to: influence research policies on a global scale; foster research co-operation; facilitate careers in science for young scientists; encourage international mobility; and facilitate the emergence and sharing of scientific knowledge to reduce the gap between developed and less developed countries. The workshop will also be an opportunity to discuss running a survey on young researchers worldwide to learn more about their current status, working conditions, career prospects and career barriers.

Agnieszka Majcher-Teleon (Organiser & Participant)
World Academy of Young Scientists (WAYS)
Warsaw, Poland
- Young researchers world-wide: challenges for the future

Victoria Mendizabal (Co-Organiser)
World Academy of Young Scientists (WAYS)
Buenos Aires, Argentina

Olivier da Costa (Participant)
Institute for Prospective and Technological Studies
Joint Research Centre
European Commission
Sevilla, Spain
- A European monitoring on researchers and research personnel

Maria Harsanyi (Participant)
World Academy of Young Scientists (WAYS)
Budapest, Hungary
- The situation and career prospects of young Hungarian scientists

Dunja Potocnik (Participant)
Institute of Social Research
Zagreb, Croatia
- PhD candidates world-wide: challenges for the future

Max Reinhardt (Participant)
Interdisziplinäres Netzwerk THESIS für Promovierende und Promovierte e. V.
Hannover, Germany
- PhD candidates Europe-wide: challenges for the future
Outreach Activities address the general public and especially the younger generation through interactive exhibits, live experiments, ‘hands-on’ demonstrations, games and science cafés. The ESOF2006 Outreach programme jointly takes place with the Wissenschaftsommer, the German National Science Week.

**OUTREACH ACTIVITIES**

88 New demonstrations with phosphorescence and fluorescence
88 Want to know how, when or why? Go on, come and give it a try!
88 Galaxies, quarks and the shareholder value
88 Deep sea adventures without getting your feet wet
89 The Bremen Profmobile – exciting science, curious audiences, lively dialogues
89 Expedition into the microcosm
89 Sciences and youth: make it happen!
90 Mysterix – the science truck
90 The brain in mind: explore the human brain through science, history and art
91 Puppet theatre “A Time Journey”, a geo-theatre for children
91 Metamagicum – the magic of science
91 Basic research – basis of our knowledge
93 Take a trip to the frontiers of science!
93 Facts and myths about “gene-technology”: a case study on “Golden Rice” and polyunsaturated fatty acids
93 How safe is your food?
94 Plug your neurones!
94 Living with food allergy
94 Molecular gastronomy and daily technological applications – impact on health and education
Interactive Exhibition and Lecture:
New demonstrations with phosphorescence and fluorescence

Saturday 15 July | 12.00 – 24.00
Sunday 16 July – Friday 21 July | 10.00 – 19.00
Altes Rathaus, Munich

Lecture: Thursday 20 July | 17.00 – 18.30
Tent for special events, Marienhof, Munich

There are several methods to demonstrate the law of acceleration of a free falling body. One of them is very spectacular and suitable for public performances. The body in question which contains a ring of periodically flashing lights, is held by an electromagnet at the ceiling. The process is initiated by pushing a button. While falling the flashing lights produce dots on the wall behind, which is coated with phosphorescent material. Due to its special quality the surface captures the increasing distances of the dots thereby demonstrating the law of acceleration in a very graphic manner. The experiment is complemented by a lecture on the phenomenon of phosphorescence.

Otto Luehrs (Organiser)
Phäno
Wolfsburg, Germany

Interactive Exhibition:
Want to know how, when and why?
Go on, come and give it a try!

Saturday 15 July | 12.00 – 24.00
Sunday 16 July – Friday 21 July | 10.00 – 19.00
Marienhof, Munich

So, what exactly happens when you put a chocolate marshmallow into a vacuum? Why is everybody unique? How accurately can you hear where a sound comes from? Ever wanted to experience science first hand? Well, then visit the school labs of the Helmholtz Association at the Marienhof in Munich’s centre between July 15th – 21st.

Ellen Peerenboom (Organiser)
Helmholtz Association
Berlin, Germany

Ulrike Behrens (Participant)
DESY Berlin Zeuthen
Germany

Susanne Strempel (Participant)
DLR Göttingen
Germany

Andrea Fournier (Participant)
Forschungszentrum Jülich
Germany

Gunthard Metzig (Participant)
Karlsruhe Research Centre
Germany

Iris Eisenbeiser (Participant)
Gesellschaft für Biotechnologische Forschung
Braunschweig, Germany

Interactive Exhibition and Discussion:
Galaxies, quarks and the shareholder value

Saturday 15 July | 12.00 – 24.00
Sunday 16 July – Friday 21 July | 10.00 – 19.00
Altes Rathaus, Munich

Lecture: Wednesday 19 July | 17.00 – 19.00
Tent for special events, Marienhof, Munich

Why is the Universe flat? Why does the Universe contain almost entirely matter, and almost no antimatter? Over the last decades the field of particle physics has achieved astonishing insights into the simplicity that belies the complexity of the microworld. Forces that govern the atomic and subatomic world have been measured, and the building blocks of matter, quarks and leptons have been discovered. Naturally, such research is costly and requires the joint use of laboratories and facilities. Our exhibition will show how limited resources of individual countries are joined in Europe and worldwide to tackle the most pressing questions in basic research.

Ties Behnke (Organiser)
DESY Hamburg
Germany

Interactive Exhibition:
Deep sea aDVENTures without getting your feet wet

Saturday 15 July | 12.00 – 24.00
Sunday 16 July – Friday 21 July | 10.00 – 19.00
Altes Rathaus, Munich

Most of the ocean ridge – 60,000 kilometres of deep sea mountain range that form Earth’s largest physical feature – remains unexplored. Scientists know more about outer space than they do about the ‘inner space’ of the deep ocean. It’s a wet and wild world packed with mystery. Earth’s crust is born in this sunless place, the site of black smokers – chimney-like volcanic structures – billowing a mineral-laden brew almost four times as hot as boiling water. In and around many ridge spots are gutless, buttless, bloody tubeworms stretching high like giant lipsticks.

What’s more, this scientific frontier could hold answers to questions about the origin of life on earth and the possibility of life on other planets – not to mention discoveries that could improve the ways we clean up the environment, advance medicine and improve industry. How do scientists get to this place, and how do they work together in teams to understand the complex ecosystem? What do they hope to learn? The exhibition will feature real vent samples, including one from a site called “Lost City”, a half hour
educational video called “Voyage into the abyss”; an interactive website; a powerpoint show; an aquarium model with toy remote control sub to show how scientists study the ocean floor; and 1-2 of the world’s best ridge scientists on hand.

**Kristen Kusek** (Organiser)
InterRidge
Kiel, Germany & Cambridge/MA, USA

**Gretchen Früh-Green** (Participant)
Institute for Mineralogy and Petrography
ETH-Zürich
Switzerland

**Monika Bright** (Participant)
Marine Biology Zoological Institute
University of Vienna
Austria

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**Interactive Exhibition: Expedition into the microcosm**

**Interactive Exhibition: Sciences and youth: make it happen!**
important for our association Planète Sciences, for each activity we focus on experimental process, project management and teamwork.

Valérie Collin (Organiser)
Planète Sciences
Ris Orangis, France

Interactive Exhibition:
Mysterix – the science truck
Saturday 15 July – Friday 21 July | 10.00 – 17.00
Inner courtyard, Deutsches Museum, Munich

On the road again …! Technopolis, the Flemish Science Centre in Belgium brings its Mysterix science truck to Munich. Young and old are invited to perform different experiments from physics, mechanics, biology, music and language. Save our world from the spread of a dangerous virus while unravelling the mysteries of science!

Steven Vols (Organiser)
Technopolis, the Flemish Science Center
Mechelen, Belgium

Theatre, panel discussion:
The brain in mind: explore the human brain through science, history and art
Saturday 15 July | 20.00 – 21.00 (Theater)
Sunday 16 July | 14.00 – 19.00
Tent for special events, Marienhof, Munich

How do we recognise emotion? How is laughter processed? Why do we respond to rewards? What is the science behind mind-altering drugs?

This multidisciplinary event brings together scientists, historians and artists to discuss such themes plus the far-reaching scientific and social consequences of advances in neuroscience.

Join artist Bobby Baker for a performance of “How to Live”, a live demonstration of the effectiveness of her new therapy with one of her patients – a frozen pea.

A panel of high-profile scientists and historians will lead a lively and interactive discussion on their fascinating research.

Plus there will be a chance to see acclaimed short films on science and the arts, and an art installation by Andrew Carnie.

A final performance of “How to Live” will close the event.

Philomena Gibbons (Organiser)
Wellcome Trust
London, United Kingdom

Lisa Jamieson (Co-Organiser)
Wellcome Trust
London, United Kingdom

Bobby Baker (Participant)
London, United Kingdom

Geraint Rees (Participant)
University College London
United Kingdom

Kai Alter (Participant)
School of Neurology, Neurobiology and Psychiatry
University of Newcastle
United Kingdom

Mike Jay (Participant)
United Kingdom

Wolfram Schultz (Participant)
Department of Physiology, Development and Neuroscience
University of Cambridge
United Kingdom

Michael Neve (Participant)
Wellcome Trust Centre for the History of Medicine
University College London
United Kingdom

Andrew Carnie (Participant)
United Kingdom
Theatre: 
Puppet theatre “A Time Journey”, a geo-theatre for children

Sunday 16 July – Friday 21 July | 8.45 and 10.00
Tent for special events, Marienhof, Munich

Imagine … a little ice bear girl named Ursi stumbles between huge dinosaurs, a time worm creeps across the stage and a mammoth looks for something to eat in the middle of nowhere. Definitely an odd situation, right? Did someone perhaps fumble on some lever switches in a time machine? Mammoth Helmut and Ursi buzz through different epochs of Earth’s history with a time machine of the time worm Temporum. Steaming and whistling, this obstinate machine takes actors and audience on a journey through the history of our earth.

FRANZ OSSING (Organiser)
GeoForschungsZentrum
Potsdam, Germany

Theatre: 
Metamagicum – the magic of science

Monday 17 July | 20.30 (in German language)
Tuesday 18 July | 20.30 (in English language)
Theater Drehleier, Rosenheimer Straße 123, Munich

Is gravity dispensable? Is there a free will? What does a dancing top quark look like? Adn wyh cna yuo raed tihs sneetne wuothit ayn plrebom? Science has many questions. A quote from Einstein perfectly captures the underlying motif for the show: “The most beautiful thing we can experience is the mysterious. It is the source of all true art and science.” In ‘Metamagicum’, Thomas Fraps and Pit Hartling fantasise their way through the worlds of science and conjuring. From the paradoxes of quantum physics to an IQ-scan of the audience and a group-travel into a parallel universe - Metamagicum is a tantalizing mix of fact and fiction. Where else would you experience optical illusions and world-class sleight of hand magic back to back with movie projections and Bach’s well-tempered piano? And in case you ever wondered what happened to those missing socks or how the special theory of relativity relates to the traditional Munich brewery “Spaten”: Metamagicum has the answers! Metamagicum blends scientific facts, masterful conjuring, surreal gadgetry and professional nonsense into a full-evening extravaganza. (Free tickets for both shows are available at the ESOF2006 conference office, Room Aurora, Ground Floor).

THOMAS FRAPS & PIT HARTLING (Organisers)
Trick 17 magic concepts
Munich, Germany

Lecture: 
Basic research – basis of our knowledge

Sunday 16 July – Friday 21 July | 19.00 – 22.00
Max-Planck-Haus am Hofgarten, Hofgartenstraße 8, Munich

Covering a wide variety of topics, ESOF provides the ideal opportunity to demonstrate the fascination of basic research to the public. Our series will therefore feature a different speaker every night who will address a specific topic based on key themes from the ESOF programme. Further lectures will take place in the mornings, specifically addressing students from Munich schools. These lectures are also generally open to ESOF participants. For more information on both lecture series please consult the programme of the Wissenschaftssommer. (Please note that all lectures, with the exception of Prof. Vaupel’s, will be held in German.)

ANDREA WEGENER (Organiser)
Max-Planck-Gesellschaft
Munich, Germany

Sunday 16 July
WOLF SINGER (Participant)
Max Planck Institute for Brain Research
Frankfurt, Germany

Hirnforschung – Brücke zwischen Natur und Humanwissenschaften

Monday 17 July
KARSTEN DANZMANN (Participant)
Max Planck Institute for Gravitational Physics
Hannover, Germany

Der Klang des Universums – auf der Suche nach Einsteins Gravitationswellen

Tuesday 18 July
JAMES W. VAUPEL (Participant)
Max Planck Institute for Demographic Research
Rostock, Germany

Aging – Prospects and Challenges for Individuals and Societies

Wednesday 19 July
STEFAN H. E. KAUFMANN (Participant)
Max Planck Institute for Infection Biology,
Berlin, Germany

In 80 Tagen um die Welt – die Globalisierung der Infektionskrankheiten
“Research in Europe – From History to the Future” is the title of a thematic module of the Euroscience Open Forum taking place on July the 16th and 17th in the “Deutsches Museum” in Munich. It aims at presenting recent research results and initiating discussions on the future goals of European research policy. The main focus will be on a section dealing with the role of foundations in European research.

It is organised by the VolkswagenFoundation/Germany, the Compagnia di San Paolo/Italy, and the Calouste Gulbenkian Foundation/Portugal.
Thursday 20 July

**Annette Schavan** (Participant)
German Federal Minister of Education and Research

**Jürgen Zöllner** (Participant)
Minister of Science, Education, Research, and Culture of Rhineland-Palatinate

**Ernst-Ludwig Winnacker** (Participant)
President of the Deutsche Forschungsgemeinschaft

**Peter Gruss** (Participant)
President of the Max-Planck-Gesellschaft

**Panel discussion: “Vorfahrt für Forschung?!”**

Friday 21 July

**Rolf Emmermann**
GeoForschungsZentrum Potsdam, Germany

**Das Tsunami-Frühwarnsystem im Indischen Ozean**

**Webcast:**
**Take a trip to the frontiers of science!**

Monday 17 July | 11.30 – 13.00
Forum am Deutschen Museum | Kino 2

Are Europeans feeling more and more disconnected with science and technology? We propose an interactive webcast directly connecting an audience of students in Munich with young scientists working at the cutting edge of research. The scientists will be working on some of the most exciting large-scale experiments and they will be able to outline the cutting edge research they are doing (from particle physics to fusion research, space exploration to molecular biology, astronomy to probing the very heart of matter). Students will have the opportunity to discuss with researchers what some of their daily tasks are, how they got to work at one of the world largest research organisations and what made them choose a scientific career thus enabling them to catch an exciting glimpse of science in practice.

**Chris Warrick** (Organiser)
UKAEA Culham Division (on behalf of the European Fusion Development Agreement – EFDA)
Abingdon, United Kingdom

Monday 17 July | 11.00 – 12.15
Tent for special events, Marienhof, Munich

**Nutrition Day: Facts and myths about “gene-technology”: a case study on “Golden Rice” and polyunsaturated fatty acids**

**Monday 17 July | 12.30 – 13.45**
Tent for special events, Marienhof, Munich

Why do people in Europe seem more sceptical about biotechnology compared to other parts of the world? What motivates people to campaign against specific areas of scientific research? How has our risk perception changed over time? The workshop aims to discuss these changes and what brought them about by focusing on case studies of “Golden Rice”, a biotechnological invention with seemingly big potential which has nearly been stopped as a result of modern scepticism, and the development of healthy polyunsaturated fatty acids in genetically modified plants.

**Thomas Deichmann** (Organiser)
Novo Magazin
Frankfurt, Germany

**Ingo Potrykus** (Participant)
Golden Rice Humanitarian Board
Magden, Switzerland

**Klaus-Dieter Jany** (Participant) Bundesforschungsanstalt für Ernährung
Karlsruhe, Germany

**Jörg Bauer** (Participant)
BASF Plant Science BPH, Limburgerhof, Germany

**Nutrition Day: How safe is your food?**

**Monday 17 July | 11.00 – 12.15**
Tent for special events, Marienhof, Munich

Some experts believe that the European food chain is one of the safest in the world. Paradoxically, most consumers have little confidence in the safety of their food supply. Do you trust the institutions and procedures that are responsible for the safety of the food you are eating? What do experts mean when they talk about ‘an acceptable risk’? Is organic food actually any ‘different’ or safer than food produced by intensive agriculture? SAFE FOODS, a large European project addressing ‘hot potatoes’ in the current food safety discussion, organises an interactive seminar complemented by an exhibition. Social and natural scientists will engage with the audience and talk about the mistakes of the past and how to prevent food safety crises in the future.

**Filip Cnudde** (Organiser)
SAFE FOODS project Wageningen University
The Netherlands

**Clara Hermoso Sanchez** (Participant)
Wageningen University
The Netherlands
Young people (16-24 years) are more likely to experience a severe allergic reaction. Away from the protective action of their parents and needing to fit in with their peers, all teenagers take risks. How can scientists, health professionals and the food industry communicate and manage food allergy risk without overprotecting young people but still reassuring parents? We would like to encourage discussion among food allergic young people in Germany about their condition, the advice they are given, and how food allergy experts might better present essential information enabling them to deal with their condition responsibly.

Sian Astley (Organiser)
Institute of Food Research
Norwich, United Kingdom

Nutrition Day:
Molecular gastronomy and daily technological applications – impact on health and education

Monday 17 July | 15.30 – 16.45
Tent for special events, Marienhof, Munich

Ever thought of cooking as a scientific process? Interested to know what molecular gastronomy might be? Our workshop will introduce the participants to the nature of chemical reactions during cooking and explain their effects on the pleasure of eating and our health. We will show that cooking bears many similarities to a scientific experiment. In the workshop the award winning Chef Pascal Barbot from restaurant L’Astrance in Paris, a food chemistry expert Professor Peter Schieberle from the German Research Centre for Food Chemistry and Professor Hervé This of the Collège de France in Paris will demonstrate how knowledge about molecular gastronomy helps to better understand the process of food preparation.

Evelyn McEwan & Reto Battaglia (Organisers)
European Association for Chemical and Molecular Sciences (EuCheMS)
London, United Kindom

Pascal Barbot (Participant)
Restaurant L’Astrance
Paris, France

Peter Schieberle (Participant)
German Research Centre for Food Chemistry
Munich, Germany

Hervé This (Participant)
Collège de France
Paris, France

Science Café:
Plug your neurones!

Monday 17 July | 17.00
Café of the Forum am Deutschen Museum

Voulez-vous neuroner avec nous? Neuro and cognitive sciences appear as the great challenge and scientific revolution at the beginning of the 21st century. The aim of our science café is to discuss how to increase awareness of brain research, the medical applications in the field and the ethical aspects connected to these developments. The activity is modelled on the project “Neuronez-vous” (Plug your neurones!) conceived by Scité network in collaboration with the Belgian Brain Council and the King Baudouin Foundation.

Marie Jose Gama (Organiser)
Réseau Scité – Scité network
Brussels, Belgium
Wissenschaftssommer 2006 in Munich – A Trip Into the World of Bits and Bytes
Saturday 15 July to Friday 21 July.

During the “Year of Informatics” (Science Year 2006), the Wissenschaftssommer, the German National Science Week, will be taking visitors in Munich on a journey through the world of bits and bytes. More than 100 individual events will offer visitors opportunities to increase their familiarity with the science of computers and its manifold applications, whether in science or in everyday life. The Wissenschaftssommer jointly takes place with the outreach activities of ESOF2006.
The German National Science Week
Wissenschaftssommer 2006
Saturday 15 July – Friday 21 July

The activities, undertaken by the largest German science organisations, and designed to bring science and research to the general public, are being bundled together and presented by Wissenschaft im Dialog (“Science in Dialogue”) as community initiatives. The focus of attention is the Wissenschaftssommer, Germany’s weeklong “Summer of Science” which is since 2000 held every year in a different city in a different German state. This federal direction aims to anchor the Wissenschaft im Dialog idea regionally throughout Germany.

The intention of the Wissenschaftssommer is to achieve a mix of different event formats, presenting knowledge and research experiments in the public domain. Current scientific topics are therefore introduced and discussed in the form of exhibitions, films, symposia and lectures. Entertaining presentations and artistic aspects are as much a part of the initiative as experiments and interactive workshops. The variety of event formats is guaranteed to appeal to the interests of a broad range of individuals from different age groups. Hands-on participation is important, providing young and old alike with access to some cases very complicated sciences. This is why the Wissenschaftssommer is oriented primarily toward the kind of interactive exhibits, workshops and experiments visitors can take part in.

In 2006, the Wissenschaftssommer invites you to the following events, among many others. The complete programme is available at www.wissenschaftssommer2006.de and at the ESOF registration desk.

Opening Show “Wissenschaftssommer 2006”:
Open Air Show with the Think Theatre

Saturday 15 July | 18.00 – 19.00
Marienplatz, Munich

Opening the Science Festival on Saturday evening is a performance on “smart laughter”. Body artists, a backwards speaker, and a possible world record holder in mental computation with a virtually incalculable IQ offer scientific stimulus and entertainment. Jointly with Dr. Annette Schavan, Germany’s Federal Minister for Education and Research, Munich Mayor Christian Ude and Professor Dr. Joachim Treusch, Chair of Wissenschaft im Dialog, the Brain Entertainers of the Think Theatre open the Wissenschaftssommer 2006 with a binary countdown.

Lange Nacht der Wissenschaften
(Long Night of the Sciences)

Saturday 15 July | 19.00 – 24.00
Jahrmarkt der Wissenschaften (Science Fair)
Marienhof and Altes Rathaus, Munich

Get together with friends on the “Lange Nacht” for a science cocktail. Stroll through the “Jahrmarkt der Wissenschaften” and experience at close hand just how instructive, entertaining and exciting research can be. Around 40 scientific and experimental booths await you with stimulating mental acrobatics continuing right up until midnight.
Jahrmarkt der Wissenschaften (Science Fair)
Saturday 15 July | 12.00 – 24.00
Sunday 16 July – Friday 21 July | 10.00 – 19.00
Marienhof and Altes Rathaus, Munich

The main attraction of the Summer of Science is a large tent exhibition in Munich’s inner city. For one week, the Marienhof and the Alter Rathausaal will be transformed into a Science Fair. Circa 40 exhibits, experiments, and booths will display the latest research and invite visitors to join in and take part. Scientists will be arriving not just from Bavaria, but from all over Germany, and even throughout Europe, in order to inform us about computer science. Computers and computer games from three decades show how gaming has made elite computer technology accessible for use by the everyman. By interacting with a variety of original computers from different periods, visitors will come to realize just how quickly the technology has evolved. Those who wish to engage in experimentation directly can do so in the larger school laboratory, trying their own hands at research. There, visitors will learn, among other things, exactly how a chocolate cream cake behaves in a vacuum.

Open House Day:
Life Sciences Campus, Martinsried | Großhadern
Saturday 15 July | 10.00 – 18.00
Martinsried | Großhadern, Munich

- Max-Planck-Institut für Biochemie, Martinsried
- Max-Planck-Institut für Neurobiologie, Martinsried
- Genzentrum, Großhadern
- Forschungspavillon Neurologische Klinik, Großhadern
- Biozentrum, Martinsried

Engage scientists in discussions about the mechanisms that generate diseases such as cancer, Alzheimer’s and diabetes, or learn more about the development and functioning of our nervous systems and our brains (memory, vision, spatial orientation). In the visitor’s laboratory, researchers both large and small can conduct experiments in gene technology and cell biology, or test themselves to learn more about the functioning of the five senses.

Open House Day:
DLR – Deutsches Zentrum für Luft- und Raumfahrt / German Aerospace Centre
Sunday 16 July | 10.00 – 17.00
Münchnerstraße 20, Oberpfaffenhofen

Visit the eight institutes of the DLR in Oberpfaffenhofen and experience for yourself just how thrilling and illuminating scientific research can be. Learn more about preparations for both scientific and manned space missions. Listen to explanations of how a fleet of research aircraft investigates the Earth’s atmosphere, and how ultra-light arms and hands are developed for robots.
Cinema: Science Film Festival

Monday 17 July – Friday 21 July | 10.00 and 20.00
Mathäser Filmpalast, Bayerstraße 3-5, Munich

At the Science Film Festival in Mathäser Filmpalast, young viewers will learn just how much scientific truth is contained in popular American Hollywood productions. Is it really possible to hook up a human brain to a computer, as in Minority Report? Can robots really develop personalities, as depicted in I, Robot? Could the future really turn out this way, or is all of this sheer fantasy? A different specialist will introduce each film topic and answer questions afterwards.

Monday 17 July | 10.00 and 20.00
23 – Nichts ist so wie es scheint

Tuesday 18 July | 10.00 and 20.00
The Day After Tomorrow

Wednesday 19 July | 10.00 and 20.00
Minority Report

Thursday 20 July | 10.00 and 20.00
I, Robot

Friday 21 July | 10.00 and 20.00
Pi

Student Parliament with Plenary Session

Sunday 16 July – Tuesday 18 July | 8.30 – 14.30
Bavarian Parliament
Maximilianeum, Munich

The plenary session taking place on Tuesday 18 July from 8.30 to 14.30 will be open to the public.

During the current “Year of Informatics”, approximately 100 students from Munich and vicinity will contend in parliamentarian debate about pressing questions regarding the Internet and data protection measures, as well as about policies concerning education and science. Students will also attend lectures and pose questions to scientists. At the conclusion, they will discuss their political demands and adopt resolutions in simulated parliamentarian procedures.
Wissenschaft im Dialog

In May 1999, the Stifterverband für die Deutsche Wissenschaft held a symposium entitled, “Public Understanding of the Sciences and Humanities (PUSH) – International and German Perspectives”. That was the beginning of an initiative designed to promote greater understanding of science in the general population.

As an intermediary between researchers and laypeople, science and the public, Wissenschaft im Dialog also initiates, supports, coordinates and organizes the science transfer process in Germany, and is also available as an international partner.

Wissenschaft im Dialog is an initiative of the largest German science organisations. It is supported by the Federal Ministry for Education and Research and by the Stifterverband für die Deutsche Wissenschaft.

- Deutsche Forschungsgemeinschaft
- Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung
- Helmholtz-Gemeinschaft Deutscher Forschungszentren
- Hochschulrektorenkonferenz
- Max-Planck-Gesellschaft zur Förderung der Wissenschaften
- Leibniz-Gemeinschaft
- Wissenschaftsrat
- Arbeitsgemeinschaft industrieller Forschungsvereinigungen Otto von Guericke e.V.
- Berlin-Brandenburgische Akademie der Wissenschaften
- Deutscher Verband Technisch-Wissenschaftlicher Vereine
- Gesellschaft Deutscher Naturforscher und Ärzte

Contact Wissenschaftssommer:
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www.wissenschaft-im-dialog.de
Social and Satellite Events

Social events such as a theatrical performance, evening receptions (including one at the “Flugwerft Schleißheim”), the BA x-change, the Science Biergarten and a poetry competition complement the scientific programme.
Joint Opening Ceremony
ESOF2006/Wissenschaftssommer 2006
Saturday 15 July | 16.00 – 18.00
Hotel Bayerischer Hof, Promenadeplatz 2-6

ESOF2006 will be opened with the Wissenschaftsommer 2006 (German National Science Week) in a joint ceremony. The organisers are happy to confirm that the President of the Federal Republic of Germany, Horst Köhler, will be participating in this event. The ceremony will be followed by a reception at the hotel “Bayerischer Hof” located in the heart of Munich. Only participants who have registered in advance may attend. Due to the participation of the Federal President all guests must be seated by 15.45. Please show your ticket at the entrance.

Euroscience Reception
Saturday 15 July 2006 | 20.00 – 22.30
Luftfahrthalle, Deutsches Museum

All ESOF2006 participants are warmly welcome to attend the Euroscience President’s Reception in the aviation hall (Luftfahrthalle) of the Deutsches Museum. The reception follows the opening lecture of Nobel laureate Theodor Hänsch which heralds the beginning of the scientific programme.

European Foundations’ Reception
Sunday 16 July 2006 | 18.45 – 20.30
Kraftmaschinenhalle, Deutsches Museum

Following the session “The future of research in Europe: the role of private donors and foundations” the organisers of ESOF2006 and the partner foundations invite the session participants and interested journalists to a reception. The reception encourages the exchange among corporate and private donors as well as foundations, researchers and science journalists. The organisers of ESOF2006 as well as representatives of the Fundação Calouste Gulbenkian, Compagnia di San Paolo, Riksbankens Jubileumsfond, Robert Bosch Stiftung, Stifterverband für die Deutsche Wissenschaft and the VolkswagenStiftung would like to welcome you on this occasion. The reception is highlighted by the European Science Writers Award through the Euroscience Foundation. The prize acknowledges European science journalists who promote public understanding of science and humanities in Europe and help to build a bridge between the scientific communities and the wider public. The Euroscience Foundation was established in 2000 for the promotion of the European science and culture. It awards prizes and gives financial support to scientific workshops and also collects money for the Euroscience Association.

Mind dancing – Meeting of Arts and Sciences
Sunday 16 July 2006 | 20.00 – 22.00
Ehrensaal, Deutsches Museum

Mind Dancing is a performance which – in synaesthetical ping-pong between international well-known scientists and artists – illuminates the mobility of the human mind. The dancing mind accomplishes the transactions of sound, image, thought, speech, and body. Artists as well as scientists have taken part in neuroscientific experiments which results are aesthetically visualised by multimedia installation.

Pieces of work by the synaesthetical composers Eric Satie, John Cage, Luciano Berio and Roman Haubenstock-Ramati are part of the synaesthetical interaction on stage as well as the scientific commentations (humanities and neurosciences) of this experiment performed in real-time. Again and again the body is the medium of the dancing mind. All participants of the performance are in motion. The performance is based on an aerial choreography of sound, image, body, and thought. Thus scientific and artistic disciplines are integrated and contrasted.

All participants in this performance are internationally highly recognised artists and scientists.
International/National Press Reception

Sunday 16 July | 20.00 – 23.00
Aktionsforum Praterinsel, Wurzelkeller

ESOF2006 invites members of the national and international press to the Praterinsel, a little romantic island in the river Isar for an evening of casual entertainment and socialising. (Note: event restricted to press badge holders)

Evening Reception at the “Flugwerft Schleißheim”

Monday 17 July | 20.00 – 22.30
Deutsches Museum, Flugwerft Schleißheim

One of the most attractive branches of the Deutsches Museum is the “Flugwerft Schleißheim” (aerodrome). This is the site of the historic airfield which was built between 1912 and 1919. In the early nineties it was restored and enlarged with a new exhibition hall. Today the Flugwerft hosts one of the largest aerospace exhibitions in Germany with more than 50 historical aeroplanes, helicopters and gliders. ESOF2006 is very proud to be able to take you on a trip back to the first hours of manned aviation by welcoming you to a reception in these historical surroundings. Registration is necessary. Participation will be charged with €20.00 per person incl. VAT. (Busses leave between 19.15-19.45 from the “Boschbrücke”, see maps.)

The BA x-change

Sunday 16 July – Tuesday 18 July | 18.45 – 19.45
Science Biergarten

The x-change is a wonderfully entertaining “round up” of each day’s sessions at ESOF2006. Together with Quentin Cooper, BBC radio journalist and freelance science writer, we invite you to enjoy this informal event while relaxing over a “beer” and “bratwurst” in the Science Biergarten. Don’t miss it!

QUENTIN COOPER (Moderator)
Bucks, United Kingdom

ESOF2006 Closing Ceremony

Wednesday 19 July | 14.30 – 15.30
Science Biergarten

All good things have to end ... we invite you to an informal closing ceremony and wrap-up of ESOF2006. Let us know what you thought about the programme and meet the hosts of ESOF2008!

ESOF2006 Poetry Competition

Submission deadline: Monday 17 July | 14.30

The competition for poems in German, French or English is one of the most original features of ESOF2006. Just 14 lines are enough to enter the competition and perhaps even win one of the three prizes of €300 (one for every language). Poems can be dropped off until noon on Monday, 17 July at the registration desk. The winners will be announced during the closing ceremony (see above).
Our Activities:

- History, Language and Culture
- State, Economy and Society
- Medicine and Natural Sciences

Partner of ESOF 2006:

- Social Integration
- Science Policy in Europe and beyond
- Evidence and Belief
- The Fabric of Science

Meet us on www.fritz-thyssen-stiftung.de

Fritz Thyssen Stiftung
Am RömerTurm 3
50667 Köln
Germany

Phone: +49 (0)221-27 74 96-0
Fax: +49 (0)221-27 74 96-29
E-Mail: fts@fritz-thyssen-stiftung.de
The ESOF2006 Exhibition provides commercial, scientific and academic partners with a platform to present themselves and their work. It takes place on the Ground Floor of the Forum am Deutschen Museum and is open and free of charge for participants and visitors.
employees and posted sales of more than €42.7 billion. Further information on BASF is available on the internet at www.basf.com. | Booth 4

BW International

Georg Overbeck
Willi-Bleicher-Straße 17
70174 Stuttgart | Germany
www.bw-i.de

Our formula for success: R+D = B-W

The Federal State of Baden-Württemberg occupies a world leading position in R+D, spending almost four per cent of its GDP for this purpose. Research institutes and companies in our state are technologically in a front position, with their numerous projects anticipating and designing the future. Activities cover the whole range from basic to applied research, combined with a successful system of technology transfer. Cluster strategies and the enhancement of an interdisciplinary approach result in fruitful synergies. You are invited to visit the Baden-Württemberg booth to learn more about this system of excellence which enjoys an outstanding reputation in academic teaching and scientific research. | Booth 1

CORDIS

Barbara Bergamasco
Skockova, Martina
2, Rue Mercier
2985 Luxembourg | Luxembourg
cordis.europa.eu

The Office for Official Publications of the European Communities is the publishing house of the European Union. It produces and disseminates the publications and information material of the European institutions, agencies and other bodies. The Publication Office manages online services such as CORDIS, the Community Research and Development Information Service. It facilitates access to European Union research & development funding programmes by providing information on calls for project proposals, potential partners, on-going projects and project results ready for take-up. EU Bookshop online service provides a single access point to EU publications. The official journal of the European Union including public procurement notices is published in TED and EUR-Lex online environment. | Booth 25

DAAD – Secretariat of the Joint Initiative “International Marketing for the Promotion of Study, Research and Training in Germany”

Cornelia Keller
Kennedyallee 50
53755 Bonn | Germany
www.daad.de
www.avh.de
www.fraunhofer.de
www.helmholtz.de
www.mpg.de
www.wgl.de

The German Academic Exchange Service (DAAD) and other leading German funding and research organisations will be presented at this Euroscience Open Forum. Other organisations that will be presented include the Alexander von Humboldt Foundation (AvH), the Deutsche Forschungsgemeinschaft (DFG), the Fraunhofer-Gesellschaft (FhG), the Helmholtz Gemeinschaft, the Leibniz Association and the Max-Planck-Gesellschaft (MPG). Experts will inform about opportunities for researchers interested in enhancing their scientific experience in Germany or in getting involved in cooperative research projects with German

Business Section

AlphaGalileo

Peter Green
175-185 Grey’s Inn Road
London, WC1X 8UE | UK
www.alphagalileo.org

The AlphaGalileo service is Europe’s Internet press centre for research in science and the arts. The service is provided by AlphaGalileo Foundation an independent not-for-profit company limited by guarantee. AlphaGalileo promotes European research by providing a one-stop shop for the world’s media covering all aspects of research. The service takes press releases, event details, announcements of new books from Europe’s research institutions and makes them available to the world’s press and broadcasting media via email alerts, RSS feed and web site. | Booth 18

BASF

Klaus Goedert
Carl-Bosch-Straße 38
67056 Ludwigshafen | Germany
www.basf.com

BASF is the world’s leading chemical company: The Chemical Company. Its portfolio ranges from chemicals, plastics, performance products, agricultural products and fine chemicals to crude oil and natural gas. As a reliable partner to virtually all industries, BASF’s intelligent system solutions and high-value products help its customers to be more successful. BASF develops new technologies and uses them to open up additional market opportunities. It combines economic success with environmental protection and social responsibility, thus contributing to a better future. In 2005, BASF had approximately 81,000

COST

Martin Grabert
Avenue Louise 149
1050 Brussels | Belgium
www.cost.esf.org

COST is an intergovernmental European framework for international co-operation between nationally founded research activities. COST creates scientific networks and enables scientists to collaborate in a wide spectrum of activities in research and technology. COST comprises 34 member states throughout Europe and one cooperating state. | Booth 12
scientists. They will also indicate funding instruments and exchange programmes designed to facilitate co-operations or to support scientists during a research stay in Germany. | Booth 28

Eiroforum
Ray Lewis
1211 Genève 23 | Switzerland
www.eiroforum.org

EIROforum is a partnership between the seven European intergovernmental research organisations, operating some of the world’s largest research infrastructures: CERN, EFDA, EMBL, ESA, ESO, ESRF, ILL. As world leaders within their respective fields of science, they constitute the vanguard of European science, enabling European scientists to engage in cutting-edge research and be competitive on a global scale. EIROforum plays an active and constructive role in promoting the quality and impact of European research. In particular the group mobilises its combined expertise in research and in the management of large international infrastructures, facilities and programmes. Working in close dialogue both with the European Commission and national research institutions, the EIROforum organisations play a vital role in forging European collaboration in science and supporting the creation of the European Research Area. | Booth 11

ELLINOGERMANIKI AGOGI/CONNECT
Sofoklis Sotiriou
D. Panagea
153 51 Pallini | Greece
www.connect-project.net
www.ellinogermaniki.gr

Ellinogermaniki Agogi (E.A.) is an educational organization of private law. Its Research and Development Department, established in 1995, focuses on the design, development and implementation of research activities in education, as it provides a fruitful test bed for research. The research group has participated in many European and National projects, a number of which communicates science to students and the wider public. Among other activities, the research group participates in the CONNECT project to design the classroom of tomorrow by using advanced technologies to connect the field trip activities carried out in a science centre to the science school curriculum. | Booth 21

ESOF2008/Fundació Catalana per a la Recerca i la Innovació
Mas Jordi
Pg. Lluís Companys, 23
08010 Barcelona | Spain
www.fcr.es
www.esof2008.org

Barcelona is proud to host ESOF2008 in July 2008. We invite Europe to experience cutting-edge science in one of the world’s most dynamic cities, boasting exceptional scientific infrastructure and exciting people dedicated to research and development. The vision of ESOF2008 is to make science an integral part of European culture, bringing together researchers, children, Nobel Prize winners, businesspeople, politicians, NGOs, families, students and officials to hear about and discuss the achievements of leading European research and its relevance for our lives. Experience how science enriches life in Europe. Experience ESOF2008. | Booth 20

EU DG Research
Regine Prunzel
European Commission
1049 Brussels | Belgium
ec.europa.eu/research/

Europe has a long-standing tradition of excellence in research and innovation, and European teams continue to lead progress in many fields of science and technology. Research and knowledge are keys to our future and will deliver solutions to the problems we encounter every day. We are engaged in building Europe’s tomorrow, interpreting the concept of integration in a positive and forward-looking way in order to extend and strengthen the basis for European research. Moving towards the integration of the European Research Area, a broad vision for better research in Europe, aimed at better co-ordination, more co-operation and improved complementarily of policies, programmes and financial contributions of all relevant actors and institutions is our focus. The EU’s final objective is to contribute to the competitiveness of European industry and to improve the quality of life of its citizens. One of the instruments used for the implementation of this policy is the multi-annual Framework Programme which helps to organise and financially support co-operation between universities, research centres and industries – including small and medium-sized enterprises. An important cornerstone is the forthcoming 7th Framework Programme that is currently in the process of decision. | Booth 26

EUREKA
Stefano Mason
Rue Neerveld 107
1200 Brussels | Belgium
www.eureka.be

The EUREKA Initiative – 20 years of world-class innovation. The EUREKA Initiative is committed to enhancing the competitiveness of European industry through the promotion of high-quality collaborative, market-led innovation. Its unrivalled network enables industry, research centres, universities and national administrations to join forces in near-market research and development through
trans-national collaborative projects, and to refine and exploit the technologies essential for European competitiveness, job creation and a better quality of life. The EUREKA Network is making a substantial contribution to boosting Europe's competitive edge and technological advantage by helping ensure the success of European industry – particularly through its support for small and medium-sized enterprises (SMEs) and its market closeness. Since 1985, around 24 billion Euro of European public and private funding have been deployed through the EUREKA Initiative and more than 11,000 partners from industry as well as research centres, universities and national administrations have been involved in some 2,700 projects. | Booth 13

European Science Foundation
Amy Stockton
1 Quai Lezay-Marnésia BP 90015
67080 Strasbourg | France
www.esf.org

The European Science Foundation (ESF) is the European association of 78 national research organisations in 30 countries, with offices in Strasbourg and Brussels, devoted to scientific research. The ESF covers all research areas: physical and engineering sciences; life, earth and environmental sciences; medical sciences; humanities; social sciences; space science; marine science; and polar science. The mission of the European Science Foundation is to provide a common European platform for its Member Organisations in order to advance research and explore new directions for research at the European level. | Booth 10

Institut für Plasmaphysik
Isabella Milch
Bolzmannstraße 2
85748 Garching | Germany
www.ipp.mpg.de

Max-Planck-Institut für Plasmaphysik (IPP) in Garching and Greifswald is investigating the physical basis of a fusion power plant. Like the sun, such a plant is to generate energy from fusion of atomic nuclei. For this purpose IPP at Garching is conducting the ASDEX Upgrade tokamak experiment. The stellarator WENDELSTEIN 7-X is being built at the Greifswald Branch of IPP. With its workforce of approx. 1,000 IPP is one of the largest fusion research centres in Europe. The European Fusion Development Agreement EFDA incorporates the technology activities of the European Fusion Programme, the JET facility and the European contributions to ITER. | Booth 2

Institute für Plasmaphysik
Isabella Milch
Bolzmannstraße 2
85748 Garching | Germany
www.ipp.mpg.de

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Euroscience
Julia Epp
8, rue des Ecrivains
67000 Strasbourg | France
www.euroscience.org

Euroscience is a pan-European ‘grass-roots’ association of individuals who aim to construct scientific Europe ‘bottom-up’. We are open to research professionals, science administrators, policy-makers, teachers, PhD-students, post-docs, engineers, industrialists, and generally to any citizen interested in science and technology and its links with society. Our members and regional section representatives will be happy to explain their activities to everybody interested in joining us or simply to learn more about us. | Booth 29

Forschungszentrum Jülich
Angela Lindner
Forschungszentrum Jülich GmbH
Wilhelm-Johnen-Straße
52425 Jülich | Germany
www.fz-juelich.de

With a staff of about 4,300, Research Centre Jülich is the largest multidisciplinary research centre in Europe. Its topics reflect the grand challenges facing society: supplying energy, protecting the environment, handling information and preserving human health. Its mission includes long-term, theory-oriented and cross-disciplinary contributions for science and technology as well as concrete technological applications for industry. It is characteristic of Jülich that the researchers exploit two central key competences: that of physics and of scientific computing with supercomputers. Research Centre Jülich, founded in 1956, is a member of the Helmholtz Gemeinschaft (HGF), a group of 16 national research centres that each receive 90% of their funds from the Federal Government and 10% from the federal state in which they are located. | Booth 3

EurekAlert!
Jill Grigg
1200 New Your Avenue
Washington, DC 20005 | USA
www.EurekAlert.org

EurekAlert! (www.EurekAlert.org) is the premier global news service focused on science, medicine and technology. EurekAlert! offers press release distribution, an experts database, a multimedia gallery and other services aimed at connecting the scientific and medical community with reporters. More than 5,000 reporters worldwide rely on EurekAlert! for story ideas and resources. | Booth 19
Joint Research Centre
Barbara Krippel
Square de Meeûs 8
1049 Brussels | Belgium
www.jrc.cec.eu.int

As a Directorate General of the European Commission, the Joint Research Centre comprises about 2,650 scientific and support staff located across seven Institutes in five member states – Belgium, Germany, Italy, the Netherlands, and Spain. Its role is to provide other DGs and European institutions such as the Council or Parliament with the research they need for policy-making in areas such as food safety, chemical products and health; reference materials and measurements; public security and antifraud. It serves the common interests of the member states, while being independent of special interests, whether private or national. | Booth 27

Körber Stiftung
Nikolaus Besch
Kehrwieder 12
20457 Hamburg | Germany
www.koerber-stiftung.de

The Körber Stiftung in Hamburg seeks with its projects to engage citizens actively in social discourses. In this sense it sees itself as a forum for new initiatives, providing opportunities for involvement in politics, education, science and international communication in particular. The Körber Prize, endowed with €750,000, is awarded alternately in the fields of technical sciences and life sciences to a scientist working in Europe for a concrete research project. Two international search committees suggest prize candidates to the trustee committee of the award. | Booth 27

Medical Information Centre for European Projects (MICEP)
Miloslav Spunda
Karlovo namesti 12800 Prague | Czech Republic
www.micep.cuni.cz

MICEP was established on January 1st, 2005 thanks to the support of the Charles University and its First Faculty of Medicine. Financial support for the beginning is poured into by the Ministry of Education and Sport of Czech Republic and the First Faculty of Medicine. The expected result will be that a medical and other research centres will obtain better knowledge about their possibilities to participate in European projects. Due to information provided by MICEP to potential participants from the Czech Republic and other EU countries and due to MICEPs’ other activities, total participation of the Czech Republic in Framework Programmes will improve. | Booth 27

Nationales Genomforschungs-netzwerk
Gesa Westermann
Heinrich-Konen-Straße 1
53227 Bonn | Germany
www.ngfn.de

The National Genome Research Network (NGFN) is organized around five disease- oriented genome networks which focus on the most commonly occurring diseases in Germany, namely cancer, cardiovascular diseases, diseases of the nervous system, infection and inflammation, and diseases due to environmental factors. The main objective of these research groups is to elucidate the role played by genetic factors in the onset of these diseases and thereby to substantially improve the diagnosis, prevention and treatment of common ailments. The outstanding feature of the National Genome Research Network is the tight cross-linking of medical research projects combined with access to excellent technological resources. | Booth 27

Nature
Philippa Warby
4 Crinan Street The Macmillan Building
London, N1 9XW | UK
www.nature.com

Nature Publishing Group (NPG) brings you leading scientific and medical research to your desk top. The NPG portfolio combines the continued excellence of Nature and its associated research and review journals and over 30 leading academic and society journals. Visit the NPG stand to pick up copies of Nature and other titles. | Booth 27
Robert Bosch Stiftung
Michael Schwarz
Heidereistroße 31
70184 Stuttgart | Germany
www.bosch-stiftung.de

We at the Robert Bosch Stiftung co-initiated ESOF 2006 because we consider science to be the most significant resource available to help us build Europe’s future. At our lounge in the Exhibition area we will present our foundation and our science programmes. Check out our programmes for science journalists. Learn more about our programmes NaT-Working and Denkwerk that bring together schools and research institutes. Outstanding Chinese scientists will present China’s strong research community. Cutting-edge international researchers will be available for discussions on the latest news on cancer therapy. We are looking forward to meeting you at our lounge! | Booth 23

ScienceClub BMW
Gudrun Herrmann
Infanteriestraße 19
80797 München | Germany
www.bmwgroup.com/scienceclub

For the BMW Group, research and science are vitally important – since technology is essential to sustainable progress in the automotive industry. With the BMW Group Research and Technology Division, the BMW Group has everything it takes for leadership in technology. In its orientation and activities, it is split up into five areas of research: Vehicle Technology, Clean Energy, Efficient Dynamics, ConnectedDrive, and IT Drive. The BMW Group ScienceClub offers insights into the exciting world of vehicle research, and present solutions that ensure you will continue to be mobile in the future. | Booth 20

Science International
Wendy Sturley
Bateman House Bz-82 Hills Road
Cambridge, CB2 1LQ | UK
www.sciencemag.org
www.aaas.org

Science magazine is published by the American Association for the Advancement of Science (AAAS), the world’s largest general scientific society. Founded in 1880 by Thomas Edison, Science ranks as the world’s leading scientific journal, with over 130,000 subscribers. Each week, Science provides the best in peer-reviewed original research, scientific research articles and reports, commentaries on recent news and events – a unique perspective on what’s happening in the world of science, across all disciplines. Since its founding in 1848, AAAS has become the world’s largest multidisciplinary society and the leading international voice for the advancement of science. Its mission is to “advance science and innovation throughout the world for the benefit of all people”. AAAS programs in such areas as science, education, policy, and international co-operation have gained worldwide recognition. | Booth 8

Stifterverband für die Deutsche Wissenschaft
Frank Stäudner
Barkhoveallee 1
45239 Essen | Germany
www.stifterverband.de

Since 1920, Stifterverband is the business community’s innovation agency for the German science system. Representing 3000 companies, business associations and individuals, its sole source of funding is charitable giving. Stifterverband’s goal is to improve the quality of the science system. Through its programmes, it wants to ensure that the sciences retain their reputation and high quality for the long term. In this spirit, Stifterverband has – together with the Robert Bosch Foundation – initiated the ESOF 2006 Conference in Munich and is very proud to welcome scientists from all over Europe. Dr. Volker Meyer-Guckel, Dr. Frank Stäudner and Moritz Kralemann are looking forward to getting to know you and answer all your questions about our work and our reform ideas for the science system in Germany. | Booth 14

Technology Review
Annemarie Scharl-Send
Kichfeldstraße 9
82284 Grafrath | Germany
www.technologyreview.com

Questions about Germany’s capacity for innovation and technological expertise play a particularly important role in the current discussion about the country’s future viability as a business location. Decision-makers in the fields of business and science and opinion leaders in politics and society are the individuals who drive technological developments, shaping our society’s future in the process. They need dependable interdisciplinary information that bridges the gap between science and business. And that is precisely what Technology Review provides. How important are automobile technology and mechanical engineering for Germany’s economy? Where will the energy of tomorrow come from? Are biotechnology and nanotechnology worth investing in? Is there a future for genetic engineering in Germany? How are information technology and telecommunications changing the economy and society? Technology Review uncovers technological trends, providing background on everything from initial trials through to the marketable product. Instead of presenting abstract technologies, the magazine illustrates opportunities for economic growth – a unique concept in the German magazine market. | Booth 9
The Swedish Research Councils

Gabriella Norlin
103 78 Stockholm | Sweden
www.vr.se

The Four Swedish Research Councils: FAS – Swedish Council for Working Life and Social Research – initiates and supports basic and applied research about working life, public health, welfare, caring services and social relations. Formas – Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning – is a government agency promoting excellence in basic and applied research related to sustainable development. Vetenskapsrådet – Swedish Research Council – is a government agency funding basic research of the highest scientific quality in all disciplines. The Council has a national responsibility to support and develop basic research and promote research innovation and research communication. VINNOVA's – Swedish Governmental Agency for Innovation Systems – tasks include funding the problem-oriented research that a competitive industry and a flourishing society require, as well as strengthening the networks that are a necessary element of this work. | Booth 7

WONDERS/Wissenschaft im Dialog/EUSJA/EUSCEA

Peter Rebernik
Anton-Baumgartner-Straße 44
A-1230 Vienna | Austria
www.wonders.at

A "Carousel of Science" sweeps through Europe in 2006: science communication events send their presentations to each other’s science festivals, enjoying the public with hands-on science demonstrations. They are also looking for the “Best” of these methods. Every science event will select the local “best” of these sent presentations, which will go to the Finals in Finland in December, where the “Best of the Best” will be chosen. One of the Carousel partners is “Wissenschaft im Dialog”, who will receive presentations from Belgium and from France – and will send its events to Portugal. Additionally science cafés will discuss more thoroughly issues of science, under the moderation of renowned science journalists, nominated by members of EUSJA, the European Union of Science Journalists’ Associations, a project participant. The project’s acronym is WONDERS (Welcome to Observations, News and Demonstrations of European Research and Science) and it is “powered” by the European Union. The coordinator is EUSCEA, the European Science Events Association. The third participant is ECSITE, the union of science centres and science museums. | Booth 15

Xplora

Karl Sarnow
Rue de Treves 61
1040 Brussels | Belgium
www.xplora.org

Xplora, the new European Science Education Gateway was launched on 10th of June 2005 during the ECSITE conference in Vantaa, Finland. Its services are focused on serving teachers of science, as a resource to stimulate compelling, innovative teaching, to raise interest in science acting and scientific careers among young people. Xplora is built by European Schoolnet together with a consortium of partners including ECSITE and more than 12 science museums across Europe. The project PENCIL is funded by the European Commission Directorate General for Research as part of the Science and Society action of the sixth Framework Programme. | Booth 22
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### General Meeting Information

**Meeting Location**

**Deutsches Museum**
Museumsinsel 1
80538 Munich
Tel: +49 (0)89 2179 425
Fax: +49 (0)89 2179 562

**Deutsches Museum**
Museumsinsel 1
80538 Munich
Tel: +49 (0)89 2179 562
Fax: +49 (0)89 2179 425

**Conference Office**

The conference office is located in the Forum am Deutschen Museum, Room Aurora, Ground Floor.

**Opening hours:**
Saturday 15 July 12.00 – 15.00
Sunday 16 July 08.00 – 17.00
Monday 17 July 08.00 – 17.00
Tuesday 18 July 08.00 – 17.00
Wednesday 19 July 08.00 – 12.00

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Mob: +49 (0)162 24 88 108 (from 12 July onwards)
Fax: +49 (0)30 20 64 92 05
Email: andreas.gundelwein@w-i-d.de

**Meeting Registration**

Registration is possible online at www.esof2006.org until 12 July 2006 and on site during the conference (15 – 19 July 2006). The ESOF 2006 registration area is on the Ground Floor of the Forum am Deutschen Museum.

**Registration hours:**
Saturday 15 July 12.00 – 19.00
Sunday 16 July 07.30 – 18.30
Monday 17 July 08.00 – 18.30
Tuesday 18 July 08.00 – 18.30
Wednesday 19 July 08.00 – 12.00

Registrants are requested to wear their badges at all times when attending ESOF 2006 meetings. Anyone without a valid meeting badge may be denied entry to the sessions and other activities. Please note that no registration is required for the Exhibition, the Outreach Activities and the Plenary Lectures.

**Registration is handled by:**
EUROKONGRESS GmbH
Isartorplatz 3
80331 Munich
Germany
Tel: +49 (0)89 210 986 0
Fax: +49 (0)89 210 986 98
Email: esof2006@eurokongress.de

**Medical Care**

Medical care and first aid by experienced personnel is available in both the Forum am Deutschen Museum (Ground Floor) and the Deutsches Museum (Ground Floor).

**Outreach Activities**

The locations of the ESOF 2006 Outreach Activities are as follows:

**Main locations:**
- Marienhof (in the centre of Munich, just behind the town hall)
- Altes Rathaus (in the centre of Munich, inside the town hall)

**Secondary locations:**
- Forum am Deutschen Museum (Museumsinsel 1, Munich)
- Max-Planck-Haus am Hofgarten (Hofgartenstraße 8, Munich)
- Deutsches Museum, Inner courtyard
- Theater Drehleier (Rosenheimer-strasse 123, Munich)

**Opening hours:**
Saturday 15 July 12.00 – 24.00
Sunday 16 July 10.00 – 19.00
Monday 17 July 10.00 – 19.00
Tuesday 18 July 10.00 – 19.00
Wednesday 19 July 10.00 – 19.00
Thursday 20 July 10.00 – 19.00
Friday 21 July 10.00 – 19.00
EXHIBITION

The ESOF2006 Exhibition is located in the Forum am Deutschen Museum, Ground Floor.

Opening hours:
- Saturday 15 July: 12.00 – 16.00
- Sunday 16 July: 09.00 – 19.00
- Monday 17 July: 09.00 – 19.00
- Tuesday 18 July: 09.00 – 19.00
- Wednesday 19 July: 09.00 – 14.30

PRESS CENTRE

The ESOF2006 press operation is located in the Forum am Deutschen Museum on the Second Floor. Please note that access is restricted to press badge holders. (Exception: speakers holding press briefings or giving interviews).

The layout of the Press Centre is as follows:
- Help Desk (Büro 3)
- Coffee Lounge (Room Phoenix)
- Speakers’ Papers (Room Pegasus)
- Press Briefings (Room Andromeda)
- Computer Room (Room Auriga)
- Scheduled Interviews (Büro 2)
- Follow-up Interviews (Room Carina)

Opening hours:
- Saturday 15 July: 12.00 – 16.00
- Sunday 16 July: 07.30 – 19.00
- Monday 17 July: 07.30 – 19.00
- Tuesday 18 July: 07.30 – 19.00
- Wednesday 19 July: 07.30 – 11.30

All speakers are kindly requested to deliver their presentation on a CD, DVD or memory stick at least 3 hours before their session or lecture takes place.

MEDIA CHECK

The media check is located in the Forum am Deutschen Museum, Room Diana, Ground Floor.

Opening hours:
- Saturday 15 July: 13.00 – 19.00
- Sunday 16 July: 07.30 – 17.30
- Monday 17 July: 07.30 – 17.30
- Tuesday 18 July: 07.30 – 17.30
- Wednesday 19 July: 07.30 – 11.30

LOUNGE

The following lounges are available during the conference:

Speakers’ & Exhibitors’ Lounge
- Forum am Deutschen Museum, Room Orion, Second Floor

Partners’ Lounge
- Forum am Deutschen Museum, Room Wega, Second Floor

Opening hours:
- Sunday 16 July: 07.30 – 18.30
- Monday 17 July: 07.30 – 18.30
- Tuesday 18 July: 07.30 – 18.30
- Wednesday 19 July: 07.30 – 15.00

Please note that only holders of the respective badges will be allowed in the lounges.

INTERNET CAFÉ

Computers with free internet access are available in the Forum am Deutschen Museum on the First Floor.
Munich, a City with Charm

Munich, often called ‘City with a Heart’, is one of Germany’s most popular destinations and has something to offer to everyone – from culture, high-tech, parks and greenery, to night-life, architecture, beer gardens, shopping or the extraordinary scenery of the nearby mountains and lakes.

Munich is much more than just the venue for the world-famous Oktoberfest; it is the high-tech capital of Germany with many headquarters of international companies as well as the home of many renowned scientific institutes and research centres. The numerous museums and famous art galleries as well as the countless beautiful churches and other historic buildings, such as the royal castles in and around Munich, complete the city’s offer and make it a unique destination for both business and pleasure.

www.muenchen-tourist.de
The Venues

1. Forum am Deutschen Museum

- A. Sessions
- B. Exhibition
- C. Cafeteria
- D. Helpdesk and Registration
- E. Press Centre
- F. First Aid
- G. Conference Office
- H. Media Check
- I. Lounge
- J. Staff
- K. Toilets
The Venues

Deutsches Museum

Deutsches Museum

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M. Luftfahrtmuseum (Ground and First Floor)
O. Hall of Fame (First floor)
P. Forum am Deutschen Museum
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