



EUROPEAN  
COMMISSION

Community research



# Descartes communication prize

Excellence in  
**science communication**

2005

1-2 December 2005  
Royal Society, London  
United Kingdom

GENERAL INFORMATION

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SCIENCE AND SOCIETY

# Royal Society welcomes Descartes Prizes to London

It is fitting and timely for the Royal Society to be hosting the Descartes Prizes Ceremony in 2005 when the United Kingdom currently holds the presidency of a newly expanded EU – a Union offering ever-increasing opportunities for scientific collaboration. As president of the Royal Society, I am delighted that the awards ceremony is taking place at our premises in London.

The Royal Society is the oldest scientific academy in continuous existence. Its first Fellows are acknowledged as having invented the scientific method still employed today. The Society was founded by Royal Charter awarded by King Charles II in 1660, with the motto *nullius in verba*, literally 'on the words of no one'. This motto signifies the commitment of the founding Fellows to establishing the truth of scientific matters through experiment rather than through deference to authority.

This commitment resonates strongly with the philosophy of René Descartes. Although he died ten years before the Royal Society was formed, his writings influenced the climate of inquiry and opinion in philosophical pursuits and this important legacy was sometimes the measure against which the Society's Fellows would test new descriptions of the workings of the universe.

Several founding and early Fellows had direct contact with Descartes. Sir Kenhelm Digby (1603-1665) met and discoursed with him several times on the continent during the 1640s and the two enjoyed mutual respect, if not agreement. Henry More (1614-1683), the Cambridge Platonist, was one of Descartes' correspondents.

The Descartes Prizes give Europe a valuable opportunity to recognise excellence in scientific collaboration and in science communication. These areas are closely aligned with the Royal Society's activities today. Through our various research fellowship schemes, international exchange programmes and discussion meetings, we support excellent individuals in their pursuit of scientific knowledge and in their collaboration with each other.

We foster excellence in science communication through programmes which encourage scientists to inspire others and to engage in dialogue with the public, social scientists, civil society groups and politicians with a view to informing policy decisions. We award prizes to authors of popular science books for children and adults, and publish seven internationally renowned journals. The oldest of these, *Philosophical*

*Transactions of the Royal Society*, was first published in 1665 and is the world's longest running international science journal, while the most recent addition, *Journal of the Royal Society Interface*, was first published in 2004.

The Society has a close and productive working relationship with European colleagues. This is reflected particularly in our strong involvement with the European Academies Science Advisory Council (EASAC) which has published reports on themes including infectious diseases, genomics and pollution, as well as a user's guide to biodiversity indicators. We enjoy warm bilateral relations with sister academies and worked closely with several of those in Europe and further afield this year in initiating and issuing statements on climate change and Africa to influence the G8 deliberations in Gleneagles, Scotland. We have participated in the planning of EU science in society activities and our successful MP/Scientist pairing scheme will be extended to include Members of the European Parliament in 2006.

I am pleased to note that the United Kingdom has performed well in the Descartes Prizes in recent years. Past research prize winners have included teams led by Professor Alan Lehman of the University of Sussex (2000), and Dr Michael North of King's College (2001). Fellows of the Royal Society have also enjoyed success, with research prizes being won by teams led by Professor Ian Smith FRS of Birmingham University (2000) and Sir Richard Friend FRS of Cambridge University (2003). In 2004, Sir David Attenborough FRS won one of the inaugural science communication prizes and Professor Howard Trevor Jacobs of the University of Tampere, a former Royal Society University Research Fellow, led one of the teams which won a research prize.

The Royal Society is the physical and spiritual home of British science and it is most apt that we should be hosting the prizes named in honour of the man whose ideas contributed so much to modern scientific thought. We look forward to greeting our distinguished guests in London for the 2005 Descartes Prizes awards ceremony.



Lord Rees of Ludlow  
President  
The Royal Society



# The Descartes Prizes Award Ceremony 2005

The Royal Society, London, 1-2 December

## 1 December

### 14.30 - 18.00 Opening of the exhibition

> *City of London rooms, Marble Hall*

The Descartes laureates, finalists and nominees display their work

The exhibition continues throughout the event on 1<sup>st</sup> and 2<sup>nd</sup> of December

### 16.00 - 18.00 Round table discussion: Whose voice counts in science?

> *Wellcome Trust Lecture Hall*

Welcome address by **Lord Rees of Ludlow**, *President of the Royal Society* and by

**Jean-Michel Baer**, *Director of Science and Society, Research Directorate-General, European Commission*

CHAIR **Dr David Stewart Boak**, *Director of Communications, Royal Society*

MODERATOR **Mr Ranga Yogeshwar**

### 16.00 Testimonies on experiences within Europe

SPEAKERS **Mr Pierre-Benoît Joly**, *Research Director at the National Institute of Agronomic Research (INRA), Director of the Research Unit TSV (Social Transformations related to Life Sciences and Life Forms), France*

**Professor Mark E. Welland FRS**, *Director of the Nanoscience Centre University of Cambridge, Director of the Interdisciplinary Research Collaboration in Nanotechnology, United Kingdom*

**Mr Caspar de Bok**, *International Science Shop Network Coordinator, Science Shop for Biology, Utrecht University, Netherlands*

**Mr Mike Barry**, *Head of Corporate Social Responsibility, Marks and Spencer, United Kingdom*

**Dr Jasber Singh**, *Deputy Director of Co-Inquiry, PEALS (Policy, Ethics and Life Sciences) Research Centre, University of Newcastle, United Kingdom*

### 17.00 Debate involving participants and the Descartes laureates

### 18.00 - 19.30 Cocktail drink and visit to the archives of the Royal Society

> *City of London rooms, Marble Hall*

### 19.30 - 22.30 Dinner meeting on Community Research in the 21<sup>st</sup> century

> *Wellcome Trust Lecture Hall*

Welcome by **Lord Rees of Ludlow**, *President of the Royal Society*

Interventions of the *European Commissioner for Science and Research*, **Mr Janez Potočnik** and the *British Under-Secretary of State for Science and Innovation*, **Lord Sainsbury of Turville**

MODERATOR **Mr Ranga Yogeshwar**



## 2 December

**8.00 - 8.15** **Doors of the Royal Society open**

**8.15 - 8.30** > *Wellcome Trust Lecture Hall*

Video presentation of the Descartes Prizes

Welcome and presentation by **Mr Alex Taylor**

Opening of the Ceremony by

**Dame Julia Higgins**, *Vice President of the Royal Society*,

**Lord Sainsbury of Turville**, *Under-Secretary of State for Science and Innovation*, and by

**Mr Janez Potočnik**, *European Commissioner for Science and Research*

**8.30 - 9.45** **Descartes Prize for Collaborative Research: the 2005 winners**

Introduction by **Professor Ms Ene Ergma**, *President of the Descartes Research Grand Jury*

Screening of "The Finalists of the Descartes Research Prize 2005"

Announcement of the laureates and finalists

Award of prizes and diplomas to the laureates and finalists

**9.45 - 10.00** Music interlude

**10.00 - 10.45** **The Descartes Research laureates and their teams testify on:  
Challenges of scientific co-operation**

**10.45 - 11.00** Coffee break

**11.00 - 12.15** **Descartes Prize for Science Communication: the 2005 winners**

Introduction by **Mr Andrea Bandelli**, *member of the Descartes Communication Prize Presidents' panel*

Screening of "The Finalists of the Descartes Communication Prize 2005"

Announcement of the laureates and finalists

Award of prizes and diplomas to the laureates and finalists

**12.15 - 12.30** Music interlude

**12.30 - 13.15** **Presentations and testimonies by the Descartes Communication laureates**

Closing remarks by **Alex Taylor**

**13.15 - 14.00** **Press conference**

> *Kohn Centre*

**13.15 - 14.30** **Lunch and Exhibition**

> *City of London rooms, Marble Hall*

**15.00 - 16.45** **Visit to the archives of the Royal Society**

**17.00** **End of festivities**



# Descartes Prizes highlight the strength of European research

By Science and Research Commissioner Janez Potočnik



Now in its sixth year, the Descartes Prize has done much to raise the profile of European research on the world stage. René Descartes, the inspiration behind this annual event, was himself one of the world's truly great thinkers. A towering figure of the 17<sup>th</sup> century – physicist, physiologist, mathematician and philosopher – his name has become synonymous with European excellence. His readiness to embrace new ideas and challenge conventional wisdom embody the qualities we have sought in selecting candidates for our own 2005 nominations.

The 14 projects shortlisted for their **excellence in scientific collaborative research** were chosen by an expert panel from a total of 85 submissions – three times more than in 2004 and clear evidence of the growing interest in our prize by the European scientific community. The majority of the laureates and finalists are in the basic and life sciences and, for the first time, a social science project is on the final list.

As Europe's most prestigious award for achievements resulting from transnational research, the Descartes Prize not only honours the creativity of its scientists, but also underlines the strength of a Union committed to building the knowledge society.

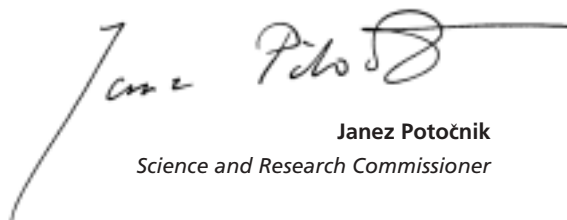
The high priority given to research by the European Commission is demonstrated by its proposal to double the budget for the forthcoming Framework Programme for research, as well as the creation of an autonomous European Research Council which will fund the best of European research which is pushing forward the frontiers of our knowledge.

More needs to be done to increase the level of public and private investments, in order to reach the target set by the Barcelona Council to boost spending on R&D to 3% of GDP by 2010. One way of helping to achieve this goal is to raise public awareness of the profound impact made by research on citizens' health, wealth and quality of life.

This is why, in 2004, we introduced the Descartes Prize for **excellence in science communication**. Awards are presented to individuals and organisations recognised for their ability to inform and enthuse the public about science and technology. To ensure only the 'best of the best' compete for the European prize, the laureates are selected from among winners of existing local, regional and national science communication prizes and festivals, of varying size and fame.

This year, the Commission received 65 submissions, out of which 23 were selected to attend the Award Ceremony. Five laureates – a famous author, a Belgian TV channel, a German educator and two Scandinavian science communicators – will share the top prize, while five 'finalists' will receive honourable mentions and a smaller prize amount.

I would like to express my sincere thanks to all those who have helped to make a success of this year's Descartes Prize: the expert panel, the Grand Jury – under the expert leadership of Professor Ene Ergma – who faced the difficult task of choosing the winners, Commission staff and local organisers, and to our hosts at the Royal Society. And, of course, I would especially thank all of the researchers who presented their work for consideration. Although you may not have got through to the final stages, you should know Europe values your dedication and effort.



Janez Potočnik  
Science and Research Commissioner



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## How the **Descartes Prizes** promote excellence in European research



**Achilleas Mitsos**  
*Director-General, Research DG*

In just a short time, the Descartes Prize has become synonymous with European excellence in collaborative research. It highlights the added value created by partnerships extending across national frontiers and scientific disciplines, and showcases the benefits of research and technological development to society.

In 2004, the organisers of the Prize at the European Commission saw an opportunity to extend Descartes' reach even further by setting up a parallel Prize for excellent examples of science communication to the wider public.

This new Prize aims to fuel interest and careers in scientific communication and to improve public understanding of scientific research through better-quality reporting. By rewarding information multipliers, such as journalists, editors, science writers, radio/television producers and directors, but also scientists themselves engaged in spreading the word about science, the goal is to extend the lines of communication and, thus, bridge the science and society divide.

The Commission called on organisers of similar national science communication prizes to submit candidates, and the response was tremendous. In the first year, almost 50 examples of excellent science communication were received, which was whittled down to 19 finalists, whereof 5 laureates. Each received significant media coverage and write-ups in last year's brochure. Only five could be named laureates, but the strength of the entries was clearly evident.

For the 2005 Prize, 65 entries were received from 46 organisations representing 16 countries in the EU and beyond, including Bulgaria, Canada, Iceland, Russia and Switzerland. The Expert Panel chose five laureates (from Sweden, Denmark, Belgium, the United Kingdom and Germany), five finalists (two from France, one from Germany, Switzerland and the United Kingdom) and 13 highly rated nominees from all over Europe, including Germany, France, Spain, Belgium, Island, Finland, Switzerland. All are presented in this brochure.

This year, the European Commission has decided to grant a financial prize of €250 000 to the laureates (as in 2004) but on top of that, an amount of €5 000 will also go to each finalist.

Once again, the quality of all entries was very high this year – the 23 projects presented in these pages provide ample proof of this. They covered four of the five categories open to the prize. We have famous authors, documentary makers, educators, enlightened scientists, journalists and, for the first time this year, a women finalist. Indeed, it is a great pleasure to introduce this brochure full to the brim of 'excellence'.

My thanks go to all who have helped put this event together.

**Achilleas Mitsos**  
*Director-General, Research DG*



## Descartes Communication Prize 2005

### expert panel members

#### Dr Andrea Bandelli

Speciality:  
Consultant in science  
communication

##### *Consultant for Après Tendance, Amsterdam, Netherlands*

Mr Bandelli is an independent advisor on science communication initiatives. After working for new Metropolis in Amsterdam (now 'NEMO') from 1995 to 1999, he became manager of the Science Learning Network, a worldwide online community of educators, students, schools, science museums and other institutions pursuing a new inquiry-based science education model. From 2000 to 2004, he was project manager of BIONET, a virtual collaborative exhibition on the life sciences, and he is currently leading DECIDE, a project to encourage democratic activities in science centres and museums. He has been a consultant for various institutions in Europe and the USA, and for the national research organisations of Brazil and South Africa. His articles on public engagement with science and informal learning have been published by the Nobel Foundation, the Science Museum in London and in several journals. He was a board member at the Wellcome Trust's ReDiscover fund, and is currently a trustee of the Next Generation Foundation in London.

#### Mr Philippe Bijvoet

Speciality:  
Science, education television  
programmes

##### *Director of Educational Programmes and Science Documentaries, VRT, Brussels, Belgium*

Mr Bijvoet's long career working for the Flemish public broadcaster, the VRT, has focused on bringing science closer to society by producing high-quality scientific documentaries and programmes aimed at educating audiences. After studying at the Flemish Film, TV and Theatre Academy in Brussels – now part of Erasmus Hogeschool – he went on to work as a freelance TV director for the public broadcaster and private production companies before moving to the educational department of the VRT in 1978. Since then, he has directed science, technology and historical programmes. He is a member of the science and educational programme of the European Broadcasting Union (EBU).

#### Dr David Boak

Speciality:  
Science communication  
and science in society

##### *Director of Communications at the Royal Society, London, United Kingdom*

Dr Boak has held his present position as Director of Communications at the prestigious Royal Society since 1999. He is responsible for its strategically oriented science communication activities and pioneering science in society programme, both of which have an impact on the way science is progressing, in the United Kingdom and abroad. He also oversees the Society's well-regarded public relations work. Before this, he was Director of Communications at Heriot-Watt University, Edinburgh, and spent 20 years with the British Council in Europe, South America and Africa building bilateral science links with the United Kingdom. In these positions, and through his studies, he has acquired a broad knowledge of science and honed his ability to communicating it – skills he now applies to his current duties.

#### Dr Richard Braun

Speciality:  
Microbiology,  
science and society

##### *Former Head of the Microbiology Department at the University of Bern, Switzerland*

In Mr Braun's 26 years at the University of Bern's microbiology department, he has worn many hats – professor, department head and dean of the science faculty. His research interest focused on how the genome is organised and on gene expression in parasitic protozoa. Since retiring, in 1998, he has concentrated on the interaction between science and society, in particular public perceptions of biotechnology. He has contributed, both at the national and European levels, to public dialogue in the area of biotech and the life sciences. Currently, he is a member of the Task Group on Public Perceptions on Biotechnology of the EFB (European Federation of Biotechnology).

#### Ms Deborah Cohen

Speciality:  
Science communication  
and radio journalism

##### *Editor of Radio Science at the British Broadcasting Corporation (BBC), United Kingdom*

Ms Cohen has over 25 years experience at the world-renowned BBC. During this time, she has been involved in thousands of science programmes aired mostly on radio. She has also been an invited speaker at international conferences, helping researchers to appreciate the need for the public to understand science. Originally trained in physics and the social studies of science, she branched out into journalism in 1979. Since then, she has developed new ways of using radio to bring scientific developments and their effects to the public.





## Ms Sophie Coisne

Speciality:  
Journalism and science  
communication

### *Senior editor for the French science magazine La Recherche*

Former vice president of the French Science Journalists Association (AJSPI) in Paris, Ms Coisne is a science reporter for the monthly magazine Science et Vie Junior. Since completing her studies in biology, she has gained vast experience writing for the French daily La Tribune, the weekly Le Point and specialist publications, such as La Recherche and a magazine for students, l'Étudiant. Her aim is to improve the communication between scientists and journalists and to strengthen the ties between the AJSPI and equivalent European associations.

## Professor Nuno Crato

Speciality:  
Mathematics and statistics

### *Mathematics Professor at Lisbon Technical University, Portugal*

Dr Crato took up his current post in 2000, after eight years at the New Jersey and Stevens Institutes of Technology (USA). He is also a senior science correspondent for the Portuguese weekly newspaper Expresso and author of TV science documentaries. His research interests include stochastic processes and time series analysis with applications to economic and financial (volatility) models, as well as to climate and fisheries data. He has a parallel interest in science writing and advising science museums, and has won the 2003 European Mathematics Society prize for the best article addressing the general public, as well as an award for science communication by Visionarium (PT). He has published over five hundred articles, four dozen academic papers, four books, is a member of several task forces and committees, and is currently president of the Portuguese Mathematical Society (SPM).

## Dr Suzanne de Cheveigné

Speciality:  
Science communication

### *Researcher, National Centre for Scientific Research (CNRS), Paris, France*

Dr de Cheveigné is actively involved in the science and society dialogue through her work at CNRS and as a ten-year member of the editorial committee of the well-known scientific journal Hermès. Specialising in public perception of science, risk governance and how society relates to technology, she has taken an interest in the media coverage, especially television, of biotechnology and animal-human relations. She has also studied women's careers in science institutions. She is a member of several national and EU scientific committees looking at science communication issues. With numerous publications to her name in popular and scientific titles, as well as TV programmes, she has put her scientific knowledge and communication skills to good use in lifting the barriers between science and the public.

## Ms Susan Dahl

Speciality:  
Science education, ICT,  
media studies

### *Education Specialist, Fermi National Accelerator Laboratory (Fermilab), USA*

In her 20 years of professional experience, Ms Dahl has held senior positions in organisations, boards and committees. As an independent consultant, she advises various US government agencies and organisations on a number of science education, training and media topics. She has 17 years experience at Fermilab (US Dept. of Energy) and is currently an education specialist directing the Teacher Resource Centre, managing the Science Adventures informal enrichment programme for students, and advising scientists who communicate science to society. During her 15 years with the Leon M. Lederman Science Education Centre, her activities included serving as the coordinator of the Eisenhower National Clearinghouse (US Dept. of Education) demonstration site for the north-central region and on the liaison staff with the North Central Eisenhower Mathematics and Science Consortium. Due to the international nature of Fermilab Ms Dahl has developed a passion for working towards a vision and understanding of global science education.

## Mrs Maria Dimitrova

Speciality:  
Environment and science

### *Editor at the Bulgarian National Radio Station, Sofia, Bulgaria*

Mrs Dimitrova has 25 year's experience in radio and journalism and is currently an editor for Bulgaria's National Radio and a reporter in the Sofia office of Agence France Presse. Her interests and background are in the environment, natural sciences, economics and EU integration, but she also has an interest in cultural heritage. She has won several journalism awards, including the 1997 prize for her coverage of the national campaign on household and industrial waste and one in 1999 for her role in a campaign on protecting the ozone layer. Mrs Dimitrova took part in major conferences on science communication in Europe and science and innovation events, such as Innovact and Eurorobots, and the Venus Transit 2004 campaign and Earth & Space Week 2005. She is a member of SCIRAB, a science in radio broadcasting project.



## Mr Patrice Goldberg

Speciality:  
Journalism and educational  
sciences

### *Head of the Science Team, RTBF, Brussels, Belgium*

Mr Goldberg has applied his knowledge and interest in the sciences to a rewarding career in television journalism and, later, production. In his current role as editor-in-chief, presenter and producer of the French-speaking public station's regular prime-time science programme *Matière Grise*, he is involved in the writing, editing and presenting of thought-provoking scientific topics. His mission is to explore the scope of audio-visual material and methods in bringing the sciences to life for the public at large and, as such, he recognises the importance of matching the communication – reportage, documentary, etc. – to the audience.

## Dr André Jaumotte

Speciality:  
Technology,  
hydraulic engineering,  
renewable energy

### *Emeritus Professor, Free University of Brussels, Belgium*

Professor Jaumotte has built an illustrious career including many publications in the field of thermodynamics, hydro- and gas turbines, renewable energies and technologies. His long list of books include such titles as *La science au service du pays* (Science at the service of countries), published by the King Baudoin Foundation in 1985, *Notre Europe* (Our Europe) by J. Dieux-Brichart publishers in 1991 and, more recently, the Belgian Nuclear Society by *Mémoires d'Europe*, 1994. He has shown an interest in the Bologna process of creating a European educational area and is currently investigating energy and the environment.

## Dr Athina Markantoni

Speciality:  
Social scientist, European  
affairs, communication

### *Managing Director of Euroscope Ltd, Greece*

Dr Markantoni is a specialist in, among other things, institution building and public administration reform, and is involved in a range of EU policy-making areas, such as evaluating the research Framework Programmes, gender issues, human resources, communication, and SME development. Cutting her teeth as a researcher at Athens University working on a social policy project in Greece, she moved into the European political sphere as a trainer in EU affairs covering such topics as EU integration, EU institutions and decision-making procedures. Between 2001 and 2003, she worked as a development consultant at Planet Ernst & Young, responsible for setting up and managing the Business Acquisition Office. During this time, she conducted vocational training for senior Greek public administrators on EU issues to help them prepare for the EU Presidency in 2003. She also worked as an expert on public administration reform and communication for the EU funded project PCA II – Kyrgyzstan. From 2003 until February 2005, she was director of the International Unit at European Profiles SA. Currently, she is managing director of Euroscope Ltd.

## Mrs Jeanne Monfret

Speciality:  
Research and EU policy

### *Project Manager, French National Centre for Scientific Research (CNRS), France*

As a project manager at CNRS, Mrs Monfret applies her knowledge of policy and experience and interest in communication towards promoting the dissemination of scientific information across Europe. She has been in charge of European affairs in the French research ministry, a member of Crest (Comité européen pour la recherche scientifique et technique), advisor to the French EU delegation, and counsellor for international and European affairs in the French research minister's cabinet. Her research interests include how to stimulate public understanding of science, especially among the youth.

## Dr Andrew Moore

Specialist:  
Life sciences, science  
communication

### *Programme Manager for Science & Society, European Molecular Biology Organization (EMBO), Germany*

A biologist by training, Dr Moore is equally at home at a microscope as at a word processor. After stints in laboratories as a molecular biologist researching the structure of biological molecules and the molecular mechanisms of neurotransmission, he moved to the EMBO to take on new challenges. His many tasks include writing for the Analysis section of the EMBO reports, for which he keeps abreast of a range of subjects, from recent bioscience and biotech advances to current affairs in science policy. As coordinator of the EU-funded CEEBT project, he established a European teacher-training network, and he coordinates the EMBO Award for Communication in Life Sciences and the EMBO Science Writing Prize. The organisation of science and society conferences and an annual media workshop for young life scientists complete his work.



## Dr Cornelia Munteanu

Specialist:  
Industrial engineering,  
geophysics, education and  
science awareness

### *Expert of Romanian National Commission for UNESCO, Romania*

Dr Munteanu's background in research and engineering helps her bring science closer to society, focusing on young people and the use of ICTs. In a long career as an academic, adviser and businesswoman, she has a large portfolio of publications and experience. With UNESCO, she was the national coordinator of the 'Usage of ICTs in Education' project, and the 'Uniting the Seas' (Baltic, Black and Caspian) project for preserving world heritage and promoting sustainable development using ICTs. She is a national evaluator for a European high school campaign set up by the EC delegation in Romania. Her research interests include national capacity building and, previously, research on biological sensors for predicting earthquakes. Before taking up her current position, she was an advisor to the president of Nemira Publishing House, a research and education executive at the Centre of Complexity Studies and an earth science researcher.

## Dr Vladimir Nekvasil

Specialist:  
Physical sciences,  
nanosciences, RTD

### *Senior Scientist, Czech Academy of Sciences, Institute of Physics, Czech Republic*

During his long career, Dr Nekvasil has published over 100 scientific papers in leading journals. He has held many academic positions and been involved in innumerable conferences and committees. He was vice-president of the esteemed Czech Academy of Sciences between 2001-2005. His current research interests include superconductivity and colossal magnetoresistance in perovskites. He took part in the jury for NATO's Science Fellowships Programme, as well as many other public-funded research schemes. He is a member of the Research and Development Council of the Government of the Czech Republic.

## Mr Hanns-Joachim Neubert

Speciality:  
Biological sciences  
and technology

### *Communications Consultant, ScienceCom, Hamburg, Germany*

In 25 years in science journalism, Mr Neubert's has, among other things, edited books and journals, written numerous articles for German, British and US magazines and directed documentaries. He spent most of the 1990s working as press officer for the German ministry of science and technology before becoming a freelance journalist and communications consultant in such fields as biotechnology and nanotechnology. He is president of TELI, the German association of science and technology writers, and vice president of the European Union of Science Journalists' Associations (EUSJA). He has travelled the world lecturing and advising on science and policy, and spent five years researching marine planktology and microbiology in the northern and Baltic region.

## Dr Jussi Nuorteva

Speciality:  
Archiving and document  
management, science policy  
and communication

### *Director-General, National Archives Services, Helsinki, Finland*

Prior to taking up his current post in 2003, Mr Nuorteva was secretary-general of the Finnish Literature Society for three years and of the Academy of Finland's Research Council for Culture and Society for two. Historian by trade, he has documented the history of science, especially in universities, until the 17th century and written extensively on this and other subjects in academic and popular publications. His passion for science communication shows in his career through his membership of several literature societies and scientific academies, while he honed his writing skills during a four-year stint with the Finnish Broadcasting Company (YLE) as a science journalist. He also chairs the government Committee for Public Information, central to the field of communication and non-fiction writing in Finland. He is also chairing the organising committee of the Turku International Book Fair.

## Mr István Palugyai

Speciality:  
Media studies and  
science communication

### *Science Editor, Népszabadság Newspaper, Budapest, Hungary*

With more than 25 years of experience in science journalism, in both printed and electronic media, Mr Palugyai is well placed to comment on the evolution of scientific communication over the decades. In addition to his editorial responsibilities on the weekly science, medicine, environment and IT pages at Népszabadság – Hungary's leading broadsheet with a circulation of up to 170 000 – he is also president of the European Union of Science Journalists' Associations (EUSJA) and vice president of the World Federation of Science Journalists (WFSJ). His stated ambition in these roles is to strengthen co-operation between European science journalists and to raise the level of journalism in this field across Europe and worldwide.



## Mr Walter Staveloz

Speciality:  
Humanities, science  
communication

### *Executive Director Ecsite, Brussels, Belgium*

For seven years, Mr Staveloz was the general secretary of Focus Research, the Belgian association for the advancement of science. During this time, he built up the organisation whose aims are to improve communication and dialogue among researchers and research policy-makers, and to 'popularise' science. In 1995, he took the helm of Ecsite – a European non-profit association of around 300 museums and science centres in 25 countries. Its main goal is to create a science communicators' forum to exchange and diffuse best practices among its members. Through Ecsite, he is striving to bridge the gap between informal and formal sciences, including the human sciences.

## Dr Eva-Maria Streier

Speciality:  
Media studies and production

### *Head of Press Relations, German Research Foundation, Bonn, Germany*

A journalist by training, Dr Streier has an academic background in humanities (American Studies and History). She has spent 20 years in science communication as head of the Press and Public Relations Department of the Deutsche Forschungsgemeinschaft (DFG). The DFG serves all branches of science, including humanities, by funding research projects and facilitating co-operation among researchers. The annual budget comes up to €1.3 billion. It also advises parliaments and government on scientific questions and establishes contacts with the scientific community abroad.

## Dr Andreas Trepte

Speciality:  
Science press relations  
and exhibitions

### *Managing Editor of News/Press and Chief Curator of the 'Science Tunnel' expo, Max Planck Society (MPG), Munich, Germany*

With some 15 years in science communication and a background in social science, economics and humanities, Dr Trepte has built up a noteworthy career. Since 1991, he has worked at the MPG managing various programmes and projects, such as setting up 27 MP research units in eastern Germany, and preparing numerous studies and exposés about cutting-edge research and technology. As managing editor of MPG's science news releases and website, he has written and edited scores of material relating to new findings in all disciplines of science. Recently, he was involved in setting up a new web portal and content management system for MPG. This builds on his interest in new web technology, electronic publishing and open access. In 2005, he initiated the 'Science Tunnel', a new MPG multimedia exhibition portraying the frontiers of modern science, which will be displayed in Tokyo and other major cities.

## Mrs Tina Zethraeus

Speciality:  
Science communication

### *Project Director, Swedish Research Council (SRC), Stockholm, Sweden*

After some 14 years working for Swedish Radio and 13 as head of media relations at Uppsala University, in 2001 Mrs Zethraeus took up her position at the SRC, which aims to strengthen Sweden's basic research through funding, science communication and policy initiatives. Her main professional goal is to build bridges between journalists and researchers. She has set up a national media service, uniting all research institutions, to help journalists find scientists to interview and secure international coverage of Swedish research news. She has championed numerous activities to improve science communication – festivals, exhibitions, fairs, etc. – and is especially interested in European benchmarking.

## FORMER MEMBERS OF THE EXPERT PANEL

**Dr Monica Alexandru**  
**Mr Jacques-Olivier Baruch**  
**Dr Michael Esser**  
**Mr Ismael Gaona Pérez**  
**Mrs Daniele Jörg**  
**Dr Sergey Komarov**  
**Dr Luisa Minoli**  
**Ms Lara Ricci**  
**Mrs Silvia Rosa-Brusin**

Scientific and technical project assistant, ERA-Watch, Institute for Prospective Technological Studies (IPTS), JRC DG  
Journalist and President of the French Science Journalists Association (AJSPI), Paris, France  
Head of Dramaworks GmbH, Berlin, Germany  
Coordinating Editor, Grupo Joly de Información, Seville, Spain  
Producer, WDR Television, Cologne, Germany  
Deputy Editor-in-Chief, InformNauka Science News Agency, Moscow, Russia  
Project Manager, Association of SMEs (API), Varese, Italy  
Writer/Editor, Il Sole-24 Ore, Milan, Italy  
Presenter and Deputy Editor-in-Chief of 'Leonardo', RAI Television, Turin, Italy



# Sweden's Mr Science Communication

## spreads the word

This submission was made by the Ångpanneföreningen's Foundation for Research and Development and Carl Johan Sundberg won the 2005 Åforsk prize for dissemination of knowledge



The staid image of the scientist locked in the laboratory, unwilling to talk to the outside world is a long way from Dr Carl Johan Sundberg's outlook. This Swedish Associate Professor of Physiology has made a name for himself as a people-friendly scientist who can enthuse a range of audiences from PhD students to school children.

> Dr Sundberg is a licensed physician and has carved out a successful scientific career in human molecular physiology. Running parallel with the hard work of research, he has also developed a prolific role as a nationally and internationally renowned science communicator.

He has been involved in a huge number of communications projects over the past 20 years and has helped to design several science centre exhibitions, which have been visited by thousands of people. He has held more than 100 lectures on science for the public and school pupils, and written dozens of articles about science in the media. He has a passion for explaining science in a clear, understandable way and recently finished writing a book about biology for young teenagers.

Dr Sundberg is committed to breaking down the barriers between science and the media. He has created courses on bio-medical science for journalists and on science communication for PhD students.

### European impact

Carl Johan Sundberg also founded the Euroscience Open Forum (ESOF) which first took place in Stockholm in 2004. About 11 000 people visited the Forum's outreach programme, and more than 1 800 people attended the conference itself – including 350 journalists. Topics addressed included nanotechnology, the brain, science policy and the world's climate. The Forum aims to stimulate awareness of science and foster debate on issues that are

important to Europe's citizens. It will now be held biennially in a European City of Science (Munich in 2006).

Dr Sundberg's enthusiasm and energy was not lost on the Åforsk prize jury. They praised his "remarkable" ability to produce high-quality work that appeals to different groups, including pre-school children, high school students, journalists, museum workers, fellow scientists, industry and politicians.

And what drives Dr Sundberg? According to the Åforsk jury, he puts it down to "...sheer enjoyment. The best way to learn is to teach..."

### PANEL INFO

#### Science in Motion by Dr Carl Johan Sundberg

**CATEGORY:**

Professional scientist engaged in science communication to the public

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## Star of the show

This submission was made by the Danish Ministry of Science, Technology and Innovation and Dr Anja C Andersen won its National Research Communication award for 2004

A young Danish astrophysicist, and mother of three, certainly has the magic touch when presenting the complexities of science to a popular audience. Dr Anja C Andersen is a well-known figure in her native country thanks to numerous appearances on TV, radio and in newspapers. Her success and enthusiasm make her an inspiration to young women looking to forge a career in science.

> Dr Andersen became a star in Denmark thanks, in part, to her appearances as the astrophysics expert on a TV science show called Kosmos. The programme was aimed at young people and won a major television award in Paris. Soon after, her public persona was assured when half the population of Denmark tuned in to watch her live presentation of a solar eclipse over Europe.

Along with frequent appearances in the media, she travels around the country presenting popular talks and actively participates in debates about science and technology issues at schools, libraries and colleges. Dr Andersen has penned plenty of popular articles about astronomy and physics and has written a book about stardust, aimed at 9th grade physics and chemistry pupils. She has also contributed to physics teaching material for high school students.



© Morten Mejnecke

### PANEL INFO

#### Stardust by Dr Anja C Andersen

##### CATEGORY:

Professional scientist engaged in science communication to the public

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### Drive and charisma

Dr Andersen is now so well known to the Danish public that she has even managed to present science and technology issues in traditional glossy women's magazines – usually a no-go area for researchers!

Her drive and charisma have helped to increase the visibility of science with the general public and, according to the Danish Science Ministry, she is now an important role model for young women who may be interested in pursuing and maintaining a scientific career. She is committed to raising young people's interest in science in general, and to improving gender equality in academia.

When proposing Dr Andersen for the Descartes awards, the ministry noted her "remarkable ability to relate difficult topics within physics and technology to ordinary people's lives without compromising the scientific quality". Turning 40 this year, her life as a family woman, researcher and media star shows what can be achieved in a short time with copious measures of enthusiasm and determination. Her new 'day job' is associate professor in the Dark Cosmology Center at the Niels Bohr Institute, University of Copenhagen.



# A journey through space and time



This submission was made by The Royal Society, United Kingdom, and Bill Bryson won the 2004 AVENTIS Prize for Science Books

Author Bill Bryson is well known for his witty travel writing, but he recently went on a very different kind of journey to produce one of the most popular science books in years. 'A Short History of Everything' sees the author travel through space and time to show the reader how the world and the universe have developed.

> Bill Bryson's curiosity certainly got the better of him when he decided to venture into science writing. His thirst for knowledge about the world and beyond drove him to pen a bestseller that takes in almost everything from the big bang to the rise of human civilisation.

As Bill himself says: "This book is about how we went from being nothing at all to there being something and then how a little of that something turned into us, and also what happened in between and some of what has happened since."

He set out with little more scientific knowledge than the average person, but his desire to understand the world around him took him to a whole range of experts who helped him answer, as he puts it, some outstandingly dumb questions. How did we end up with a hot core in the middle of our planet and how do they know how hot it is? How do they know what goes inside an atom? And how can scientists so often seem to know nearly everything but still can't predict an earthquake or even tell us whether we should take an umbrella with us to the races next Wednesday? These are just some of the questions the British-based author mulled over when writing his book.

## Scientific wonder

The wonder of science is a thread that runs through the book as the author tackles some really big subjects, such as the origins of the Universe; the discovery of the size and age of the Earth; and the origins and history of life. He also looks into the evolution of man and dips into the strange worlds of relativity and quantum theory.

The book has won many plaudits for its easy, non-patronising style. Chairman of the AVENTIS Prize judging panel, Professor Robert Winston said: "This ambitious book will communicate science to the widest possible audience in an intelligent and highly accessible way."

One review of the book in the British newspaper The Guardian praised the "energetic, quirky, familiar and humorous" prose, noting that, "Bryson's great skill is that of holding the reader's hand throughout; building up such trust that topics as recondite as atomic weights, relativity and particle physics are shorn of their terrors."

## PANEL INFO

### 'A Short History of Everything' by Bill Bryson

**CATEGORY:**

Popularising science through the written word

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# TV show reveals the scientist's struggle

This submission was made by the Royal Flemish Academy of Belgium for Science and the Arts and OverLeven won its 2003 'Prijs van de Vlaamse minister voor Wetenschapsbeleid'

Science is an everyday story of intellect, passion and determination. When researchers pour their heart and soul into overcoming a problem, the dividend for mankind can be astonishing. A Belgian TV show, OverLeven (On Survival/About Life), has been shedding light on how scientists go about their work.

> Unlike its reality TV counterparts, OverLeven is a science series broadcast weekly on Canvas, a Flemish-language public channel in Belgium. Attracting about 120 000 viewers a week, each episode tells the story of a scientist – or group of scientists – trying to solve a problem or achieve a breakthrough in a range of fields, from zoology to environmental issues

The show's producers are keen to draw in the viewer by highlighting the determination of the scientists as they face their research challenges. The aim is to present difficult scientific content by using analogies and metaphors – and to avoid too much technical jargon. By concentrating on the scientists – and at least one of the researchers featured in any given episode should be Flemish – OverLeven adds personality to the story-telling process. This can create compelling viewing where a scientist's successes and failures carry the viewer away and create a certain amount of dramatic tension.

With a commitment to featuring issues that are important to society, OverLeven has built up a broad portfolio of work.



© Lander Loeckx

Episodes include a look at groundbreaking work carried out by a leading Belgian haematologist, and one that features a scientist who has trained rats to act as minesweepers.

## Something they ate

One episode takes viewers on a journey to South Africa to investigate the puzzling deaths of a type of deer. At first, poachers were suspected, until the scientists arrived and started to unravel the mystery. They initially looked into a virus, then thought a parasite might be causing the animals to drop dead. But the bloodwork turned out negative for this theory. It took time and scientific rigour, but the culprit was revealed... a dodgy diet.

The show airs every Thursday evening. To encourage scientists to present their work in a clear and comprehensible way, the show's makers have developed a new initiative – the OverLeven Prize. Winners will get to appear in an episode of OverLeven, or will be published in a scientific journal.

The Royal Flemish Academy's governing council gave OverLeven its award because the show reaches a vast range of people and has made the work of scientists more attractive.

## PANEL INFO

### OverLeven by Jos Van Hemelrijck

#### CATEGORY:

Popularising science through audio-visual and electronic media

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# 'Children's University' proves a huge success

This submission was made by Deutsche Forschungsgemeinschaft (DFG) and the University of Tübingen won the 2003 PR-FUCHS prize

A German university has thrown open its doors to an unusual audience with dramatic effect. After providing a series of lectures to children, the University of Tübingen found itself to be the inspiration for other educational institutions that are now offering the same service.



## Inspiring others

The journalists involved in the project wrote a book about Kinder-Uni's first year of activities. More than 120 000 copies have been sold and the book has been translated into 11 languages, including Spanish, Dutch, Korean, Japanese and Chinese. The book's success and general media interest has inspired other universities to copy the Tübingen process. It is now estimated that there are about 70 similar projects running in Germany and neighbouring countries.

According to a survey, children find the Tübingen lectures fun, interesting and challenging. The kids also said that the experience stoked their interest in disciplines such as astronomy, philosophy and archaeology. But perhaps it is the way the children are treated that really makes the university experience a winner. Michael Seifert explains: "In the Kids-Uni they are exclusively offered something that normally only adults gain access to. They are treated seriously like adult students and the lecturers evidently [make] a great effort to fascinate the kids."

And the children get to sample university life in the same way as any German under-graduate: they receive a student ID; learn to knock on the table to show their appreciation; and even get to eat in the university canteen.

> The idea of creating a children's university – or 'Kinder-Uni' as it has become known in Germany – was put together by Michael Seifert, head of press relations at the university, and two local journalists, Ulla Steuernagel and Ulrich Janssen. Professors at Tübingen University were keen to help and so, in summer 2002, an inaugural programme involving eight lecturers was drawn up to help curious kids get the most out of science.

Each lecture took the form of a question that aimed to stimulate a target audience of 8-12 year olds. The first posed was "Why do volcanoes erupt?" and attracted 400 children. Other lecturers delved into questions such as "Why don't the stars fall from the sky?" and "Why are some people rich and others poor?".

The format proved instantly popular – the second lecture had to use the university's largest lecture hall to fit in about 1 000 children. The 2003 lecture series even attracted a Nobel Prize Winner who tackled the demanding question, "Why is one not allowed to clone human beings?"

## PANEL INFO

### Tübinger Kinder-Uni by Michael Seifert

#### CATEGORY:

Innovative action for science communication

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This submission was made by the British Rocketry Oral History Programme (United Kingdom). Professor Colin Pillinger was awarded the 2005 Sir Arthur C. Clarke Outreach Award

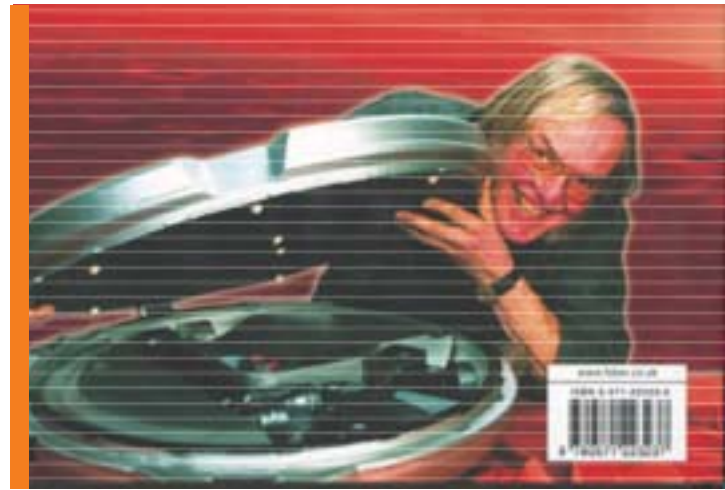
## Space age media master

Scientists rarely get a look-in on British TV, but one man has proved an exception. Professor of Planetary Sciences Colin Pillinger found his way into the national consciousness thanks to constant media appearances to explain the Beagle 2 Mars Lander mission.

> As leader of the Beagle 2 project, Prof. Pillinger was in constant demand from the UK's media to explain the mission. He appeared on TV screens so often that he became a celebrity, even appearing on popular shows like 'Top Gear' and 'Test the Nation'.

In amongst the fun, Pillinger's publicity efforts paid real dividends as he managed to raise the public profile of the European Space Agency's Mars Express mission. The professor had the knack of getting Beagle 2 talked about. He once produced a model of the Lander in a shopping basket to demonstrate its size, pictures of which were shown on British TV's most popular news quiz.

Sadly, the bid to land a vehicle on the Red Planet ended in disappointment. Beagle 2 failed to send a signal back and was declared lost in February 2004. Prof. Pillinger was once again in demand, and was able to convey to the public the difficulties, risks and demands of space exploration.



### Higher profile

Before Prof. Pillinger's regular media briefings and TV appearances, most of the British public were unaware of Mars Express and knew very little about ESA's work. In fact, ESA market research showed that Britain knew less about the Agency's programmes than any other European country.

Interest in the Mars programme and Beagle 2's trials and tribulations has helped to renew interest in space exploration. The British government even appears to be won over by this new public engagement. It was among the first to join – and has become the second biggest contributor to – ESA's Aurora programme, which could see a European on Mars by 2030.

For his efforts in raising public awareness of space research and his numerous outreach activities, Prof. Pillinger became the first recipient of the British Rocketry Oral History Project's Arthur C. Clarke award. It should be noted, however, that the professor already has his name written in the stars – in recognition of his contribution to the study of meteorites, Asteroid 15614 was named Pillinger in his honour!

### PANEL INFO

#### SAC-Outreach by Professor Colin Pillinger

##### CATEGORY:

Professional scientists engaged in science communication to the public

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# Making biology child's play



This submission was made by the European Molecular Biology Organization and Frances Balkwill won its Award for Communication in the Life Sciences in 2004

**Professor of Cancer Biology Frances Balkwill is on a mission to help children understand some of the most complex scientific issues of the day. She has written numerous children's books on the wonders of biological research, often covering some very difficult subjects, such as stem cells, HIV/AIDS and cancer. Now she has turned her skills to developing a new science centre in London.**

➤ Known for their clear narratives and imaginative illustrations by designer Mic Rolph, Fran and Mic's books have proved popular with children the world over and have been translated into more than a dozen languages, including German, Italian and more exotic ones like Korean, Zulu and Afrikaans. She is certainly not one to shy away from a challenging issue. Her latest books are aimed squarely at educating children in sub-Saharan Africa who are at risk of contracting HIV.

'Staying Alive: Fighting HIV/AIDS' and her earlier 'You, Me and HIV' have, with the help of charitable funding, been distributed for free throughout southern Africa. Prof. Balkwill visited the region as part of her research and has acquired an understanding of – and sensitivity to – local customs and culture.

## Science centre

Balkwill is the driving force behind a major new science education project in London's East End. Due to open in November 2006, the Centre of the Cell will be the first science education centre to be housed in a medical school that has working research laboratories. The children that visit the centre will be able to see biomedical research in action through interactive exhibits and a variety of hands-on activities.

When handing out its award, the European Molecular Biology Organisation jury praised Prof. Balkwill for "her spectacular work in communicating important scientific concepts to the young". They were particularly impressed by her "untiring efforts to bring critical science and health messages to deprived communities and disadvantaged countries outside Europe". The jury also note that, along with her science communications activities, Frances Balkwill heads up a research department and runs a lab carrying out high-quality research.

Her efforts have certainly not gone unnoticed – she also won the 2005 Michael Faraday Prize, widely considered to be the United Kingdom's most prestigious award for science communication.

## PANEL INFO

### Professor Frances Balkwill

**CATEGORY:**

Popularising science through the written word

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# Finding the right formula for maths

This submission was made by the Swiss Academy of Sciences and George Szpiro won its Prix Media ASSN/SANW 2003

Some say mathematics is black and white: you either get it or you don't! But so much in our world depends on maths – from, say, adding the bill in restaurants, to using calculus in air traffic control, or complex trigonometry in mobile telephony – that those who do not bother to understand it are missing out. George Szpiro's series of maths stories defy the odds by making this subject comprehensible, but also original and fun.



> George Szpiro is one of a fairly rare breed whose mastery of mathematics is coupled by a talent for communicating it to a wider audience. While maths was not difficult for him, learning to communicate it has been more of a labour of love which he has finely tuned over many years.

But the effort all became worth it when he won the Swiss Academy of Sciences Media Prize 2003 for contributions to scientific journalism (print or electronic). Honoured for his ability to, in the jury's words, "render complex mathematics accessible to the public at large", the Israel-based journalist displays a passion for clarity and meticulous research.

His monthly column 'George Szpiros kleines Einmaleins' (George Szpiro's little multiplication table), appearing in the Swiss newspaper NZZ am Sonntag, covers a wide range of subjects. Past columns have looked into the big questions like 'The search for a simple formula for Nature' which traces the mathematics of natural phenomena and draws on the works of famous figures, such as Fibonacci and the naturalist and mathematician D'Arcy Thompson.



## 'Headstrong twins'...

Szpiro is as confident tackling pure mathematical problems – such as 'How a Fermat prime number comes to have 17 angles' and 'Headstrong twins' (prime numbers separated by an even number) – as he is dealing with more everyday topics, such as the maths behind leap years and 'What tax dodgers should know'.

One of his more contentious titles, entitled Die fraktale Dimension von Israels Zaun (The fractal dimension of Israel's security barrier), melds his background in political journalism in Israel with his passion for quirky maths writing for the Swiss newspaper. He has been a political correspondent for Neue Zürcher Zeitung in Israel for some 18 years. Then, with the introduction of the Sunday edition, he took the opportunity to explore his passion for maths as well as put his studies on the subject to the test.

The results speak for themselves. The Swiss Academy of Sciences Jury says his writings are an "admirable tour de force because he successfully arouses interest in a subject previously mostly obscure". Now his work is being celebrated Europe-wide through the European Union-sponsored Descartes Science Communication Prize.

## PANEL INFO

### Swiss Academy of Sciences Prix Media 2003 *George Szpiro*

#### CATEGORY:

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# In search of the origins of AIDS



**It's a story we all think we know. AIDS caused by the HIV virus which probably derived from similar strains found in chimps. Case closed. But scientists are not so cut and dry about the origins of this major disease which, in 2004 alone, killed 4.1 million. Film-makers Peter Chappell and Catherine Peix dig deeper into the mystery surrounding The Origin of AIDS.**

> Ever since acquired immunodeficiency syndrome (AIDS) first came to light in the early 1980s, scientists have grappled to trace its origins. One of the theories suggests African bush meat hunters came into contact with infected chimpanzee blood, another points towards a suspect vaccination programme, and the wildest theory yet suggests a government conspiracy to wipe out what have become heavily infected communities.

Of course, evidence points strongly towards a scientific answer. Two hypothesis split the scientific community. In the first, it is believed it was an accident of nature – the simian immunodeficiency virus (SIV) somehow mutated to become the human form of the virus (HIV). Several ideas have come forward for how this zoonosis (transfer between species) took place. One is that it was transmitted from chimps to humans when they were butchered for food.

A second – somewhat controversial – school of thought involves human input. The science journalist Edward Hooper suggests in his book, *The River*, that HIV could be traced back to the oral polio vaccine, called 'Chat', invented by American Prof. Hilary Koprowsky, and which was administered through a mass vaccination programme to around one million people in the Belgian Congo in 1958. The 'final' vaccine was made locally in chimpanzee kidney tissue culture which may have contained SIV and later evolved into HIV.

This submission was made by the Maison des Jeunes et de la Culture (MJC) Oullins and Catherine Peix and Peter Chappell won its Prix du Jury Jeune in the 2004 'A Nous de Voir – Science et Cinéma' festival

## Tracing backwards

In their multiple award-winning film, Peix and Chappell trace the history of HIV/AIDS through interviews and first-hand accounts on the ground. By rekindling the memories of those who witnessed the early days of the disease – before science could give it a name, before it could connect HIV to AIDS – and by unearthing previously unpublished archives, this powerful story thrusts the audience into the centre of an unprecedented scientific controversy.

Originally made for television in 2003, the 91-minute documentary has been shown in dozens of film festivals all over the world as well, winning top accolades at the 40th Chicago International TV Awards, and a prize for best direction at the International Festival of Documentaries ('Hot Docs') in Canada.

Added to this haul, in 2004, were two more awards in Canada, and one at the Prix Europa in Berlin, Germany. It also earned a *Prix du Jury Jeune* (Youth Jury Prize) at the Scientific Film Festival A Nous de Voir, hosted by MJC Oullins, which in turn entered the film in the European Descartes Science Communication Prize. According to the MJC Oullins jury, the film's fluent narrative works very well with the legitimacy and credibility of scientific journalism. "I tried to explain scientific facts in a way that is understandable to a wider audience – it's a public interest story and a scientific story," concludes Peix.

## PANEL INFO

**Les origines du SIDA** by Catherine Peix and Peter Chappell

### CATEGORY:

Popularising science through audio-visual and electronic media (scientific television)

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# Chronicling the 'mad tale' of BSE

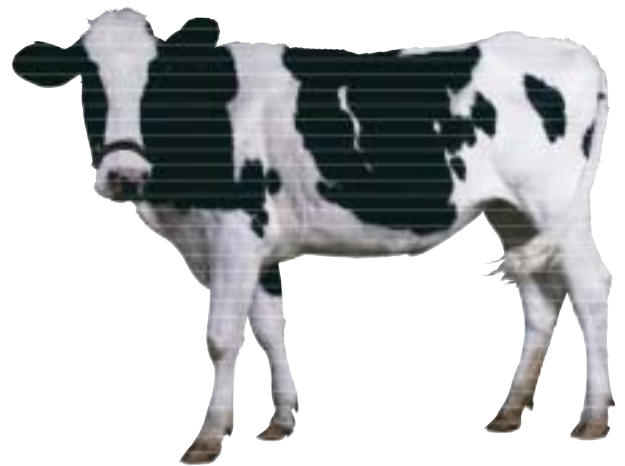
'Mad Cow Disease', or Bovine Spongiform Encephalitis (BSE) as scientists know it, broke out in the mid-1980s to devastating effect. *Folle Histoire*, by French director Raphaël Girardot, traces the history of this deadly condition and his documentary detective work takes us back to 18<sup>th</sup> century Spanish shepherds.

> *Folle Histoire* picks up the dramatic tale of BSE in 1985 when some British farmers first observed that a number of their cows were behaving peculiarly – earning them the title 'mad cows' by the media – and a few died. Analysis of the brains of the dead animals revealed that sponge-like holes had appeared in them and this new neurodegenerative condition – later named BSE – was what had led to the cows' erratic behaviour prior to their death.

Within a decade, BSE had become a major epidemic among the United Kingdom's bovine population and a very rare human variety – Creutzfeldt-Jakob Disease – was identified. A ban on British beef was imposed in many countries and the whole crisis helped bring down the embattled British government of the time. With these and other food scares, European public trust in the food supply chain has not yet been completely restored.

Several theories were put forward about how the disease had emerged. The most common was that it was a zoonosis – a disease that leaps across the species barrier – which may have been transmitted to cows whose fodder contained infected sheep's carcasses.

This submission was made by the Maison des Jeunes et de la Culture (MJC) Oullins and Raphaël Girardot won the Nous de Voir – Science et Cinéma scientific documentary first prize in 2001



## Sheepish start

Although theories vary as to whether BSE only emerged in the mid-1980s or whether it had been around since the 1970s but had gone undetected, Girardot's film shows that related forms of the disease are nothing new.

In 1732, Spanish shepherds reported what they called 'la trembladera' (the trembling) in their flocks. Scrapies – so called because the sick animal scrapes against objects – is also a neurodegenerative disease that has long been known to afflict sheep, but it is usually not as fatal as BSE. The documentary traces efforts by researchers throughout the 20<sup>th</sup> century to understand this disease, how it is transmitted and how it can be stopped.

This documentary – which appeared on Arte's Archimède programme – manages to pull off the trick of condensing nearly three centuries into 11 minutes without losing the plot.

The film employs collages of images, photos and drawings to illustrate the story of BSE. "This format," the MJC Oullins jury concludes, "makes this documentary, whose subject is serious, rather spontaneous and accessible."

## PANEL INFO

### *Folle Histoire (Archimède)* by Raphaël Girardot

#### CATEGORY:

Popularising science through audio-visual and electronic media

#### CONTACT:

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# Honourable mentions

> As in the inaugural Descartes Communication Prize, in 2004, once again the Commission called on organisers of similar national science communication prizes to submit candidates for the 2005 pan-European competition. Needless to say, the response was outstanding, with almost 70 entries from organisations across Europe and beyond. Indeed, this year, submissions were received from as far away as Canada and Russia.

With this excellent response came a big challenge for the experts to select the ten laureates and finalists who, for the first time, both receive a financial reward for their talent in communicating science to a wider audience. The panels also put forward a list of candidates to receive honourable mentions.

These 13 journalists, editors, science writers, radio/television producers and directors, but also scientists engaged in spreading the word about science, are presented in the following pages.

## 1 Maths + Beutelspacher = Fun

**Mathematics and fun – not everyone would put them in the same sentence. But one German scientist has found a successful formula to bring the two together.**

Prof. Dr Albrecht Beutelspacher was the first scientist to receive the Deutsche Forschungsgemeinschaft Communicator Award in 2000

> Professor Dr Albrecht Beutelspacher is a mathematician at the University of Giessen, Germany, who has been working hard for many years to bring his beloved subject to a wider audience. His travelling exhibition 'Mathematik zum Anfassen' – mathematics you can touch – captivated tens of thousands of people across Germany. In 2002, it was turned into the world's first interactive museum dedicated to mathematics. Now based in his hometown, the 'Mathematikum' is wildly successful, attracting more than 150 000 visitors per year.

Whenever possible, the professor tries to highlight how mathematics relates to everyday life. The Communicator Award jury noted that Dr Beutelspacher creates "a new approach for the public at large to the world of numbers, formulas and shapes".

Indeed his lectures are appreciated by students at all levels, from primary school children to PhD students. He has also written several best-selling books about maths. In Autumn 2005, he is due to publish a children's book on the subject called *Christian und die Zahlenkünstler* (Christian and the math magicians).

### PANEL INFO

#### Professor Albrecht Beutelspacher

**CATEGORY:** Professional scientist engaged in science communication to the public

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## 2 Spinning a web of science

This submission was made by the Icelandic Ministry of Education, Science and Culture, which gave Prof. Thorsteinn Vilhjalmsón an honorary award in 2005 for his lifelong service to science education

As a writer and teacher, Thorsteinn Vilhjalmsón is at the heart of Iceland's research community. Now the professor of physics and science history is harnessing the internet to bring science and Icelandic society closer together.

> Prof. Vilhjalmsón recently received an honorary award in 2005 from the Icelandic government for his lifelong service to educating the public about science. Among his many activities, the professor writes popular science books, holds summer schools for young people, and is involved in numerous educational projects run by Icelandic institutions. He also helped to develop Icelandic Science Week in 2002.

But perhaps his most notable recent achievement has been to establish and edit the Icelandic Web of Science (WOS). The site acts as an on-line encyclopaedia where people can log on to send questions which are then answered by an appropriate expert. The main aim of WOS is to encourage dialogue between scientists and the public –

and judging by the user figures – the site is achieving its goal. The equivalent of 4.5% of the Icelandic population logs on to WOS every week.

### PANEL INFO

#### Professor Thorsteinn Vilhjalmsón

**CATEGORY:** Professional scientist engaged in science communication to the public

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## 3 Fishing for scientific truth

This submission was made by the Humboldt-Universitäts-Gesellschaft. Dr Robert Arlinghaus won the University's 2004 Bscher-Media Award

Recreational fishing is a popular pastime, but if not properly managed it has the potential to do harm to local ecosystems. One German scientist has engaged the country's and EU's angling lobby by encouraging debate about the pros and cons of recreational fishing.

> Dr Robert Arlinghaus is among the first European scientists to evaluate accurately the socio-economic and biological impact of recreational fishing. His research has shown that poorly managed recreational fisheries can have a negative impact on the natural environment. On the other hand, the socio-economic importance of recreational fishing is massive. Balancing social needs with potential ecological impacts is needed through sustainable management.

This is pioneering research, according to experts, and Dr Arlinghaus has worked hard to get his research results into the public domain. The 30-year-old scientist has skilfully presented his findings in meetings, angling magazines, through the internet, and in Germany's mainstream media. He has even been involved in resolving conflicts between local angling groups.

His science communication skills were recognised last year when he won Humboldt-Universitäts-Gesellschaft's media award. The award jury was impressed by the way Dr Arlinghaus has stimulated debate with stakeholders while also capturing the attention of the wider public.

### PANEL INFO

#### Dr Robert Arlinghaus

**CATEGORY:** Professional scientist engaged in science communication to the public

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## 4 A small journey into big ideas

**It takes a special talent to write a compelling and understandable book about quantum physics. French scientist Etienne Klein managed this feat, adding to his reputation as a spirited science communicator.**

This submission was made by the Mouvement Universel de la Responsabilité Scientifique, and Etienne Klein was awarded its Jean Rostand Prize in 2004

> Etienne Klein's book *Petit Voyage dans le Monde des Quanta* tackles one of the most mind-boggling subjects in science. Quantum theory is complex, even for trained physicists. However, the Jean Rostand prize jury appreciated the author's ability to clearly define concepts of quantum theory through the skilful use of images and metaphors.

The writer is a physicist at the Commissariat à l'Energie Atomique, and also holds a PhD in philosophy of science. He is committed to promoting ways to discuss how scientific discoveries contribute to the progress of human knowledge.

Klein is well known in France for his regular weekly contributions (between 1999 and 2002) to the science radio

programme *in vivo*. Since 1995, he has given about 30 public lectures a year to a variety of audiences and is a member of several French scientific councils.

### PANEL INFO

**Voyage dans le Monde des Quanta** by Etienne Klein

**CATEGORY:** Popularising science through the written word

**CONTACT:** Commissariat à l'Energie Atomique, Saclay, France  
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## 5 Rediscovering the essence of aluminium

**As far as metals go, aluminium is as versatile as it gets. Not only is it functional – try building cars without it nowadays – it is also an inspirational building material for architects and artists alike. And this is how Ivan Grinberg of the Aluminium History Institute speaks about a subject close to his heart.**

This submission was made by the Université de Technologie de Compiègne. Ivan Grinberg won its Prix Roberval, Grand Public 2004

> It is one thing to have a passion for a subject as potentially ordinary as aluminium, but it is another to be able to communicate it clearly, originally and with sufficient verve to inspire others. Ivan Grinberg's many writings on aluminium and its role in forging industrial societies makes for surprisingly riveting reading.

Grinberg's prize-winning book *L'aluminium: un si léger métal* (Aluminium, such a light metal) traces the history of aluminium almost like a travel book, from its discovery 150 years ago through the industrial revolution to its current place in everyday life.

"The book is well written in a clear and easily accessible style," cite the jury of the Roberval Prize as reasons for choosing to award the historian their top honour for books that encourage the public to reflect on science and technology.

### PANEL INFO

**L'aluminium: un si léger métal** by Ivan Grinberg

**CATEGORY:** Popularising science through the written word

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Gennevilliers, France  
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## 6 A really 'rotten' book for children

This submission was made by The Royal Society and Nick Arnold and illustrator Tony De Saulles won the 2004 AVENTIS (Children's) Prize for science books

**A book packed with revolting experiments and facts about the more unusual side of science is proving a big hit with children.**

> 'Really Rotten Experiments' by Nick Arnold explores science in a fun and humorous way, and is fabulously illustrated by Tony De Saulles. The book is full of experiments designed to keep children occupied for hours – though some subjects are not for the fainthearted! There's a recipe for making green slime, and kids can learn to dance like a skunk, eat like a chimp and chat in cat language.

Like the 20 or so other 'Horrible Science' books by the same author, this book presents numerous interesting facts and quizzes designed to spark children's interest in the sciences. In amongst the fun and games, Nick Arnold always carefully explains the scientific processes behind the experiments. In all, 'Horrible Science' has sold well over 3 million books and has been published to acclaim throughout Europe.

'Really Rotten Experiments' won the AVENTIS children's prize for science books in 2004. More than 700 children took part in the judging process and they heaped praise on the winner. One 12 year-old said "it was easy to read and understand and it was great learning about the awesome experiments you can do at home".

### PANEL INFO

**'Really Rotten Experiments'** by Nick Arnold and illustrator Tony De Saulles (published by Scholastic Ltd)

**CATEGORY:** Popularising science through the written word

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**WEBSITE:** www.aventisprizes.com

## 7 Bird documentary flies high

This submission was made by the University of Navarra, and 'First Flight' won awards at the 2004 Telenatura Festival

**A television documentary that compares the flight of birds, insects and bats to the history of human aviation has received plaudits for its quality and innovation.**

> 'First Flight', produced by ORF-UNIVERSUM, the Natural History Unit of the Austrian Broadcasting Corporation, won best film, best direction and the award for science popularisation at the 2004 Telenatura – an international TV festival that showcases work which focuses on nature conservation and the environment.

Judges praised the documentary for the way it balanced the need for scientific rigour with the audio-visual quality of its script, photography and editing. Shot in a sophisticated way, the film puts an original spin on its subject matter and is full of excellent recreation sequences and superb images of bird, insect and bat behaviour.

Telenatura organiser, the University of Navarra, considers that the way the documentary compares bird flight with the human experience of aviation is "a highly effective way of communicating scientific content to a wide television audience".

### PANEL INFO

**FLICOMA – 'First Flight'** by Steve Nicholls and Alfred Vendl

**CATEGORY:** Popularising science through audio-visual and electronic media

**CONTACT:** Walter Koehler, Head of ORF-UNIVERSUM Natural History Unit, Austrian Broadcasting Corporation (ORF), Vienna, Austria – Tel: +43 1878 78 14129

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## 8 Beyond the call of duty

This submission was made by Maison des Jeunes et de la Culture (MJC) Oullins. Andreoli Emanuela and Wladimir Tchertkoff won its 'A Nous de Voir – Science et Cinéma' Prize for the best scientific film

Memories of the chilling night of 26 April 1986 are hard to erase for the many millions of Europeans affected by the Chernobyl nuclear disaster. What few know is that squads of men worked around the clock to seal the deadly open wound of the Ukranian nuclear reactor. Many died in the process.

> On the day of the explosion and in the months that followed the Chernobyl meltdown, about 1 million men, called 'liquidators', were thrown into terrifying radioactive conditions to smother the fiery reactor and clean up the nuclear aftermath near and far. Tens of thousands died in the weeks and months that followed... and they are still dying.

In their powerful film, *Le Sacrifice* (The Sacrifice), Emanuela Andreoli and Wladimir Tchertkoff take audiences back to that fearful time through first-hand accounts of the people who experienced it. "I was on the roof of the power plant four days... [one day] I put down a piece of graphite; I had to pick it up with my hands to throw it down," said one worker interviewed in the film.

The film's narrator then tells viewers that a piece of material from the reactor picked up by hand would transmit in half

a second more radioactivity to a man than he would expect to be exposed to in a lifetime. The liquidators had no choice. MJC Oullins awarded these film-makers its highest prize for their honest and thorough depiction of the science behind a very sad but human story.

### PANEL INFO

**Le Sacrifice** by Emanuela Andreoli and Wladimir Tchertkoff

**CATEGORY:** Popularising science through audio-visual and electronic media

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**WEBSITE:** www.mjc-oullins.com

## 9 A short-but-sweet look at science

TV journalist, writer and producer Roland Blaser won the Swiss Academy of Sciences' Prix Media award for some very short-but-sweet films.

This submission was made by the Swiss Academy of Sciences. Roland Blaser won the Academy's 2002 Media Prize

> Roland Blaser's slot, *Fokus Schweiz*, appears on the Swiss TV science show *Menschen Technik Wissenschaft* (Men, Technology, Science). In each transmission, he delivers short reports on three Swiss research projects that do not normally receive a lot of exposure.

Each of his mini-reports lasts only between one and two minutes. Nevertheless, Blaser succeeds in getting the key themes across to his audience. According to the Swiss Academy, these short films arouse the curiosity of the viewers and reflect the beauty, complexity and diversity of science.

Fascinated by technology since his school days, Roland Blaser trained as telecommunications electrician before turning to journalism and television production. He

certainly knows how to use technology as well as talk about it – in 1987, he became a commercial airline pilot, and besides filming he still flies as a part-time commander for a Swiss airline.

### PANEL INFO

**Fokus Schwei** by Roland Blaser

**CATEGORY:** Popularising science through audio-visual and electronic media

**CONTACT:** Mr Roland Blaser, Schweizer Fernsehen DRS Television, Zurich, Switzerland - Fax: +41 32 682 03 45

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www.homepage.mac.com/roland.blaser



# 10 Helping kids understand climate change

This submission was made by La Fondation Mgr Georges Lemaître. Alain Hubert and the International Polar Foundation won the 2003 Georges Lemaître Prize

The complexities of climate change are hard for most people to understand, let alone children. However, the International Polar Foundation (IPF) – which was founded by explorer Alain Hubert – has produced a series of animations about the polar regions and climate change that help bridge the knowledge gap.

> The IPF's Flash interactive animations set out to explain complex scientific questions using simple language and colourful, clear graphics. The aim is to give youngsters the background they need to make their own minds up about one of the world's hottest and contentious topics.

Scientists and communicators from different nations collaborated on the production. They sought a balance between offering the viewer sound scientific advice and making the subject matter understandable and fun to watch.

The animations were designed for different age groups and have progressively challenging reading levels. They are available free of charge and in six languages online and

on CD-ROM. The IPF is drawing up plans to disseminate the product to youngsters, teachers and the press.

## PANEL INFO

**EDIAK – Educational Interactive Animations for Kids**  
by Alain Hubert

**CATEGORY:** Popularising science through audio-visual and electronic media

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Tel: +32 2 543 06 97 - Fax: +32 2 543 06 97

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**WEBSITE:** <http://ipfpolarfoundation.org/>

# 11 Northern light

This submission was made by the University of Helsinki, which awarded Jan Rydman the 2003 J V Snellman Award for science communication

Finnish science communicator Jan Rydman knows how to give the public what it wants. He is responsible for developing Finland's most important science and society event, Science Forum Finland.

> Jan Rydman began organising Science Forum Finland at the end of the 1980s and it has been growing ever since. It is now a five-day event, held every other year, which delivers a stimulating programme of lectures, exhibitions, science theatre and debates. Members of the public, school children and teachers flock to the Forum, which also attracts prominent researchers and decision-makers, such as government ministers and MPs.

The 2003 Forum theme was 'Science in the State of Change – Visionaries and Missionaries'. It drew in 300 guest lecturers, a public audience of more than 15 000 people, and received massive coverage in Finland's media.

The University of Helsinki nominated Jan Rydman for the Descartes Science Communication Prize for his tireless

efforts in developing this forum. But as a science communicator, he has plenty of other strings to his bow. For example, in 2001, he was one of the founders of the European Science Events Association, and he has developed *Tieteessä tapahtuu* into one of Finland's leading science magazines.

## PANEL INFO

**Jan Rydman and the Science Forum Finland**

**CATEGORY:** Innovative action for science communication

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## 12 Creative approaches to physics

Particle physics may be fearsomely complicated, but a German professor is making it child's play by developing innovative teaching and outreach activities.

This submission was made by the European Physical Society (High Energy Particle Physics Board). Prof. Michael Kobel won the Society's High Energy Physics Outreach Prize 2002

> Prof. Michael Kobel is committed to bringing modern physics closer to high-school students. Along with student teachers at Bonn University, he has developed courses and computer-based teaching material about particle physics and its uses in medicine and cosmology. Aimed at 15-16 year-olds, the courses have been taught in several schools in the Bonn area.

Running alongside the school-work, Prof. Kobel has also embraced and extended the 'masterclass' concept of teaching particle physics. This involves hosting events where 30-80 high-school students attend a university or research centre to hear lectures on the subject. The youngsters get to roll their sleeves up and perform measurements using real data from particle physics experiments.

Prof. Kobel has used the Bonn experience as a model to help develop similar activities in 18 countries. The first Europe-wide masterclasses were successfully performed in early 2005. More than 3 000 students and around 60 institutes took part.

### PANEL INFO

#### Masterclasses by Professor Michael Kobel

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## 13 Sea of stars

The north-western Spanish port of La Coruña witnessed one of the worst oil spills ever to hit European coastal waters when the tanker Prestige split open in 2002. Underwater photographer Jorge Candan has tracked the consequences of the spill, and the slow recovery of the Galician marine ecosystem.

This submission was made by Casa de Las Ciencias, La Coruña, and Jorge Candan won the 2004 Prismas Casa de las Ciencias Award

> Candan's film, *Mar de Estrelas* (Sea of Stars) is an emotive and poetic production that celebrates the beauty of the marine world. The documentary captured the imagination of the viewing public who saw it at the city's aquarium, where it was also partly filmed.

The jury of the Casa de las Ciencias' awards was also impressed, and handed Candan its 'Prismas' award last year. The prize organisers noted: "Candan combines the technical skills of underwater filming with a sound knowledge of the biology, behaviour and ecology of the creatures he shoots."

They also said the film was capable of stirring emotions in the people that watched it, and that "the universal appeal of beauty, rhythm and humour means that *Mar de Estrelas* can easily reach all kinds of public, regardless of age or cultural background".

### PANEL INFO

#### Mr Jorge Candan

**CATEGORY:** Innovative action for science communication

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## A look at the organisations providing the candidates in 2005

Special thanks are extended to the numerous prize-giving organisations which provided, not only their valuable time, but also submitted excellent examples of scientific communication, from articles and papers to television documentaries and multimedia ideas.

### Prize organisers contributing the Descartes Communication Prize laureates

#### Ångpanneföreningen's Foundation for Research and Development (ÅFORSK)

[www.aforsk.se/](http://www.aforsk.se/)

ÅFORSK was founded in 1983 to work for technical development, safety, quality, reliability, a good external and internal environment, and the economical use of energy at industrial sites and other facilities that have qualified technical equipment. The Foundation's funds are used for project grants, scholarships and prizes aimed at the successful dissemination of technology or good teaching in technical science.

#### Danish Ministry of Science Technology and Innovation (VTU)

[www.videnskabsministeriet.dk](http://www.videnskabsministeriet.dk)

VTU was created in November 2001 as an extension of the former Ministry of Information Technology and Research and covers universities (research and education), industrial research and Denmark's policy on technology and innovation. VTU's aim is to promote interaction among trade, industry and research and education centres, and to strengthen coordination in pursuance of industry and research policy.

#### Deutsche Forschungsgemeinschaft (DFG)

[www.dfg.de/](http://www.dfg.de/)

The DFG (German Research Foundation) is the central, self-governing research organisation that promotes research at universities and other publicly financed research institutions in Germany. It serves all branches of science and the humanities by funding research projects and facilitating co-operation among researchers.

#### Royal Flemish Academy of Belgium for Science and the Arts (KVAB)

[www.kvab.be](http://www.kvab.be)

Formed in 1938 to aid co-operation between Flemish universities in Belgium, KVAB stimulates cultural and scientific activities, national committees, organisations and forums, foreign professor exchanges, policy advice for government and reports on all these activities in publications and reports.

#### Royal Society of London

[www.royalsoc.ac.uk/](http://www.royalsoc.ac.uk/)

The Royal Society, the United Kingdom National Academy of Science, promotes science and technology by funding the brightest professional and postdoctoral science researchers, stimulating international collaboration through the provision of grants each year for visits and joint projects and producing a series of influential statements and reports on topical areas of science. It publishes top-class scientific journals and maintains a renowned history of science library and archives. It also has an active science education and science communication programme.



## Prize organisers contributing the Descartes Communication Prize finalists

BROHP began with the intention of recording the experiences of those who worked on the British rocketry programmes of the 1950s and 60s. Its members felt a valuable source of primary material was in danger of being lost with the passage of time. Starting with a conference in 1998, the group's remit now includes related postwar research and development (e.g. missile projects), a refereed journal PROSPERO and prizes.

### British Rocket Oral History Programme (BROHP)

[www.spaceuk.org/brohpb/brohpb.htm](http://www.spaceuk.org/brohpb/brohpb.htm)

The EMBO was established in 1964 with the aim of promoting biosciences in Europe. Subsidiary to that general aim were concepts such as the development of a strong transnational approach to molecular biology, the identification of measures that can assist in the training of scientists in this area, and the emphasis on scientific criteria for all of its activities.

### European Molecular Biology Organisation (EMBO)

[www.embo.org/](http://www.embo.org/)

The festival was created in 1987 and, since the year 2000, has been interested particularly in scientific film for francophone countries in Europe. The topics covered during the festival's 15-year history include animal and vegetable biology, medicine, geology, astrophysics and more.

### Festival 'A nous de Voir - Science et cinéma'

[www.mjc-oullins.com/index\\_film.htm](http://www.mjc-oullins.com/index_film.htm)

SCNAT is an extensive network of more than 35 000 scientists from all subject areas and disciplines. It has been actively promoting a better understanding of the sciences since 1815. The Academy awards various annual prizes, including its Prix Media for journalism in the area of sciences, Prix Expo for exhibitions on nature and the sciences and prizes for doctoral theses and young researchers.

### The Swiss Academy of Sciences (SCNAT)

[www.scnat.ch/](http://www.scnat.ch/)

## Other prize organisers and contributors to the Descartes Communication Prize

This Canadian organisation specialises in conferences, consulting, publishing and training for cultural heritage professionals. The conferences promote information sharing. The publishing chronicles the development of interactive multimedia in museums and the impact of the Web on digital museums and libraries. The seminars and workshops are given by leading experts in the field, and the consulting services emphasise inter-institutional collaboration, strategic planning and standards-based solutions.

### Archives & Museum Informatics

[www.archimuse.com](http://www.archimuse.com)

ARISTARQUE is a non-profit organisation producing high-level science. Its president Alain Caron has produced and directed four innovative films in 2001 with ARISTARQUE, the CNRS and Louis de Broglie Foundation.

### ARISTARQUE

[ARISTARQUE@club-internet.fr](mailto:ARISTARQUE@club-internet.fr)

AEN's aim is to contribute to the development of mental health sciences for the benefit of citizens. It is an inter-professional association, integrating different specialists in the mental health field. Membership is made up of psychiatrists or psychologists, as well as nurses working in society, sociologists, doctors, lawyers and philosophers.

### Asociación Asturiana de Neuropsiquiatría y Salud Mental (AEN)

[www.telecable.es/personales/aenasturias/](http://www.telecable.es/personales/aenasturias/)

ACCC was set up in 1990 as a professional body whose members are scientific communicators, specialised journalists, scientists, and publishers of the Catalan community with an interest in scientific communication via the written and audiovisual media. Its aim is to promote, disseminate, broaden and improve scientific communication in the Catalan-speaking regions. It also works on the social and political aspects of scientific communication, mainly its contribution to social progress. Another of ACCC's main objectives is to provide its members with life-long training and to provoke debate and questioning of methods among communicators of science, technology and innovation.

### Associació Catalana de Comunicació Científica (ACCC)

[www.acccnet.net/](http://www.acccnet.net/)



### Bodil Petersen Foundation

[nilsarmand@get2net.dk](mailto:nilsarmand@get2net.dk)

The aim of the foundation is to give financial support to cultural, scientific and humanitarian purposes. One part of these activities is the annual Tycho Brahe Medal Award, which is donated to people who have made a special effort for the dissemination of astronomical activities.

### Catalan Foundation for Research and Innovation (FCRI)

[www.fcri.es](http://www.fcri.es)

FCRI is a non-profit private institution whose aim is to contribute to the structuring of the Catalan Scheme of Research and Innovation, thus promoting better recognition of the important role of science. Its strategic plan for 2005-2009 is built on the concept, mission and values of the Catalan Foundation for Research and Innovation, which must inform all its activities.

### CERN

<http://public.web.cern.ch>

CERN is situated on the border between France and Switzerland. It is the world's largest research centre for particle physics and is recognised as the birthplace of the World Wide Web. The convention establishing it was signed in 1954. From the original 12 signatories of the CERN convention, membership has grown to the present 20 member countries.

### Department of Mathematics (MAT), Technical University of Denmark (DTU)

[www.mat.dtu.dk/](http://www.mat.dtu.dk/)

MAT conducts introductory teaching in mathematics for DTU's engineering students at bachelor level. Later in the study programme, more advanced courses are given for master students and PhDs. Mathematics at MAT delves into the continuum and deterministic systems, discrete mathematics and coding theory. Emphasis is on high international standards and leading-edge research within general mathematics, with applications to science and technology.

### Deutsche Physikalische Gesellschaft e.V. (DPG)

[www.dpg-physik.de/](http://www.dpg-physik.de/)

The DPG is the oldest organisation of its kind worldwide and with more than 50 000 members, it is also the largest group specialising in physics. Its membership – both present and past – resembles a 'who's who' of physics. Among the former presidents of DPG are numerous world famous researchers, notable names being Max Planck and Albert Einstein.

### Deutsche Umwelthilfe e.V.

[www.duh.de/](http://www.duh.de/)

This non-profit and independent agency for the protection of nature and environment was created in 1975. The agency has developed a river protection network, under the project name 'Living rivers', an environmental education networks in co-operation with federal agencies and schools, and has run a campaign promoting municipal energy saving.

### Forum Engelberg

[www.forum-engelberg.org/](http://www.forum-engelberg.org/)

Founded in 1989, the Forum is now an experienced and pioneering platform for all types of sciences. Its annual conferences have dealt with issues of global importance and examined them from an interdisciplinary standpoint. Science, technology, economy, politics, ethics and values are common aspects of all conferences.

### Forum Region Stuttgart e.V.

[www.forum-region-stuttgart.de/](http://www.forum-region-stuttgart.de/)

The forum region Stuttgart is a non-partisan, non-profit citizens' initiative registered in 1994 as an association. The members consist of people from a wide social range, among which include education, trade unions, church, culture, media, sport, environment, economics and science.

### Gedeon Programmes

[www.gedeonprogrammes.com](http://www.gedeonprogrammes.com)

Gedeon Programmes is one of Europe's leading producers of high-quality programmes for television, corporate communication and the internet. It has back catalogue of 467 hours of filming, and has taken home 200 awards in festivals throughout the world.

### Humboldt-Universitäts-Gesellschaft

[www.hu-berlin.de/hu/hug/](http://www.hu-berlin.de/hu/hug/)

Founded in 1810, Humboldt University Berlin soon became a model for tertiary education reform in Germany which had ripples around the world. Top priorities in the coming years are the promotion of research in all fields, particularly the improvement of the working conditions for young researchers, and the preservation of high standards in teaching and management.





IME&C is the Icelandic government's ministry in charge of education, science and cultural affairs. Institutions under IME&C's responsibility include the preschools, compulsory schools, music schools, upper secondary schools, museums, public libraries and universities.

#### **Icelandic Ministry of Education, Science and Culture (IME&C)**

<http://eng.menntamalaraduneyti.is/>

The main research activities of the UCL-ASTR deal with climate variability in the polar regions, past climate changes, human impacts on climate, regional climate and atmospheric processes, lakes and shallow seas, and development of modelling tools. Research in astronomy-geophysics and on spatial plasmas is done in collaboration with the Royal Observatory of Belgium and the Belgian Institute for Space Aeronomy.

#### **Institute of Astronomy and Geophysics Georges Lemaître (UCL-ASTR)**

[www.astr.ucl.ac.be/](http://www.astr.ucl.ac.be/)

This French institute provides a forum for remembering and discussing astronautics and space activities – in France and abroad – throughout history. It supports the identification and conservation of documents and material related to space, and promotes historical research and work in this field.

#### **Institut Français d'Histoire de l'Espace (IFHE)**

<http://ifhe.free.fr/>

The SISSA in Trieste is one of Italy's leading centres for higher learning and research. Among its eight faculties, SISSA comprises the school in science communication. The school organises scores of activities such as seminars, masters, exhibitions and business-oriented workshops.

#### **International School for Advanced Studies (SISSA)**

[www.sissa.it/](http://www.sissa.it/)

Keele was the first new United Kingdom university of the 20<sup>th</sup> century. It was founded to promote interdisciplinary and multi-disciplinary scholarship and makes a distinctive contribution to higher education by emphasising the strength of a broad educational programme. The Chemistry and Physics Departments offer a variety of undergraduate and post-graduate programmes.

#### **Keele University and the British Council**

[www.keele.ac.uk](http://www.keele.ac.uk)

Le Prix Roberval, created in 1986 by the Conseil Général de l'Oise and the Université de Technologie de Compiègne, is an international competition open to authors of technology related material in French-speaking countries from all over the world. The Université et Grande Ecole d'ingénieurs is an engineering school with an average of 500 graduates a year and a total student body of some 3 200. It was created in 1972.

#### **Le Prix Roberval - Université de Technologie de Compiègne (UTC)**

<http://prixroberval.utc.fr/>  
and [www.utc.fr/](http://www.utc.fr/)

The MURS-France is an independent organisation created in 1974 following a landmark international symposium entitled 'Biologie et Devenir de l'Homme'. It aims to harmonise knowledge, power and duty, and to encourage dialogue between scientists, citizens and decision-makers.

#### **Mouvement Universel de la Responsabilité Scientifique (MURS)**

[www.murs-france.asso.fr/](http://www.murs-france.asso.fr/)

Museos Científicos Coruñeses is the Science Museum Network founded by La Coruna City Council in 1983. Its three science centers – Casa de las Ciencias (House of Science), Domus (House of Mankind) and Aquarium Finisterrae (House of Fishes) – cover a wide range of topics (general science, human beings and marine life) through exhibitions and activities for the public at large.

#### **Museos Científicos Coruñeses**

[www.casaciencias.org](http://www.casaciencias.org)

Set up in 1920 as a national federation of the associations between chemical manufacturers, it evolved into the National Association of the Chemical Industry in 1945 and became a Federation in 1984. Around 1 350 enterprises are represented by FEDERCHIMICA, which aims to encourage progress in the chemical industry in Italy, and to protect the interests of its members.

#### **National Federation of the Chemical Industry, Italy (FEDERCHIMICA)**

[www2.federchimica.it/](http://www2.federchimica.it/)

The National Encyclopaedia is Sweden's most comprehensive publication of facts, figures and pictorial information with some 368 000 articles, including 36 000 entries of personalities, 76 000 dictionary items, as well as 92 000 words, expressions and phrases in NE's English dictionary, and more. NE's Kunskapspriset was created in 2002 and awards 250 000 kronor (around €26 000) for those who have encouraged knowledge spreading.

#### **Nationalencyklopedin (NE)**

[www.ne.se](http://www.ne.se)



### Office for Innovation in Public Administration

[www.innovazione.gov.it/](http://www.innovazione.gov.it/) (Ministry for Innovation and Technologies)

The Office for Innovation in Public Administration is part of the Italian Department of Public Administration, within the Presidency of the Council of Ministers. The main objective of this office is to manage programmes which promote innovation in governmental activities.

### Physikalisches Institut, Universität Bonn

<http://pi.physik.uni-bonn.de/>

The Physical Institute of the University of Bonn has a reputation for theoretical and practical physics at undergraduate and post-graduate levels. Lectures, seminars, colloquia are carried out in such fields as astronomy, optics and condensed matter, and nuclear physics.

### Pirelli (Premio Pirelli)

[www.pirelliaward.com/](http://www.pirelliaward.com/)

The Pirelli International Award is the world's first internet multimedia award aimed at the diffusion of scientific and technological culture worldwide since 1996. Awards are given every year to the best multimedia presentations in three main themes: multimedia oriented towards education; the environment; and enabling ICTs that package, deliver, present and define multimedia itself.

### Royal Dutch/Shell Group

[www.shell.com/home/Framework?siteld=home](http://www.shell.com/home/Framework?siteld=home)

Shell is a global group of energy and petrochemical companies. The aim of the Royal Dutch/Shell Group is to meet the energy needs of society, in ways that are economically, socially and environmentally viable, now and in the future.

### Royal Swedish Academy of Engineering Sciences (IVA)

[www.iva.se](http://www.iva.se)

IVA is an independent arena for the exchange of knowledge. By initiating and stimulating contacts between experts from different disciplines and countries the Academy promotes cross-fertilisation between industry, academia, public administration and various interest groups. Bringing people together to take part in lectures, conferences, research exchanges and other projects serves to generate new ideas and knowledge.

### Space Research Institute - Bulgarian Academy of Sciences (SRI-BAS)

[www.space.bas.bg/](http://www.space.bas.bg/)

SRI-BAS' activities cover a range of fundamental and applied research in space physics, astrophysics, image processing, remote sensing, life sciences, and scientific equipment. It investigates spacecraft navigation and control systems, air- and spacecraft equipment, cosmic materials and technologies, and is involved in the education of post-graduate students and master degrees.

### Swiss National Science Foundation (SNSF)

[www.snf.ch/default\\_en.asp](http://www.snf.ch/default_en.asp)

The SNSF offers research promotion opportunities in: project promotion (independent free research as well as targeted national and international research); personal grants (fellowships, exchange programmes, promotion for women in research, SNSF promotion professorships, etc.); publication grants; support of scientific meetings; and special funding programmes.

### The BA (British Association for the Advancement of Science)

[www.the-ba.net/the-ba/](http://www.the-ba.net/the-ba/)

The BA is a United Kingdom-wide organisation dedicated to connecting science with people, so that science and its applications become accessible to all. It aims to promote openness about science in society and to engage and inspire people directly with science and technology and their implications.

### The Mediterranean Information Office for Environment Culture and Sustainable Development (MIO-ECSD)

[www.mio-ecsde.org/](http://www.mio-ecsde.org/)

The mission of this federation of Mediterranean NGOs is to protect the natural environment (waters, air, soil, flora and fauna, biotopes, forests, coasts, natural resources, climate) and cultural heritage (archaeological and more recent monuments, traditional settlements, cities, cultural diversity, etc.) of the Mediterranean. The ultimate goal is to promote sustainable development in a peaceful and healthy Mediterranean.

### The Russian Academy of Sciences

[www.prn.ru/eng/](http://www.prn.ru/eng/)

The Academy was established in St Petersburg, in 1724, by Peter the Great. Originally called The Imperial Academy of Sciences and Arts, it bore several names throughout history until it was given its current name in 1917. After several more name changes, this name was re-instituted in 1991 following the collapse of the Soviet Union. The current Academy resides in Moscow and supports scientific excellence across the Russian federation.



Founded in 1966, UGIS supports scientific communication and dissemination through registered journalist members, representing daily newspapers, periodicals, radio and television, and online. UGIS is an affiliate of the European Union of Science Journalists' Associations, which has some 3 000 members in 22 countries.

#### **Unione Giornalisti Italiani Scientifici (UGIS)**

[www.ugis.it/](http://www.ugis.it/)

The Ernst-Moritz-Arndt Universität Greifswald is celebrating 550 years of existence with a number of festivities arranged throughout 2006. The university has a reputation for excellence in faculties, such as theology, philosophy, law, medicine, mathematics and natural sciences.

#### **University of Greifswald, Institute for Psychology**

[www.uni-greifswald.de/indexuk.html](http://www.uni-greifswald.de/indexuk.html)

The university was established in Turku, in 1640, but was moved to Helsinki in 1828. In eleven faculties, there are 38 000 degree students and 7 500 staff. The number of degrees taken each year is 4 200, of which 400 are doctorates. It concentrates on high-level scientific research and researcher education. Scientific research is also the basis of the teaching provided by the University.

#### **University of Helsinki**

[www.helsinki.fi/university/](http://www.helsinki.fi/university/)

UNAV was founded in 1952 by St Josemaría Escrivá de Balaguer whose vision was to instill awareness of the idea that work is a testimony of the supremacy of the human being over the material world, a means of personal development, a bond between people and a fundamental way of contributing to the progress of humankind. There are 27 official degrees and more than 300 postgraduate programmes at UNAV.

#### **University of Navarra (UNAV)**

[www.unav.es](http://www.unav.es)

UPMC is one of the largest universities teaching science and medicine in France, and indeed in Europe, with 4 000 researchers and teaching academics/researchers, 180 laboratories, and some 30 000 students including 8 000 postgraduates. UPMC is based in the Latin Quarter in Paris, with most facilities on a campus of 500 000 m<sup>2</sup>.

#### **Université Pierre et Marie Curie (UPMC)**

[www.upmc.fr](http://www.upmc.fr)

Germany's WDR is an all-media news provider with a presence online, on radio, in print and on television. Its Science Department is acknowledged for producing sound and entertaining scientific films covering such topics as quarks, nanotechnology, medicine and much more. Its 'Quarks & Co' programme, for instance, takes viewers on an adventure into the natural sciences.

#### **WDR, German Television, Science Department**

[www.wdr.de/tv/](http://www.wdr.de/tv/)



## A look at last year's Descartes winners

# David Attenborough's wild life

Submitted by the Royal Society, United Kingdom

> An honours graduate in zoology, Sir David Attenborough has spent the past 50 years capturing the natural sciences on film so that millions of people worldwide could witness scenes in nature normally reserved for the select few.

Captivating audiences in Britain with the first-ever pictures of the bird of paradise in 1955, Sir David started a revolution in nature documentary-making for television. Through his books and TV work, he has masterfully blended the beauty of the natural world with a dedication to the scientific facts.

Today, film-makers follow his lead in borrowing equipment from various branches of science – including endoscopes from medicine, which can be inserted into an animal's burrow to observe its behaviour discretely, and infrared technology, which has uncovered the mysterious lives of nocturnal creatures.

### PANEL INFO

**Sir David Attenborough,**

*winner of the Royal Society's 2003 Michael Faraday prize*

**CATEGORY:** Professional scientists engaged in science communication to the public

**CONTACT:** Sir David Attenborough can be reached via the Royal Society

**WEBSITE:** [www.royalsoc.ac.uk/](http://www.royalsoc.ac.uk/)

## 'Into people's hearts', one scientist's inspirational motto

Submitted by the Deutsche Forschungsgemeinschaft (DFG), Germany

### PANEL INFO

**'Nanotechnologist engaged in communication'**

*by Professor Wolfgang Heckl,  
winner of the 2002 DFG Communicator Award*

**CATEGORY:** Professional scientists engaged in science communication to the public

**CONTACT:** GeoBioCenter, Department of Geo- and Environmental Sciences, Ludwig Maximilian University, Munich, Germany  
Tel/Fax: +49 89 2180 4331

**E-MAIL:** [heckl@lmu.de](mailto:heckl@lmu.de)

**WEBSITE:** [www.nano-science.de](http://www.nano-science.de)

> Wolfgang Heckl, professor of experimental physics and nanoscientist at Germany's Ludwig Maximilians University, is a new breed of scientific entertainer. Seen on television, in glossy magazines and talking to children in schools, his calling is to pull science out of its ivory tower, so that everyone can appreciate it.

In his many dealings with the media, professor Heckl is frequently called upon to define nanotechnology in simple terms. He describes it as the formula for the emergence of life – a study of 'physical dwarfs' – backing his explanations with commonplace examples such as non-stick surfaces that mimic natural materials and new treatments for serious diseases. He also uses painting and music to build bridges between the sciences and the arts.

Perhaps his most unusual accolade is being in the Guinness Book of Records for creating the smallest man-made hole.



A look at last year's Descartes winners

# Hungry for science!

## Hungarian students enter the lab

Submitted by the European Molecular Biology Organization (EMBO), Germany

> Professor Peter Csermely is a successful Hungarian molecular biologist. In 1996, he launched the Hungarian Research Student Movement to whet the scientific appetites of young high school students. Since then, thousands have been given a taste of real lab life by working with some of the country's top scientific research teams.

Many of the participants have gone on to complete PhDs. A lot of them are now mentors in the movement, or have taken up careers as science teachers and set up their own research programmes.

Participation numbers have almost double from year to year. To date, this successful initiative has helped 7 000 youngsters find their way into top Hungarian research teams. Half of these are women, while a high proportion is drawn from villages, low-income families and minorities.

In 2002, the Movement founded a Network of Youth Excellence which promotes collaboration between extra-curricular research movements in 20 European and six non-European countries.

### PANEL INFO

**'Network of Youth Excellence'** by Peter Csermely, winner of the EMBO 2003 Award for Communication in the Life Sciences

**CATEGORY:** Innovative action for science communication

**CONTACT:** Semmelweis University, Budapest, Hungary  
Tel: +36 1 266 2755 - Fax: +36 1 266 7480

**E-MAIL:** csermely@puskin.sote.hu

**WEBSITE:** www.kutdiak.hu

# Taking composites for a spin round Europe

Submitted by Journals and exhibitions on composites (JEC), France

> 'Composites-on-tour', the brainchild of Ignaas Verpoest, a professor of metallurgical and material engineering at the Catholic University of Louvain (BE), was a mobile exhibition seeking to raise public awareness of new materials that can be lighter, stronger, tougher and greener than their traditional counterparts. Composites can be found in the most mundane and most esoteric applications, from bankcards, to lightweight bicycles, racing cars, satellites and space launchers.

The roadshow toured Europe in a specially designed ultra-light trailer, visiting eight countries and stopping off in 40 cities during the summer of 2002. It drew a massive 30 000 visitors and distributed more than 100 000 folders, posters, leaflets and invitations. It also featured at the JEC Composites Show in France, which attracted 23 000 visitors.

An accompanying international design competition brought 40 top-class entries from around the world.

In conjunction with another special exhibition at VIZO, the Design Museum in Ghent (BE), the organisers published a book – 'From bakelite to composite' – tracing the history of composites in consumer goods and design products.

### PANEL INFO

**'Composites-on-tour'** by Ignaas Verpoest, winner of the 2003 Special JEC Award

**CATEGORY:** Innovative action for science communication

**CONTACT:** Catholic University of Louvain, Belgium  
Tel: +32 16 321 306

**E-MAIL:** ignaas.verpoest@mtm.kuleuven.ac.be

**WEBSITE:** www.kuleuven.ac.be



## Confronting **the phantoms** of the insect world

Submitted by Les amis du Marché  
International du Film Scientifique, France

> The television film 'Face aux phasmes' delves into the hidden world of stick insects. Found in all shapes and sizes, these masters of disguise can change their appearance to fit in with their natural environment and escape predators. Everything about stick insects carries scientific intrigue, from their name in French, phasme, which means apparition or ghost, to their movements and unique way of concealing their eggs in reproduction.

Part of a long-running series of half-hour scientific programmes called 'C'est pas sorcier' (It's not complicated), Vincent Lamy's MIF-Sciences prize-winning documentary is crammed with fascinating insights into the 2 500 known species of stick insects found mainly in tropical parts of the world.

Showing on the national channel France 3, the series has been running since 1994 and has covered over 200 themes from the animal world, history, medicine, the environment and more. It has answered some of the most vexing scientific questions, such as why the dinosaurs disappeared, and even some of the more banal ones like why we need to eat.

### PANEL INFO

**'Face aux phasmes'** by producer Vincent Lamy,  
winner of the MIF-Sciences.net Trophy for the Best  
Scientific Film of the Year 2002

**CATEGORY:** Scientific television/radio programme

**CONTACT:** RIFF International Productions, Paris, France  
Tel: +33 1 4437 1240 - Fax: +33 1 4639 830

**E-MAIL:** vincent.lamy@riff-prod.fr

**WEBSITE:** [www.riff-prod.fr/accueil/index.html](http://www.riff-prod.fr/accueil/index.html)



# Descartes Prizes

## How to take part?

The Science and Society programme of the European Commission's Directorate-General for Research is responsible for organising the annual Descartes Prizes: one for **collaborative scientific research** and one for **science communication**.

The Commission welcomes the widest possible pool of entrants for these prestigious prizes.

### Research prize

Proposals may be submitted by teams of scientists themselves or by public or private organisations, such as research centres, foundations or universities, which can nominate candidates for the prize in the following categories:

- > Socio-economic sciences
- > Life sciences
- > Basic sciences (physics, chemistry, mathematics)
- > Earth sciences
- > Information sciences
- > Engineering

### Communication prize

Candidatures will be accepted from organisations or individuals that have achieved outstanding results in science communication. Organisers of other science communication prizes may send their winners as candidates for the EU prize in one of the following categories:

- > Professional scientists engaged in science communication towards the public
- > Popularising science through the written word
- > Popularising science through audio-visual and electronic media
- > Innovative action for science communication
- > Editorial policy for the promotion of science whatever the media

### Participation guidelines for the Descartes Prizes:

[http://europa.eu.int/comm/research/descartes/index\\_en.htm](http://europa.eu.int/comm/research/descartes/index_en.htm)

### General information about the Descartes Prizes:

European Commission  
Research Directorate-General  
Directorate for Science and Society  
Office SDME 07/33  
B-1049 Brussels, Belgium

*Georges Vlandas*  
E-mail: [rtd-descartes@cec.eu.int](mailto:rtd-descartes@cec.eu.int)  
Fax: +32 2 296 20 06



# RENE DESCARTES

## Understanding the power of knowledge

Today, scientific excellence is paramount for Europe to succeed in the competitive environment of international research and scientific development. But is this such a new concept?

René Descartes (1596-1650) understood the power of knowledge over 350 years ago. As a philosopher, mathematician and scientist, he pioneered analytical geometry and developed a detailed account of the physical universe in terms of matter and motion. His famous work *Meditations on First Philosophy* is now perhaps best remembered by the statement it contained *cogito, ergo sum* (I think, therefore I am). Despite his penchant for philosophy – a very solitary practice – he was not necessarily one to work in isolation.

Born in France, Descartes travelled widely around Europe. Between 1620 and 1628, he spent time in Hungary, Germany, Italy and France. His most productive years were spent in Netherlands – where he wrote *Discourse on the Method*, published in 1637, and other major works. He relocated to Stockholm in 1649 to become Queen Christina of Sweden's teacher but died of pneumonia a year later. Like the Enlightenment scholars who followed in his footsteps, Descartes corresponded widely – most notably with the Cambridge Platonist Henry More (1614-1683) – and was one of the first people to suggest a universal language through which people of different nationalities could exchange ideas.

The prize that bears his name acknowledges that science is rarely the preserve of a single brilliant mind in a single country. The sharing of ideas and means yields a whole that is greater than the sum of its parts. His willingness to share his thoughts and explore relationships with his peers is a poignant metaphor for what the European Commission is trying to achieve with the prestigious yearly event, the Descartes Prize. Winning a Descartes Prize is not meant to compensate scientists financially for their hard work, but is a token of how the European Union appreciates cross-border scientific excellence and communication.

