

Nominees for Descartes Prize for Science Communication

Category 1: Professional scientists engaged in science communication to the public

Nominee: Dr. Osmo Pekonen - Country: Finland

Description: Osmo Pekonen is a Finnish mathematician who is well-known on a both national and international level. He has been successful in popularizing advances in mathematical sciences, such as the work of many Fields medallists. Pekonen has made use of various media outlets (books, newspapers articles and scholarly science magazines, TV and radio) and he has published his work mainly in Finnish, but also in English, French, German, Spanish, Swedish and Lithuanian. He is the editor of the "Book Reviews" section in the most widely read general interest mathematical magazine, the Mathematical Intelligencer. As an editor, Pekonen has chosen to put books published in major European languages on an equal footing with those published in English. As a member of *Raising Public Awareness of Mathematics*, a committee set up by the European Mathematical Society, Pekonen is engaged in scientific collaboration with Europe's neighbours. He has also been active in deepening scientific cooperation: thanks to his initiative the First European-Arabic Congress of Mathematicians was held in Alhambra, Spain. Currently, he is organizing the Second European-Arabic Congress to be held in Egypt. Pekonen has also been a jury member in European-wide essay competitions on mathematics organised by the European Mathematical Society.

Nominee: Prof. Dr. Gerold Wefer - Country: Germany

Description: Prof. Dr. Gerold Wefer is a geologist, with a special focus on marine geology. His project consists of nine colourful and well-designed brochures covering various topics related to geology and associated issues. One of the more visually stimulating is the "Expedition Erde", a collection of articles by several authors for the "Year of Geosciences 2002". Dr. Wefer not only contributed articles but also wrote the preface, which captures his philosophy regarding science. Using a quote by the Former German Minister for Education and Research, Wefer wrote: "Science and research are for the people. That's why scientists have to approach the people and speak to them in understandable terms. The goal is to make it possible for all people to envision and experience the results of their research, and to even discuss the findings together." This brochure contains 30 articles and over 245 pages, related to topics such as the solar system, the Planet Earth, natural resources, climate, and culture and geosciences. Dr. Wefer, together with Wolfgang H. Berger from the University of California, San Diego, wrote: Climate History from the Depths of the Ocean – the Path from the Greenhouse to an Ice Age Climate."

Nominee: Prof. Fran Balkwill - Country: United Kingdom

Description: Professor Fran Balkwill, of Barts and the London, Queen Mary's Medical School, received the 2005 Royal Society Michael Faraday Prize for her outstanding work in communicating the concepts, facts and fascination of science in a way that captures the imagination of children of all ages, backgrounds and nationalities, while at the same time maintaining a distinguished research career, furthering our understanding of the spread of cancers. Fran Balkwill, is best known for her many science books for children, illustrated by Mic Rolph, which have had a great impact both here and in the developing world. She is also Director of another major science communication project, the Centre for the Cell. The Centre of the Cell will be only science centre for young people to be installed within a working medical research building. Its content is led by scientists and it aims to inspire children about cells and biomedical science, and encourage young people to consider careers in biomedical science. Alongside all this, she has maintained an outstanding level of scientific achievement which was recognised in 2006 by election to the UK's Academy of Medical Sciences. The Michael Faraday Prize is awarded to someone who, in the opinion of the Society, has done the most to further public communication of science, engineering or technology. Professor Balkwill received her prize and delivered a lecture on 26 January 2006.

Nominee: Jean-Marie Pelt and Alain de Sedouy - Country: France

Description: Jean-Marie Pelt is a man of science who has chosen a vocation to popularise science through the written word and with audiovisual

supports. Alain de Sedouy is a journalist, author and director of scientific and historic documentaries. Awarded individually both for their writing and productions, they have been working together on the development of scientific documentaries. In the framework of his research activities, Jean-Marie Pelt has always wanted to share his knowledge with the public at large. Having soon understood the power of the radio as a means to promote science, he has hosted many radio programmes and chronicles. Originally a pharmacist, throughout his career he has also published various books on the vegetable world and pharmacology. Alain de Sedouy's major specialty is History and he has always considered that progress comes through knowledge and science. Working in the television world he has initiated many scientific programmes for both younger and adult audiences. Together, Jean-Marie Pelt and Alain de Sedouy have transported into images the books written by Pelt. The ARTE series "About plants and humans – a history of medicinal drugs" was the first product of their joint work. Translated into various languages, this series has toured the world and became a reference in scientific documentaries. More recently they have produced the series "The taste of happiness" and "The medicines of the future" for France 5 and France 3. This last series has been very successful with the public and at different audiovisual festivals. Their productions have won 10 Mif-Sciences.net Trophies between 2002 and 2006. It is the joint work of Pelt and Sedouy which has contributed much to the popularisation of science and is currently in competition for the Descartes Prize for Science Communication.

Nominee: Prof. Steven Rose - Country: United Kingdom

Description: Professor Rose is one of the most prolific and well-known communicators of science in the UK and internationally. Appointed to the Chair of Biology at the Open University (now Professor Emeritus) at its inception in 1969 at age 30, he subsequently designed the curriculum and created courses, which made both basic science and university-level biology available to tens of thousands of people of all ages and backgrounds without any necessary prior qualifications. A distinguished and internationally recognised researcher in the neurobiology of learning and memory, his whole career has been to make bioscience accessible to the public through books, articles, radio and TV. His first book, The Chemistry of Life, (published by Penguin in 1966) sold several hundreds of thousand copies throughout its four English editions, and was translated into numerous other European languages. His 1993 book The Making of Memory won the prestigious Rhone-Poulenc Science Book Prize. His most recent books Lifelines and The 21st Century Brain continue this programme of making science and its social implications accessible to the widest possible audiences through translation into several European languages. He has also edited a series of 12 popular science books focusing on neurobiology, made many TV and radio programmes for the BBC and is a regular weekly panel member (and only scientist) on BBC Radio 4's discussion programme The Moral Maze, with audiences of over a million. Steven Rose's concern for the broader social implications of developments in the sciences led him to co-found the British Society for Social Responsibility in Science in 1969. Subsequent important posts include: President of the Biology section of the British Association for the Advancement of Science, the Royal Society's Committee on the Public Understanding of Science, Director of the Edinburgh International Science Festival and an advisor to the innovative EU-funded public consultation project 'Meeting of Minds.' In 2002 he was awarded the Biochemical

Nominee: Ms Wendy Sadler - Country: United Kingdom

Description: 'Science Made Simple' are an award-winning and innovative team of young science graduates led by Wendy Sadler who are tackling the problem of science apathy at the secondary school level (11-18 year olds) in the United Kingdom and overseas. They have developed an exciting range of creative science performances which travel to schools, festivals and events, reaching around 30,000 students a year. They offer shows for all ages but are specialists in promoting physics and engineering to the challenging teenage market, and around three-quarters of the presentations are given to this age group. Using subjects that teenagers *are* interested in (such as Music, Sport and Gadgets) they have adopted a 'science by stealth' approach - blending the science in around the subjects that are already on the agenda for the teenage age group. As an all-female group they are passionate about promoting science and engineering to girls and women, and have developed special presentations that showcase female scientists at work. The drop-off of interest in science at the high school level (and the lack of women in science and engineering) is decreasing the total pool of future scientists.

The 'science made simple' team are hoping that by engaging with teenagers this trend can be reversed. Their newest project seeks to push the boundaries of science communication and to bridge the divide between arts and sciences. 'Visualise – the beauty of science' aims to tap into the emotions of the audience by setting live science demonstrations to music and film so that people can make their own connections and have their curiosity sparked – all without the traditional lecturing approach. Less explanation, and more exploration. In addition to their live performances, they have also written 19 children's books and presented on numerous TV programmes. They regularly use their enthusiasm and experience to train academic scientists on how to communicate their research to the wider public. Their shows have been seen in Germany, Spain, South Africa, Namibia and Thailand.

Nominee: Prof. Jean-Marc Lévy-Leblond - Country: France

Description: Jean-Marc Lévy-Leblond has conducted science communications activities over the last 40 years alongside his career as a physicist. He has popularised modern physics (quantum theory, relativity) through the publication of articles in numerous publications from specialised press to dailies such as Le Monde, Libération, etc. He has also written, published and presented essays and books on the history, philosophy and social aspects of science. Some of these texts have been translated into Italian, Spanish and Portuguese. In addition to producing a number of audio CDs, Prof. Lévy-Leblond has contributed to radio programmes and has made appearances on TV. With his natural pedagogical talent, he was able to reach out to the public at large during conferences in France, Spain, Italy and Tunisia where he gave seminars and lectures to non science students in schools of arts, philosophy, literature and journalism. He is considered an expert on science communication and has offered his expertise to the European institutions and the French authorities. For more than 30 years, Jean-Marc Lévy-Leblond has collaborated with the publisher Seuil to produce and serve as editor for a series of science magazines and pocket books, such as "Points-Sciences", which are developed for the general public. He has founded the quarterly "Alliage" which is not only about science but also includes cultural and technical sections. Alliage has been published for more than 15 years and has just produced its 60th issue.

Category 2: Popularising science through the written word (newspaper articles, popular science books)

Nominee: A life dedicated to science and science communication (Boncinelli) - Country: Italy

Description: This submission contains a set of documents presenting the proposal of "Prof. Edoardo Boncinelli: A Life Dedicated to Science and Science Communication". Prof. Boncinelli has been active for years in the fields of Genetics and Developmental Biology. The themes of the 3 articles and 9 books are biology, genetics, philosophy of science and much of the material focuses on current societal debate for example on bioethics issues. The language

used is simple and all concepts and/or technical terms are explained, in both the articles and books. Articles submitted: "The steps of the human embryo"; "Science's Course and the Fine Structure of Ethics"; "The English Authorisation": Books submitted: "The place of Science – Reality, Myths, Phantasms"; "Genome: the Great Book of Man – From genes to the new medicine, how our life will change"; "Our Genes – Man's biological nature and the frontiers of research"; "Hunting for Genes"; "I Am, You Are – Identity and difference in mankind and nature"; "The Brain, the Mind and the Soul – Extraordinary discoveries on human intelligence"; "The Forms of Life – The evolution and origin of man"; "Healthy by Choice – The science that changes our lives – Dialogue with Giangiacomo Schiavi"; "First Lesson of Biology".

Nominee: The origins and evolution of the Hominids (MC2-CRITICA) - Country: Spain

Description: The theme of the proposal focuses on the origins and evolution of the Hominids. The book addresses one of the topics of compulsory learning at all western schools: the study of Prehistory. In the first chapter entitled 'Homo sapiens: the current human species', the author provides information about the Homo Sapiens and compares them with other animals and hominids. The next chapter entitled 'The first hominids', explains the most important information about the first hominids (habits, complexion, food, etc), and compares them with other animals. In the third chapter entitled 'The origins of the biped transportation', the author provides the details to help the reader understand the biped movement of the hominids. In the following chapters, the author addresses how climate change affected the origin of the homo and its diet. Additional explanations about Homo erectus and its expansion in Asia is provided, along with a description of Homo ergaster, and how it can be consider the origin of the Neanderthal. He also describes how language affected changes in growth and development. The author wrote about the population of Europe and the Atapuerca, the cannibals, and the closest ancestors of the Neanderthals. At the end of the book, the author focuses on the Neanderthal and the origin and evolution of Homo sapiens. Also discussed are the modern skeletons, the Holocene period, and the diverging theories on the origins of the Homo Sapiens. The author concludes the book by discussing the future of Homo sapiens.

Nominee: Popular Swedish science magazine "Forskning & Framsteg" - Country: Sweden

Description: The nominated project is a popular science magazine/journal published since 1966, by a non-profit foundation consisting of a group of sixteen science-funding organisations and scientific academies in Sweden. The submission consists of a description of the magazine, a bound copy of one-year's worth of issues, as well as the results of a readership survey. The magazine covers Swedish and EU research in all academic disciplines, including astronomy, archaeology, technology, medicine, political science, biology, law and environmental science. It focuses both on new insights and potential benefits for the citizens and the competitiveness of Europe. The explicit editorial policy of the magazine is to cover not only the progress of science, but also the role and impact of science in society. A case in point is the "new biology" – genetic engineering both as a field of discovery and economically viable usefulness in medicine and agriculture. Information and Communication Technology (ICT) is another example, both frontier science and practical applications – including ethical considerations – are covered extensively by the magazine. Another research field with large societal relevance and covered extensively by the magazine is IMER: International Migration and Ethnic Relations, with articles on subjects such as integration, education, fundamentalism, exclusion and inclusion. The magazine is published 8 times per year. Each issue consists of 60–68 pages, all in full colour.

Nominee: The ethical and scientific conflicts of transplanting animal organs to humans – XENESIS, science based fiction - Country: Switzerland

Description: The book, Xenesis, submitted by the Swiss science journalist and author Beat Glogger, is a 380-page medical thriller dealing with the ethical and scientific conflicts associated with the transplantation of animal organs to humans. A central aspect is also the risk of epidemics associated with such procedures, as well as the interaction between policy-makers and regulatory bodies in governing the evolution of scientific processes. Actually animal grafts for humans (Xenotransplantation) are a possible way out of the lack of human grafts. Scientists in different laboratories in the world investigate the field. All scientific and medical details in Glogger's novel are thoroughly researched by the author who has started his career as a microbiologist. He combines scientific facts with a thrilling fiction to a story that plays with unforeseen possibilities of biological processes and 'catches the reader from the first to the last page' (press review SonntagsZeitung). The author has been advised and the story has been reviewed by leading scientists who all agree: 'Xenesis describes what we fear and therefore don't do yet.' As a matter of fact, since the publication, reality has overhauled fiction in two ways: The virus the author uses, H5N1, actually threatens the world as the so-called avian flu. Commercial application of xenotransplantation is offered by the «Laboratorio de Xenotransplantes» in Mexico to treat diabetes with pig cell transplants. Swiss Centre for Technology Assessment judges the novel as «narrative technology assessment», and Swiss Academy of Sciences has awarded the book as the best popular science publication in 2005.

Nominee: "Critical Mass": the behaviour of matter (BALL) - Country: United Kingdom

Description: Philip Ball's book "Critical Mass" was the winner of the 2005 Aventis Prize for science books. In this book, Philip Ball demonstrates that the insights into the behaviour of matter provided by statistical physics can be transferred to the mass behaviour of human beings. This surprising and controversial conclusion stems from the way that both systems can be governed by collective behaviour that is largely independent of the details of how two of the component "particles" interact. Analysing modern society through topics related to economics, sociology and psychology, Philip Ball shows how much we can understand of human behaviour when we cease to try to predict and analyse the behaviour of individuals and look to the impact of hundreds, thousands or millions of individual human decisions. He looks into how circumstances in which human beings co-operate or conflict, and how their cumulative behaviour can be constructive or destructive. The book has invoked discussions among sociologists, political scientists, philosophers and policy makers, showing how science can be relevant in unexpected contexts. Philip Ball is the author of ten books on popular science, and is a consultant editor for Nature magazine. He has written and broadcast in all areas of science, and has a particular interest in the interface between the sciences and broader culture, including the arts and history.

Nominee: "Eureka" weekly science magazine for children - Country: Ireland

Description: Eoin Gill and Sheila Donegan are directors of CALMAST (Centre for the Advancement of learning of Maths, Science and Technology), the leading centre of its kind in Ireland. In its three-year existence, CALMAST has attracted over 30,000 young people to free events that popularise science and tens of thousands more have seen CALMAST displays and shows at major exhibitions in Ireland and overseas. Eoin and Sheila have written many articles for national and local newspapers to highlight the importance and relevance of science in everyday life. One of their many activities was the development, research and writing of Eureka, a weekly science magazine for children. The success of Eureka was recognised by winning a World Association of Newspapers (WAN) Young Reader Award in 2005. Eureka was a weekly four page full colour glossy science magazine for primary school pupils aged 10-13. In its first year, it had a circulation of 25,000, with an estimated readership of 35,000. Eureka used science stories, puzzles, facts,

quizzes and cartoons along with fun activities for young readers. The success of Eureka lay in the themed approach developed by Gill and Donegan. This allowed several areas of science to be explored within a single issue avoiding the traditional divisions of science into physics, chemistry and biology.

Topical content was prioritised. For instance, after the tsunami disaster in Asia during December 2004, Eureka featured the science of tsunamis. This was singled out by many teachers and parents as a most important issue as it enabled children to engage with and understand an event that had dominated their imaginations and had a terrifying impact on them. Special calendar events were used as 'hooks'. For example, for St Valentine's Day, Eureka featured the science of the heart, healthy eating, how to write your secret Valentine's Day message and how to crack codes. For St. Patrick's Day (Ireland's national holiday), the science behind many of the legends of St. Patrick was featured. The history of science was also included, allowing science to be seen as an integral part of life. Eureka was designed to be attractive and interesting for all children, not just those with a special interest in science. Science is all around us and should be for all.

Nominee: Cells - the building blocks of our body and mind (AMEISEN/MURS) - Country: France

Description: Jean-Claude Ameisen won the Jean Rostand Prize 2000 for his book entitled "The Sculpture of Life, Cell suicide or Death as a Creator". In his book he describes how each human being emerging from a single fertilised egg cell becomes a nebula of thousands billions of cells which are the building blocks of our body and mind. For a long time, scientists believed that the death of our cells could occur only as a consequence of injury, damage and ageing. Actually, cells continuously produce the weapons that allow them to self-destruct. They survive only as long as they are engaged in interactions with other cells allowing them to counter their suicide program. This dynamic process creates an absolute form of interdependence between cells allowing us to continuously reconstruct ourselves and adapt to new environments. This book, which also won the Philosophy Biguet Prize 2000 from the Académie Française, proposes a new vision on the ancient and intricate relationship between life and death.

A journey into the countries of our body, cells and genes, revealing cell suicide sculpting our metamorphoses. And a journey into the evolution of life, to the discovery of cell suicide at work in the sculpting of animals, plants and bacteria and the ancient mechanisms involved in ageing and longevity. Jean-Claude Ameisen is a professor of Immunology at Paris 7 University - Xavier Bichat School of Medicine in Paris, France. He heads the research laboratory "Programmed cell death, AIDS pathogenesis and host/pathogen interactions" at INSERM and Paris 7 University. During the last 16 years, he has made internationally recognised scientific contributions to the field of cell death research. Engaged in ethical reflection, he heads the Inserm (French NIH) Ethics Committee and is a member of the National Consultative Bioethics Committee.

Category 3: Popularising science through audio-visual and electronic media (scientific television or radio documentaries, websites)

Nominee: The Science caster (BLASER/SCNAT) - Country: Switzerland

Description: Roland Blaser is a «Science caster». Since 1980 he has been producing reports for Swiss National TV's science program «Menschen Technik Wissenschaft», «MTW» in short. Blaser's TV reports cover almost any topic the world of science and technology offers a journalist to report on. He documented Dinosaur research in Bolivia, climate drilling in Guatemala, brain research in Russia and a great deal more. His sound approach opened many doors for him. For example, he was given access to the production facilities of the famous Smart car even before the official opening ceremony. In the early 90s, Blaser started producing his reports entirely on his own. He is his own cameraman and video editor, a fact which grants him the freedom he requires for working creatively. In 2002, Blaser was awarded the «Prix Media» for his «Fokus» series - short but sweet stories about scientific research projects which would normally not have gained so much attention from the public if it wasn't for Blaser's successful concept: The world of science, which is often abstract, is given faces and voices. Roland Blaser makes innovative use of new TV production technologies - he works cinema-like with camera stabilising systems, cranes and lighting. In 2005, he made Swiss National TV's science program MTW available on the Internet as a so-called podcast. This was première in Europe, moving the world of science even closer to the iPod generation. Besides his TV work, Blaser had been a pilot for Swiss International Air Lines (formerly Crossair) for 20 years and at present, whenever time permits, he trains Russian pilots to fly the high-tech airplane Saab 2000 in Russia.

Nominee: From Kiss to Baby - Country: France

Description: From Kiss to Baby: Inner Adventure, is the work of the French film director and scientific documentary filmmaker Thierry Berrod and a team of Japanese scientific film makers, who specialise in micro cinematography. Their revolutionary work in the field of micro and macroscopic filmmaking can be seen in the documentary film From Kiss to Baby. It tells the story of the creation of new life from conception to birth. The images and movie were the results of long and intense preparation with some of the most respected researchers of the greatest institutions of European and global research. The author wanted to show real images by using the most sophisticated technologies of medical world filming. The film makers used electronic microscopy, scanners and IRM. The story is told with humour and is made accessible to a large audience.

The movie has fascinated large audiences all over Europe. For each country, the original version was rewritten to adjust the theme to local cultures. From Kiss to Baby takes you on a journey through our bodies to get a closer look at the miracle of the beginning of life through its various stages: from the search for a partner, through sexual intercourse, fertilisation, the growth of the foetus, to delivery. It offers a unique opportunity to view spectacular microscopic images (endoscopy, cell culture, electronic microscopy, etc) and medical imaging (scanning device, MRI, tomography, sonogram), never seen before.

Nominee: Malaria, the secret storm - Country: France

Description: The proposal is a film on the paludism virus. Approximately 500 million people are currently affected by paludism and 2 million deaths occur each year, 90 percent of these in Africa. Paludism remains one of the most important causes of death in sub-Saharan Africa and kills 1 in 5 children. Despite this devastation, the world remains silent. Nevertheless, no one is out of danger. The mortality rate in Africa is staggering, yet the death-toll rings silently. The movie called "Malaria, the secret storm" was filmed in Kenya, Tanzania, Benin and Burkina Faso. This documentary is a scientific and human portrait depicting the current situation of this endemic disease in East and West Africa. It also explores the factors contributing to its spread and shows the daily struggle of African people against this disease. The film, which exists in French, English and Spanish, competed in several science film festivals and won the second prize at the 14th Festival du Film Scientifique 2005.

Nominee: Europe, a Natural History - Country: Austria

Description: The movie Europe Natural is a documentary about natural history which portrays the genesis of Europe and how its landscapes and wildlife were created. Dinosaurs, the creation of mountains, the birth of the Mediterranean and many other spectacular phenomenon are included this movie. The filmmakers used specific techniques including high tech visual effects. The approach taken by the filmmaker was to explain science in an interesting and simple way while, at the same time, maintaining the necessary thoroughness when explaining scientific facts. It won the 2005 Telenatura award for best film (International Television Festival for Popularisation and Conservation of nature and the Environment). Telenatura is now on its sixth production. In the past, approximately one hundred productions from 20 to 25 countries have entered the competition every year. A preliminary jury selects the films to be exhibited and take part in the final stage of the competition. The jury of the final phase, which decides the awards, is formed by five scientist, filmmakers and environmental experts.

Nominee: Océanautes: Explorers of the deep sea - Country: France

Description: The movie 'Océanautes' portrays the lives of audacious scientists, engineers, and explorers of the deep sea, revealing their fascination, their fears and their victories. In order to discover the secrets of the abyss, they had to invent new proceedings and extraordinary machines, from Beebe's Bathysphere and Piccard's bathyscaphe to today's high tech robots. Mixing original archive footage with 3D images, the scientific and historic quality of the film is enhanced by interviews with today's scientists and researchers (including Jacques Piccard, Xavier Le Pichon and Robert Ballard, among others) that participated in these missions of exploration. The archived images, the illustrations and the interviews and comments are blended together in a very smooth way, creating a tribute to these exceptional men and their passion. 'Océanautes' has been broadcasted on primetime television both in Europe and in North America and won 1st Prize in the 205 PARISCIENCE film festival, which was judged by a jury of European scientists, journalists and filmmakers).

Category 4: Innovative action for science communication

Nominee: School competition bringing life sciences to developing countries (IMAGINE) - Country: The Netherlands

Description: Imagine has been developed by Patricia Osseweijer as an innovative school competition involving scientists, school students and the media to achieve tangible results for developing countries with the help of life sciences and technologies. Imagine invites scientists to submit ideas for projects in developing countries which are selected on their scientific quality, applicability and feasibility. Examples of projects are "artemisia against malaria" and "underground waste water treatment". Small groups of high school students aged 16-18 years chose a project to prepare a business plan. They do hands-on experiments with the scientists to test the proposed application and scientific principles. They also interview development aid experts for information on cultural and working practices in developing countries and possible problems that may be expected there. The five best performing groups attend a workshop to make a professional presentation including a promotional video with an experienced movie producer. The business plans and videos are then presented to a science symposium audience and the expert jury. The group with the best report and presentation wins. This group's project is then carried out and together with the submitting scientist the winning group visits the country where the project is being put into practice. The first winning Imagine project was "making biodiesel from algae", a project that is presently carried out in Mozambique. After this successful pilot, the 'Foundation Imagine Life Sciences' was established in 2005 to encourage scientists in applying their expertise to pressing problems in developing countries; involve young people to increase their awareness of global issues and help them to take action; carry out useful projects in developing countries building on capacities of local universities and NGOs; make young people enthusiastic about the life sciences and technologies. Imagine has since its initiation received a lot of media attention and many experts and ambassadors ar

Nominee: Delivering science and technology to the people - TECHNOPOLIS science communication centre - Country: Belgium

Description: Technopolis brings science and technology to an audience by means of interactive exhibits, shows, experiments and themed expositions. Technopolis makes the public aware of the importance of science and technology. Technopolis only has one mission: "to bring science and technology to the people". Technopolis aims not only at public awareness or understanding of science and technology, but also targets public engagement of science and technology. In fulfilling this mission, Technopolis uses creative tools in order to appeal to the target group: from science theatre to an interactive calendar, from a travelling science truck to a newspaper column, from a science festival to a storybook for children, from a girls only technology club to a show in a shopping mall or at the book fair, from science puppet theatre to interactive exhibits at a tourist destination, from a website with online experiments to a comic strip, from sleep-ins to a demonstration on a commuters train, from an invention contest to a science quiz and of course not to forget: a science centre. Technopolis uses these tools innovatively and with success. On the average Technopolis reaches 150 000 people by means of its outreach activities and the Flemish Science Centre welcomes 250 000 visitors every year. This means that the science communication centre Technopolis communicates science with 400 000 people (from a total population of 6 million!).

The Flemish hands-on centre is also renowned abroad. Each year Technopolis organises several conferences for the exchange of ideas and experience. Technopolis also takes the initiative in various European projects. This year, the Royal Flemish Academy of Belgium for Science and the Arts presented their award for significant contribution to the popularisation of science and technology to Technopolis, because of its innovative approach of the docentre.

Nominee: A hydrogen powered automobile (HYSUN3000) - Country: Germany

Description: The project HYSUN3000 consisted of the hydrogen-powered automobile HYSUN3000, which was constructed by volunteers, and its 3,000 kilometre record-setting journey through several European countries. The tour began on 7 September 2004 in Berlin and ended on 23 September 2004 in Barcelona. The final press conference on the project was conducted during the f-cell trade show, which was held in Stuttgart on 27/28 September. The HYSUN3000 project team consisted of 21 volunteers (mainly engineers, but also journalists) who spent their free time constructing the automobile and performing media relations to promote the project. Several scientific institutions took part in the project, and contributed to manufacturing the automobile parts. The German Federal Ministry of Environment acted as the official patron of the project. The journey from Berlin to Barcelona had basically 4 main goals and themes:

- Consumption: the 3,000 kilometres long journey should require as little hydrogen as possible the energy equivalent of 11 litres of gas
- Everyday suitability of the automobile: the burdens and strain of such a route provide an emphatic test of the vehicle's durability
- Innovative lightweight construction: the energy-conserving construction is exemplary when considering the weight and aerodynamics of the vehicle.

The HYSUN3000's "Europe trip" consciously tried to popularise advances in fuel cell technology. Through the press (there were press conferences at every stop along the journey) and the internet page, the public was constantly kept in the loop and informed about HYSUN's innovative approach. The minimal consumption of energy, the extensive media coverage and high level of public interest, the four goals mentioned above were able to be achieved. The HYSUN3000 tour was documented in 205 press articles and 7 TV spots in Germany alone.

Nominee: Advice of Professor Chimico on chemical risks - Country: France

Description: This CD-Rom is used by trainers who want to lead awareness-raising sessions on chemical hazards from the cartoon "Les Conseils du Professeur Chimico". It is aimed at all employees due to use and handle products they don't a priori identify as chemicals likely to be hazardous to their health. It is also aimed at students from technical and vocational education within the framework of their courses. The central character of this movie is a cartoon named professor Chimico that explains the most serious risks related to chemicals: identification of chemical products, handling and storage, states of the matter, explosion and fire, risks of asphyxia, routes of entry, intoxications, impact on the human body, prevention, and professional environment. Each sequence is accompanied by a series of fact sheets, questions and answers, ludic exercises, and quizzes. The CD-Rom also provides links to chemical databases and a glossary. A tool box allows trainers to prepare for training sessions or awareness-raising courses on chemical hazards.

They can reuse the topics developed by professor Chimico as well as his pedagogical advice. The film and CD-Rom were developed for INRS (French Research Institute for the Prevention of Occupational Accidents and Diseases). Professor Chimico was inspired by the "shadoks", from a cartoon well known in France and created by Jacques ROUXEL, who had contributed to the film direction. This CD-Rom won the multimedia prize at the Prix Roberval 2005

Nominee: Exhibition "Conversations with Snow and Ice" - Country: Latvia and Japan

Description: The exhibition "Conversations with Snow and Ice" was held at the Natural History Museum of Latvia from Nov.10, 2005 to Jan.8, 2006; under the theme of "observation/imagination in art and science". It aimed to acknowledge the bond between natural sciences and contemporary art as complementary human activities. Snow and ice are common natural phenomena familiar to everybody, yet so exquisitely complex. They were the subject of observation and source of imagination for scientists and poets alike, mediating human interactions with nature throughout history. The key figure is Ukichiro Nakaya, a Japanese scientist who, enchanted by the beauty of snow, observed snow crystals in nature, Investigated the physics of snow crystal formation, and produced the first artificial snow crystal in a laboratory in 1936. His approach to science is implicit in his writing "Science is a collaboration between humans and nature." The exhibition consisted of five parts: Documented History of the Observation of Snow Crystals; The Art and Science through Ukichiro Nakaya; Messages from Artists; The Ice Core Project; and Workshops and Related Events. "Conversations with Snow and Ice" was held in commemoration of the Museum's 160th Anniversary. Drawing more than 20,000 visitors in two months, the exhibition had a record attendance. In offering events and activities engaging scientists and artists alike, including scientific demonstrations and poetry readings, the exhibit reached a diverse audience. Visitors, especially the many school children in attendance, particularly enjoyed the snow and ice workshops offered by museum staff members. These sessions were filled to capacity for the duration of the exhibit and the museum opened its doors on extra days to meet public demand. After the close of "Conversations with Snow and Ice," museum staff members continue to offer workshops to schools and organisations outside of Riga. "No amount of investigation into a block of ice can reveal all its myriad secrets." (Ukichiro Nakaya)

Nominee: KVARKADABRA, a society for explaining science - Country: Slovenia

Description: The mission of 'Kvarkadabra' when answering questions on their website and collecting the questions and answers in the book "Why is the sky blue? Temporary answers to eternal questions" was to bring the mysteries of natural sciences closer to the widest possible population in Slovenia. The project aimed to translate and interpret the complicated language of science to those who are not fluent in it, but want to understand it. Their aim is not to teach, but to narrate and to tell a story about how science began and the people who created it.

'Kvarkadabra' activities have quickly expanded from simply debating in the university to giving lectures to a broad audience in student clubs and contributing to the production of TV series while, at the same time, becoming more and more busy answering various questions on natural science from many of the curious readers on their website. When the number of questions and answers were raised to more than a hundred, they decided to collect a sample of them in a book, suitable for relaxed reading on a sofa. The book 'Why is the sky blue' now contains 119 questions and answers. Questions vary from the latest, still hypothetical discoveries in the world of atoms to speculations about the destiny of the space. Between the two extremes, visitors to the Kvarkadabra website were curious to know about many other secrets from day to day life, about the blueness of the sky and technical discoveries. The authors did not limit their answers only to narrow specialisation, but they offered a complete scientific or technical vision of the issue. The book offers answers to both seemingly simple and more complicated physical and biological questions with the aim of connecting the sophisticated world of physical equation with colloquial scientific explanation.

Nominee: A compass-port to science infotainment (ENCOMPASS) - Country: Hungary

Description: ENCOMPASS (ENCyclopedic knowledge Made a Popular ASSet) was created in 2003 under the aegis of a public and private partnership with the academic supervision of the Hungarian Academy of Sciences and sponsorship from the corporate social responsibility programmes of telecommunications companies Magyar Telekom and T-Online. ENCOMPASS was established and it has been operating so as to transmit scientific knowledge - both in theory and practice - to the Hungarian public using the most up to date info-communications media. Having become a unique brand, the programme has achieved unprecedented success. As a sign of its media success, Hungarian PR agencies recognised ENCOMPASS with the Süveg Award 2004. As evidence of its recognition by society, the programme received the Prima Primissima Award in 2004, in the category of teaching and public education. In addition to these awards, the management of the Hungarian National Radio issued a memorial certificate to commemorate the 100th lecture of ENCOMPASS in May 2005. Finally, the website of ENCOMPASS won the first place of the eLearning category of the eFestival 2005.

Nominee: Exploring the secrets of the depths (MAR-ECO) - Country: Norway

Description: The project is based on the comprehensive efforts made by the MAR-ECO network of scientists, students and dissemination associates to popularise international scientific investigation at sea, in museums and laboratories, and to involve the wider public in the process. The project is part of the major global research programme "Census of Marine Life" that aims to promote scientific understanding of many unknown animal communities and ecosystems by using modern technology and network cooperation. MAR-ECO is led from Norway, but there are scientists and students participating from

16 countries, most of them in the EU/EEA area. The MAR-ECO project runs from 2001 until 2010. During its first field phase in 2003-2005, several research vessel operations were conducted. The principal two-vessel expedition took place over two months in 2004, during which *RV G.O. Sars* carried out a vast study on its voyage from Iceland to Azores.

The MAR-ECO team has communicated the visions, activities and results of the project to a global audience via a wide range of channels. Since 2004, media coverage has appeared in 32 countries and 14 languages. From the start, the project has focused on communication tasks and consciously adopted a dissemination strategy that uses several popularisation measures. Project manager Dr. Odd Aksel Bergstad received the 2004 Award for Excellence in Communication in Science from the Research Council of Norway.

Nominee: "Inhabiting the World" to understand the biosphere - Country: Spain

Description: Ramon Folch, PhD in Ecology and author of several reference handbooks and audio-visual productions, conceived and directed the multimedia exhibit "Inhabiting the World" (4.277 square metres, 6 Million Euros) for the Forum Barcelona 2004. This exhibit is a multilingual (English, French, Spanish and Catalan) audiovisual space designed to transfer to a very broad audience (750.000 visitors in 120 days) the most advanced concepts on the structure and general functioning of the biosphere, the relationships between humans and the terrestrial ecosystems, and the flow of energy and materials between urban systems and their hinterlands. The most advanced bio-climatic architectural technologies and the most updated multimedia resources were duly implemented in order to ensure a clear knowledge and understanding of the complex socio-environmental concepts, based on established scientific principles. For this purpose, a team of architects, calculation and computing specialists and audiovisual technicians was formed. The exhibit centre was built with reused and reusable material such as wood, metal concrete, etc including sustainability-advanced technology, modern lighting systems and digital reproductions of sound and images. This strong technical support allowed the team to conceive a very advanced scientific story line starting from the present environmental dysfunction of the Planet. The exhibition then unveils the functional mechanisms of the biosphere and responds to how man-made transformations and urbanisation impact on it. Solutions to hurdles in this field were also presented.

Nominee: International Science Festival in Göteborg - Country: Sweden

Description: The nominated project is an annual international science festival, which is organised since 1997, during two weeks, every year in Göteborg, Sweden's second largest city. The festival is strongly supported by the city of Göteborg, universities and Royal Academies, the National Research Councils and by the international business and industry.

The overall objective is to contribute to a positive attitude towards science and its role in society by virtually bringing science to the public, and providing a forum for researchers to meet and discuss topics within the field of science in society. The Science Festival is divided into three branches: a broad programme for the public, a more focused programme for school pupils and teachers, and a forum for researchers. All fields of science are covered, from humanities and social sciences to medicine, science and technology. A particular focus of the Science Festival is the encouragement of young people's curiosity and their enthusiasm for theoretical studies. The Science Festival takes place at numerous venues, from museums and libraries to shopping centres and city parks as well as in the university. Different forms of presentations are encouraged, from small and intimate conversations to lectures and workshops to theatre as well as experiments and exhibitions. The Science Festival 2006 had roughly 105,000 visitors and 1,000 activities in total. More than 30,000 were pupils and teachers.

Nominee: The Science Café - Country: Denmark

Description: The Science Café (SCICAF) is the first founded in Denmark. Opened in 2001, ait has created a democratic public forum for interdisciplinary debate on scientific issues in order to bridge science and society. SCICAF targets a broad public which involves reciprocal commitment. This is achieved through genuine face-to-face dialogues and lively discussions on current scientific issues in Danish research between prominent experts and the lay audience, facilitated by a moderator. The events are held at a café, which provides an informal and relaxed atmosphere. Science should be brought back to culture because science and technology is often abstract and volatile if it is not put into context with the reality that people influence and exist in. The café creates a public debate at a reasonable level. Broad expert panels are typically composed of representatives with scientific, social, cultural, artistic, political and economic backgrounds. Each DSC has been a full-house, with some 70 to 100 new and repeat participants. The invited experts have acknowledged the need for such a forum and they enthusiastically participate without any other compensation than a bottle of champagne. DSC is supported by both private and public foundations. Furthermore, the people behind SCICAF have presented a long list of events of current interest in a cross disciplinary perspective. SCICAF has created a highly engaged dialog with a broad public at a particularly low cost. The Science Café is becoming a tradition in Denmark, and since 2004, DSC has helped to establish new Science Cafés in Denmark as well as abroad.

Nominee: 'Città della Scienza': Italy's first science centre - Country: Italy

Description: Città della Scienza (City of Science) is the first science centre founded in Italy, comprising a scientific and technological museum as well as a business innovation centre. Vittorio Sivestrini is a distinguished physicist who was born in the North in 1935 but moved to Naples in the early 1970s and joined its academic, social and political life. Silvestrini is convinced that after the demise of heavy industry, the future of Naples lies with a steady location, a science museum and 'park', in which to show the ideas of the 'Southern model'. Together with other scientists he created the group that will launch 'Futuro Remoto' and later the IDIS Foundation and the City of Science. The City of Science is a young community that lives and works in an old chemical factory in Bagnoli, on the Gulf of Naples. The story of the City of Science starts in 1987. Silvestrini's idea is simple. If Naples and the South want to survive the demise of their industrial system, they must imagine and implement a new and alternative development model. This must be based on its resources, which are: its territory and natural environment, its culture, and its workforce. In May 1992 the first building of the Bagnoli Scientific and Technological Park, vanguard of the City of Science, is inaugurated. In 1996 the park grows with the addition of another area, an old glassworks from the 19th century. The reclaimed 7 hectares grounds with numerous buildings are part of the history of Naples, and the restructuring is carried out by an association of architects, city planners and engineers. In 2003 the finishing touch was made with the inauguration of the Business Innovation Centre (BIC). This department, recognised by the European Commission, fosters the creation and development of new enterprises. It features an Incubator of Enterprises: 4,000 sq.m. of space dedicated to the birth of innovative enterprises.

Category 5: Communicators at the start of their career

Nominee: The unique voice of Stradivarius violins (MC2-ARES) - Country: Spain

Description: The submission is a two-page article and winner of the Science Museum Prism Award for the best scientific communication newspaper article. The theme is about the theories that have been put forward up to-date regarding the superiority of Stradivarius violins vis-à-vis any instrument that can be made today. The violins made by maestros from Cremona in the 17th and 18th centuries, with Stradivarius at their head, are almost unanimously considered as the best in the world and superior to any instrument that can be made today. Science has been searching for the secret of their sublime sound quality since the middle of the 19th century. No definitive answer has been found yet although plenty of ideas have been put forward. The article entitled "The unique voice of Stradivarius" begins with an interesting introduction. The author approaches the question of how science works in an open, original and realistic way, revealing a high capacity of integrating different cultural aspects though the use of surprising analogies. After the introduction, the author tackles the explanation of the new theory about the sound of the Stradivarius. Basically, the theory says that these violins were made of an extraordinary wood that was only possible to be taken between the 17th and 18th centuries. The wood of a very particular region of Europe had specific conditions, due to the low solar intensity experienced at that specific time and region. In the second and last part of the article, the author briefly explains the other theories known so far about the Stradivarius, and their reasons with the new and last theory. Science and the scientific method are perceived by the reader as something close to daily life, not as something distant and only within the reach of erudite scientists. The text is complemented by a comprehensive illustration of a violin, which explains the different parts and their roles in making the extraordinary sound.

Nominee: The 'Big Dipper' Science Bus - Country: Estonia

Description: The Science bus 'Big Dipper' and its team composed of physics students from the University of Tartu have organised series of activities designed to popularise science throughout 2005. They are currently continuing their actions. The aim of the project was to motivate and help students, teachers and scientists as well as institutions (schools and universities) within the Estonian educational landscape to change trends in physics education. Although this target seemed rather difficult, the students made the difference. The Estonian Physics Society succeeded in motivating students and faculty within the physics department to create a committed group of 33 to 40 students to carry out planned activities. The project was set up in three phases: the science bus which took trips to schools all over Estonia; physics programmes that were broadcasted on national television throughout the project; and organised family days in the departments of physics at the University. The science bus, which demonstrated interesting physical experiments, had the biggest success and visited one-third of all schools in the country. Positive feedback was received from both pupils and parents, proving that the initiative had a positive impact on how people view physics.

See also <u>IP/07/131</u>

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