

NEW RESEARCH.

NEW TECHNOLOGY.

NEW THINKING.

ESOF2006.ORG
EUROSCIENCE OPEN FORUM



THE 2ND PAN-EUROPEAN
INTERDISCIPLINARY SCIENCE
MEETING HIGHLIGHTING
RESEARCH AND INNOVATION

15.–22. Juli
München | **Munich**
Wissenschafts-
Sommer 2006
ESOF 2006 –
Euroscience Open Forum
July 15th–19th

TWO EVENTS – ONE PLACE



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It is my pleasant official duty to extend a warm invitation to ESO2006, the 2nd pan-European interdisciplinary science forum, which will take place July 15th – 19th 2006 in Munich, Germany. Following the success of the first Euroscience Open Forum in Stockholm, we have set ourselves even higher goals to present researchers, journalists, industrial experts and the general public with cutting-edge research within a stimulating environment and with attention to detail.

The Themes of ESO2006 encompass the latest developments in science and humanities as well as topics from the liveliest debates between science and society. Searching questions are asked – thought-provoking answers are given. It is in this model, that we see the ultimate form of *dialogue* fulfilled.

Imagine the opportunities. Join the interaction. Come to the Euroscience Open Forum 2006.

Jean-Patrick Connerade
President of Euroscience
Chair ESO2006 Programme Committee

The Euroscience Open Forum provides researchers, scientists, journalists and the general public with a platform for exchanging views and discussing the challenges and consequences of scientific developments around the world. ESOF fosters interdisciplinary dialogue, debate and discussion and showcases European achievements right across the scientific spectrum.

SINCE ITS CONCEPTION, ESOF HAS OVERCOME MANY OBSTACLES AND IN A SHORT PERIOD OF TIME ACHIEVED THE UNACHIEVABLE: IT HAS ENTERED THE HEARTS AND MINDS OF SCIENCE PROFESSIONALS AND CREATED A NEW WAY OF APPROACHING SCIENTIFIC DEVELOPMENT – IT SEES ITS MISSION NOT ONLY IN PROMOTING CURRENT ACHIEVEMENTS, BUT ALSO IN RECOGNISING AWAKENING TALENT AND THUS FORESEEING INNOVATION.

*Wolfgang M. Heckl
Director General,
Deutsches Museum
Chair ESOF2006
Steering Committee*

MUNICH – HOST CITY OF ESOF2006

In 2006 ESOF travels from Stockholm to Munich. Situated in the heart of Europe, the Bavarian capital is a centre of gravity with many cultural and scientific attractions and unhindered accessibility. It is also the home of numerous well-known research centres.

ESOF2006 will be jointly held with the Wissenschaftssommer (the German national science week). While the scientific sessions will take place at the conference venue Museumsinsel, the outreach activities, integrated in the Wissenschaftssommer, will unfold around the historic Rathaus (town hall).

Information on Munich and the conference venue can be found on the ESOF2006 website.

www.esof2006.org



THEMES

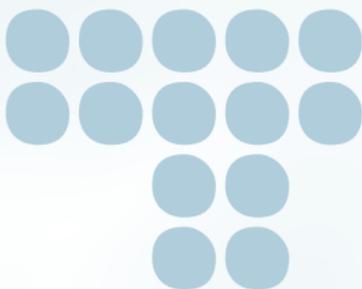
THE THEMES OF ESOF2006

The Euroscience Open Forum 2006 Programme Committee has picked a range of broad themes. These function as guidelines ensuring that sessions feature cutting-edge science presented in a thought-provoking format.

The sessions are designed to highlight the interdisciplinary mission of ESOF through the integration of ethical, social and legal aspects as well as science communication and education viewpoints.

THE SCIENTIFIC AND SOCIAL ASPECTS OF THE ROBERT BOSCH FOUNDATION'S WORK ARE REFLECTED IN ITS CONTRIBUTION TO THE MOULDING OF ESOF. WE PROUDLY SUPPORT THIS INSTITUTION GIVING EUROPEAN RESEARCH A POWERFUL PLATFORM.

*Ingrid Hamm
Chief Executive,
Robert Bosch Stiftung
Member ESOF2006
Advisory Board*



1 Beyond Quantum Mechanics and Relativity

Can quantum mechanics and theories of gravity be unified? Is space-time smooth or is it granular? Does chaos occur in quantum mechanics? How much of physics is fractal? Is there a Schrödinger Equation of the whole universe?

2 Social Integration

Are social sciences and humanities the invisible architects of society? Is secular humanism the answer to religious fundamentalism? What should be the pillars of a European identity? Does mobility favour integration? Are we heading towards a Europe of regions? How can society be engaged in scientific development?

3 Evolving Patterns of Disease

Changing lifestyle: does it create new vulnerabilities? Which diseases have become more prevalent? Why are forgotten diseases able to return? Could a sudden pandemic catch us unprepared? What can we learn from paleopathology? Should your lifestyle match your genes?

4 Science Policy in Europe and beyond

Would Einstein get funded today? How do we recognize scientific quality beyond the impact factor? What is the payback from science? Does scientific mobility enhance output? Where do we find the scientific excellence for a competitive Europe? Do strategic approaches lead to scientific innovation? Does Open Access open minds?

THEMES

5 Nanosciences and Nanotechnology

Building up vs. scaling down: Where does quantum mechanics intrude? Nanotubes and pea pots: Are they just pretty? New devices and new materials: What are the promises of nanoscience? Metallofullerenes, confined atoms, DNA chips: Are they the future of computing? Does self-assembly explain the origin of life?

6 The Nature of Time

How much do we know about the origin of time? Can time be discrete? What is the shortest possible time? How should time be measured? Is time unique? Are there other universes? How does nature measure time? Why is time perceived differently in different cultures?

7 Dealing with Disasters

Which disasters are intrinsically predictable? What do we learn from cultural heritage? How early should the warning “come”? How does one calculate the impact? Which forms of relief must be delivered?

8 Ageing – Is it all bad News?

Why do societies age? What are the challenges and opportunities? Does ageing create new markets? How do individuals age? How much of this is determined socially, and how much biologically? Can we learn from other cultures?

AN UNPARALLELED OPPORTUNITY TO DISCUSS AND CONVEY FACTS, THOUGHTS AND IMPLICATIONS OF YOUR FIELD. THOUSANDS OF PEOPLE FROM ALL OVER EUROPE, AMONG THEM SCIENTISTS, POLICY MAKERS, INDUSTRIALISTS AND HUNDREDS OF JOURNALISTS WILL TAKE PART.

*Carl Johan Sundberg
Associate Professor
Karolinska Institutet
Vice-Chair ESOF2006
Programme Committee*

9 Science – Security and Safety

Civilian and military research: A love-hate relationship? Biometrics and DNA fingerprinting: Safe new world? Is the war on terror helping or hindering science? Can the Sakharov dilemma be resolved?

10 The Workings of the Brain

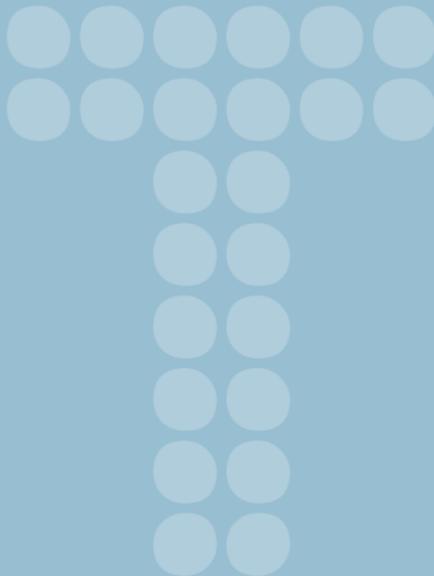
Do humans have free will or is our brain a deterministic machine? Can we manipulate our consciousness? Can biochips enhance our thinking and judgement? Why is neuroethics needed? How can the brain adapt so well?

11 Evidence and Belief

What is the impact of scientific evidence on our lives? Our knowledge of the world – a social construct? Placebo – how does it work? Which policies should science underpin? Whose science do we trust? Is it wise to follow the precautionary principle? What is the outcome when culture and scientific evidence clash? How do beliefs and social conventions influence research?

12 Environment, Energy and Resources

Is human development compatible with sustainability? How accurate are the models? Can technology and policy repair the damage? How complete is our understanding about the web of life? What is the value of biodiversity? Is there green energy for transportation?



THEMES

13 The Fabric of Science

What propels science: Genius, hard work or paradigm shifts? How do scientific breakthroughs occur? How are trends in science born? Interdisciplinarity: Just a buzz word? Mad scientists: Where do popular myths of science come from? Should there be a “Hippocratic Oath” for scientists? Are there different scientific cultures? What is the media’s role in the dissemination of science?

14 Digital Worlds

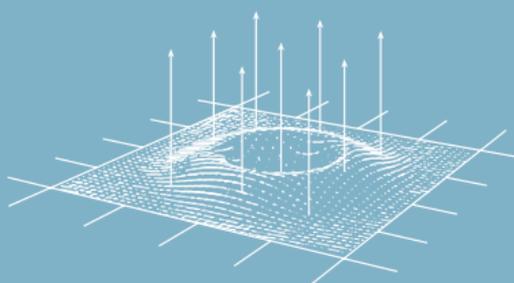
Are all the digital media converging? Will grid computing become the norm? Can artificial intelligence improve our potential? How far can computers extend biology? Is bionics the future? How should data mining be organised? Can we really cope with all the information? How big is the digital divide?

15 New Planets – New Worlds?

What do we learn by exploring other planets? What is known about their atmospheres? How many more planets will be found? Can we do better than stellar shifts? Why listen for life? Should people be in space?

16 Epigenetics – From Genes to the Individual

What shapes the individual? Why are identical twins not identical? Can the reading of genes in previous generations be remembered? Are mothers more important than fathers? Can a “good” gene be bad news?



17 What's new in green or soft Chemistry?

How much of chemistry can be green? Is green chemistry a real option? Can green biotechnology help develop sustainable agriculture? Can we find safer solvents and better feedstocks? Should reversible processes be used for energy storage? Can efficient rocking chair batteries solve our transport problems? Is lithium iron implantation the future?

THESE THEMES ADDRESS EVERY INDIVIDUAL PERSONALLY, URGING HIM OR HER TO GO BEYOND THE DAILY RIDDLES, PROVOKING CLASHES BETWEEN KNOWLEDGE AND BELIEF, THUS CAUSING THE MIND TO OPEN UP TO NEW PERCEPTIONS. ONE JUST FEELS OBLIGED TO ANSWER.

*Joachim Treusch
Chairman of the
Board of Directors,
Forschungszentrum Jülich
Chair ESOF2006
Advisory Board*

18 The pervasive Nature of Mathematics

Why does intuition sometimes fail? How is this visible in stochastics? Do percolation and Brownian motion illustrate this? What are the properties of large cardinal numbers? How can one build and use unusual mathematical models? Which conceptual tools can help understand higher dimensional structures?

ORGANISATION OF ESOF2006

The basic governing structure of ESOF2006 consists of a Steering Committee, an Advisory Board and a Programme Committee. A project team based at the Wissenschaft im Dialog office in Berlin prepares and conducts the meeting.

Steering Committee:

Wolfgang M. Heckl (Chair),
Deutsches Museum, München

Ingrid Wüning (Vice Chair), Robert Bosch
Stiftung, Stuttgart

Sir Colin Berry, Queen Mary College, London

Jean Pierre Bourguignon, Institut des
Hautes Études Scientifiques, Paris

Patricia Boya, Consejo Superior de
Investigaciones Científicas, Madrid

Jean-Patrick Connerade, Euroscience,
Strasbourg

Ulrike Felt, Universität Wien, Wien

Carsten Klein, Stifterverband für die
Deutsche Wissenschaft, Essen

Marta Maczel, World Academy of Young
Scientists, Budapest

Andrew Moore, European Molecular
Biology Organisation, Heidelberg

Raymond Seltz, Euroscience, Strasbourg

Rolf Tarrach, Université de Luxembourg,
Luxembourg

Neil Williams, European Science
Foundation, Strasbourg

Ekkehard Winter, Deutsche Telekom
Stiftung, Bonn

IT IS A GREAT RESPONSIBILITY BUT ALSO A CHALLENGE TO BE ABLE TO EMPLOY THE LONG TRADITION AND KNOW-HOW OF THE STIFTERVERBAND FÜR DIE DEUTSCHE WISSENSCHAFT FOR THE ORGANISATION OF SUCH AN AMBITIOUS PROJECT.

*Arend Oetker
President, Stifterverband für
die Deutsche Wissenschaft
Member ESOF2006
Advisory Board*

Advisory Board:

Joachim Treusch (Chair),
Forschungszentrum Jülich, Jülich

Bertil Andersson, European
Science Foundation, Strassbourg

Enric Banda, Fundació Catalana
per a la Recerca i la Innovació,
Barcelona

Philip Campbell, Nature, London

Catherine Cesarsky, European
Southern Observatory, Garching

Ingrid Hamm, Robert Bosch
Stiftung, Stuttgart

Norbert Kroo, Magyar Tudományos Akadémia
(Hungarian Academy of Sciences), Budapest

Helga Nowotny, European Research Advisory
Board, Brussels

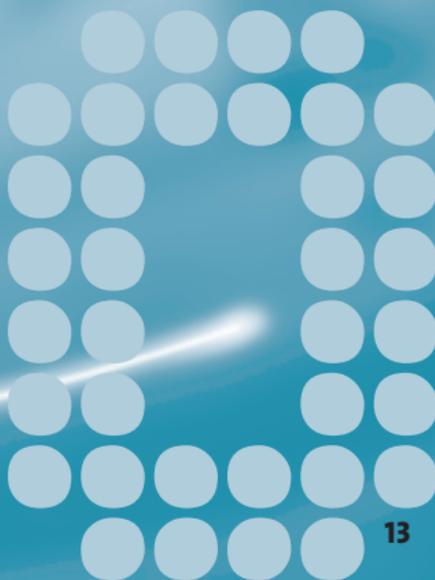
Arend Oetker, Stifterverband für die
Deutsche Wissenschaft, Essen

Alain Pompidou, European Patent Office,
Munich

Carl Johan Sundberg, Karolinska Institutet,
Stockholm

Hans Wigzell, Karolinska Institutet,
Stockholm

Wolfgang M. Heckl (Secretary), Deutsches
Museum, München



Programme Committee:

Jean-Patrick Connerade, (Chair),
Euroscience, Strassbourg

Carl Johan Sundberg, (Vice Chair),
Karolinska Institutet, Stockholm

Sir Colin Berry, Queen Mary College, London

Wim Blockmans, Netherlands Institute of
Advanced Studies, Wassenaar

Jean Pierre Bourguignon, Institut des
Hautes Études Scientifiques, Paris

Gail Cardew, Royal Institution, London

Quentin Cooper, British Broadcasting
Corporation, London

Donald B. Dingwell, Ludwig-Maximilians-
Universität, München

Robert Erikson, Stockholms Universitet,
Stockholm

Marie Noëlle Favier, Institut de Recherche
pour le Développement, Paris

Rainer Gerold, Directorate 'Science and
Society', Brussels

Eric Jacquemyn, Technopolis, Mechelen

Elisabeth Jasulke, SUEZ, Paris

Federico Mayor jr., Universidad Autónoma
de Madrid, Madrid

Howard Moore, UNESCO/ROSTE, Venice

Ortwin Renn, Universität Stuttgart,
Stuttgart

Lewis Smith, Syngenta, Basel

Margit Sutrop, Tartu Ülikool (University
of Tartu), Tartu

Frans Willekens, Interdisciplinary
Demographic Institute, The Hague

Ingrid Wüning, Robert Bosch Stiftung,
Stuttgart

PARTNERS

ESOF2006 is a joint effort of the following organisations:

FOUNDER



Euroscience

Founded in 1997 and counting 2100 members in 40 European countries Euroscience is a grass-roots organisation representing European scientists of all disciplines. It operates through workgroups and regional sections.

HOST



Wissenschaft im Dialog

Founded in 1999 by the leading German scientific organisations. With the support of the Federal Ministry for Education and Research it seeks to promote dialogue between science and society.

INITIATORS

ROBERT BOSCH STIFTUNG

Robert Bosch Stiftung

The Robert Bosch Foundation is one of the largest German foundations associated with a private company. The foundation's five areas of support and its institutions in Stuttgart are dedicated to promoting public health care, international understanding, social work, education, the arts and culture, the humanities and the social and natural sciences.

Stifterverband
für die Deutsche Wissenschaft

Stifterverband für die Deutsche Wissenschaft

The Stifterverband is a joint campaign of 3.000 companies, industrial associations and individuals. Its major goal is to promote science and humanities. As a think tank it gives incentives to improve the quality and efficiency of the higher education and research system.

FOUNDING PARTNERS

Deutsches Museum

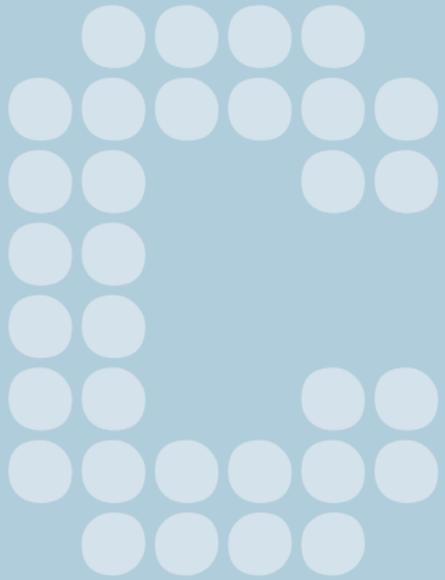


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