



EUROPEAN
COMMISSION

Community Research

THE JURY

PRESIDENT OF THE JURY

Ulf Merbold (Germany)

**European Space Agency/European Space Research and Technology Centre,
Noordwijk**

Born in Greiz, Germany, on 20 June 1941, Dr Ulf Merbold graduated from Stuttgart University in 1968 with a diploma in physics. In 1976 he received a doctorate in Sciences (Dr.rer.nat.). He was the first ESA astronaut to fly in space and the first non-American to fly on the Space Shuttle. He became an ESA astronaut in 1978 and was assigned to fly on the first Spacelab mission STS-9 (FSLP) on board Columbia, from 28 November to 8 December 1983. His second flight was as Payload Specialist on Space Shuttle Discovery, STS-42 (IML-1) from 22-31 January 1992. His third spaceflight, Euromir '94, took him on a 32-day mission to the Russian Mir Space Station from 3 October to 4 November 1994, making him the first ESA astronaut to go there. Since the end of 1999, Dr Merbold has been responsible for Utilisation Promotion Management in the Microgravity Promotion Division of the ESA Directorate of Manned Spaceflight and Microgravity, at ESTEC, Noordwijk, the Netherlands.

MEMBERS OF THE JURY

Helena Freitas (Portugal)

University of Coimbra

Helena Freitas graduated in biology and obtained her PhD at the University of Coimbra, Portugal, in 1993. In 1995 she completed her post-doctoral work at Stanford University in the USA. Since 1997, she has been Professor of Plant Ecology at the University of Coimbra's Department of Botany, where she co-ordinates an interdisciplinary unit involved in several national and international projects on Mediterranean ecosystems, biodiversity, plant-soil interactions, and nature conservation. The unit's expertise gives it a significant capacity to interact with other units by participating in research programmes and post-graduate courses. Professor Freitas was president of the Portuguese NGO for the Conservation of Nature (LPN, IUCN member) from 1999 to 2002 and is currently President of the Portuguese Ecological Society.

Vagn Lundsgaard Hansen (Denmark)**Technical University of Denmark**

Professor Vagn Lundsgaard Hansen earned a master's degree in mathematics and physics from the University of Aarhus, Denmark, in 1966, and a PhD in mathematics from the University of Warwick, England, in 1972. He was assistant professor at the University of Aarhus from 1966 to 1969, then research fellow at the University of Warwick, from 1969 to 1972, associate professor at the University of Copenhagen, Denmark, from 1972 to 1980 and, since the autumn of 1986, he has been visiting professor at the University of Maryland, College Park, USA. He has produced numerous research papers on topology, geometry, and global analysis, and is the author of several books, including "Geometry in Nature" and "Shadows of the Circle". The professor has been President of the Danish Academy of Natural Sciences since 1984. He was a member of the Danish Natural Science Research Council from 1992 to 1998, and was vice chairman for four of those years. In 2004, he was elected a member of the European Academy of Sciences. He is currently professor of mathematics and Scientific Director of the Learning Lab at the Technical University of Denmark, as well as being chairman of the European Mathematical Society's committee on Raising Public Awareness of Mathematics.

Colin Osborne (United Kingdom)**Royal Society of Chemistry**

Colin Osborne studied chemistry at the University of Sussex and then took a PhD in physical organic chemistry. He started work in patents and industrial property but after two years changed career and began teaching in schools in London and Brighton. After 24 years he changed career again to manage the Royal Society of Chemistry's education programme for schools. This includes producing books, videos, CD-ROMs and careers material, and putting on events for students and teachers. He still finds chemistry fascinating, especially its applications in everyday life.

Uuno Puus (Estonia)**University of Tartu, Cybernetica AS**

Uuno Puus studied mathematics and psychology at the University of Tartu, where he obtained his master's degree in informatics. He has worked for 12 years as a teacher in the special school of mathematics, physics and chemistry and he was a supervisor at the international summer school for young programmers in Novosibirsk in 1986 and 1987. Since 1998 he has been Head of Laboratory for Cybernetica, an R&D company in Estonia that is active in the field of data security and software development. He is also currently studying for a PhD in informatics at the University of Tartu.

Colin Pulham (UK)**University of Edinburgh**

Colin Pulham studied chemistry at the University of Oxford where he obtained a DPhil in inorganic chemistry. After a further two years of research at Oxford, he moved to the University of Edinburgh where he is currently a senior lecturer in the School of Chemistry. His research interests include the study of the effects of high pressures on molecular compounds such as pharmaceuticals, the use of high-temperature molten salts for extracting metal, and novel synthetic methods of preparing metal nitrides. For the past ten years he has developed an outreach programme to promote public engagement with science. This has involved delivering a series of demonstration lectures and interactive workshops to schools and communities throughout Scotland, highlighting the relevance of the chemical sciences to our everyday lives. He was recently awarded the Royal Society's Kohn Award for Excellence in Engaging the Public with Science Communication.

Paola Agostini (Italy)**University of Milano-Bicocca**

Paola Agostini graduated from the University of Milan in 1973 with a degree in biological sciences, and took a permanent position as a teacher in 1975. Since then she has been teaching biology, biochemistry and ecology in high schools. At the same time, she has been active in promoting life science and research methods among young people who are preparing projects for the National Contest. She has published in the areas of environment and high-school education, and co-operated with the Italian Ministry of Education in planning new life-sciences programmes for public high schools. She also organised training courses for teachers in the fields of ecology, chemistry and biology. She recently moved to the University of Milano-Bicocca, where she is in charge of the organization of master's projects in bioinformatics and environmental sciences.

Dominique Fonteyn (Belgium)**Belgian Institute for Space**

Dominique Fonteyn completed his doctoral studies in 1989 at the Katholieke Universiteit Leuven in the field of low-temperature solid-state physics before becoming a researcher at the Belgian Institute for Space Aeronomy. His main expertise is in the field of modelling atmospheric chemistry. He has successfully extended this to chemical data assimilation by means of a comprehensive chemical transport model using the 4D-VAR method. He is involved in many international co-operations, and his fields of interest include aerosols, heterogeneous stratospheric chemistry, mesospheric chemistry and planetary atmosphere chemistry (especially the Martian atmosphere). Professor Fonteyn is also co-Principal Investigator of SPICAM Light, onboard the ESA/Mars Express probe.

Nadezhda Bagdasaryan (Russia)**Bauman Moscow Technical University**

Professor Bagdasaryan, a member of the Russian Academy of Natural Sciences, is the first social scientist to be invited onto the jury. She has worked in collaboration with UNESCO, and has published extensively in the areas of university education, the sociology and philosophy of culture, and cross-cultural communications. Since 1969 she has held a post at the Bauman Moscow Technical University where she is currently chair of sociology and cultural anthropology, and senior professor for sociology and cultural sciences.

Michèle Peron (France)**European Southern Observatory**

Michèle Peron obtained her master's degree in applied mathematics in 1985, from the University Pierre and Marie Curie, Paris. She started her professional career as an engineer at the Institut d'Astrophysique de Paris. In 1989 she joined the European Southern Observatory where she has worked as a scientist ever since. From the outset, she participated in the development of MIDAS, a data analysis system widely used by the astronomical community to process observational data. In 2000, she became Head of the Data Flow Systems Group (DFS) at the ESO. This group of 30 physicists, mathematicians and software engineers is responsible for the design and implementation of a set of software components which are critical for the end-to-end operations of the Very Large Telescope (VLT) located in Chile's Atacama desert. The VLT observatory is the world's largest and most technologically advanced ground-based optical astronomical facility. The DFS system includes, in particular, observation preparation tools, archival systems and data-processing packages.

Sven-Olof Holmgren (Sweden)**Stockholm University and Royal Swedish Academy of Sciences (RSAS)**

Sven-Olof Holmgren obtained his PhD in 1970 and earned a chair in physics at the University of Stockholm in 1992. His field of research is accelerator-based experiments in elementary particle physics. He has been engaged in several big experiments at CERN and is responsible for detector hardware development as well as physics analysis. His research group at Stockholm University is presently engaged in analysing properties of the top quark in data collected in the D0 experiment at Fermilab, Chicago. They are also preparing hardware and data analysis for the ATLAS detector at the CERN LHC (Large Hadron Collider) that will begin working in 2007. He has served as head of the Physics Department, most recently for six years, ending in December 2004. Since 1997 he has been engaged in a programme at the Royal Swedish Academy of Sciences, developing – and helping teachers to introduce – inquiry-based science education in primary and secondary schools. The programme (NTA, Science & Technology for All), of which he is currently chairing the steering group, is rapidly growing and now engages over 40,000 students and 2,000 teachers.

Pantelis Kyriakides (Cyprus and UK)**European Patent Office, Munich**

Pantelis Kyriakides was born in Kyrenia, Cyprus, in 1949, and has both Cypriot and British nationalities. Mr Kyriakides grew up in Cyprus and completed his education in Britain. After working as an electronics engineer he joined the UK Patent Office in 1976, before transferring to the European Patent Office (EPO) in 1981. At the EPO, Mr Kyriakides has been involved in a wide variety of tasks, including examination, administrative organisation and technical project leadership, as well as directing an examining directorate. After being Principal Director in the technical fields of mechanics and electricity/physics, he was appointed Vice-President of the EPO at the end of 1999.

Seppo Pohjolainen (Finland)**Tampere University of Technology**

Seppo Pohjolainen was born in 1948. He received an MSc in engineering in 1974, a Licentiate of Technology degree in 1977 and a PhD in applied mathematics in 1980 – all from Tampere University of Technology (TUT). Since 1972 he has been with the Department of Mathematics at TUT, where he has been an Assistant, Senior Assistant, Lecturer, Associate Professor and, from 1998, a Professor. Between 1980 and 1986 he was a Research Fellow at the Academy of Finland. In 1994 he founded the Hypermedia Laboratory at TUT. He is currently head of the Department of Mathematics and director of the Hypermedia Laboratory. His research interests include mathematical control theory, mathematical modelling and simulation, distance learning, open learning environments, and the development of hypermedia courseware. He has led several research projects and written a number of journal articles and conference papers in all these fields.

Amparo Rausa March (Spain)**University of Valencia**

Amparo received her chemistry and PhD degrees from the University of Valencia, in the city where she was born. Her PhD thesis was done at the Institute of Agrochemistry and Food Technology (IATA) in the field of biochemistry. She also has a master's degree from Johns Hopkins University (USA) in International Public Policy. Her career began at the Massachusetts Institute of Technology (MIT), where she did research in the Chemistry and Chemical Engineering departments. Since then, she has worked for the United Nations Development Organization (UNIDO) in Vienna, in the Industrial Information Section, and also at the European Commission, where she has dealt with research programmes oriented to small and medium-sized enterprises (SMEs). She has held positions as Director of the Spanish Interministerial Commission of Science and Technology (CICIT) in Brussels and of the Regional Government of Valencia. Currently, she is working as an advisor on European Union relations to the Rector of the University of Valencia. Her fields of interest range from chemistry to RTD (research and technological development) policy and international relations.

Piotr Chrzastowski-Wachtel (Poland)**University of Warsaw**

Piotr Chrzastowski-Wachtel completed his master's and doctoral studies at the Institute of Informatics, Warsaw University, in the area of concurrency. He has been employed at Warsaw University since 1980, and in recent years he has also worked at the Polish-Japanese Institute of Information Technology and in the Warsaw School for Social Psychology, where he is involved in organizing a new kind of study that combines computer science, psychology and art. He teaches informatics and mathematics at various levels, including primary school (ages 5-12), and in various types of studies. Prof. Chrzastowski-Wachtel has been vice-director of the Institute of Informatics at Warsaw University, and was vice-president of the Foundation for Information Technology Development. He was also a member of the Programme Committee of the Olympiad in Informatics in Poland, for which he has designed over 20 original problems over the past 12 years. He takes an active part in the popularisation of science in Poland.