

# THE JURY

The role of the Jury of the European Union Contest for Young Scientists is of utmost importance. The Jury assesses and scores the competing projects based on their written description (before the Contest) and through interviews with the Contestants carried out at the exhibition during the Contest. The Jury then draws up the list of winners of the different prizes and Awards of the Contest. The members of the Jury carry out all their duties as independent scientific experts, not as representatives of an institution or country.

Since the European Commission took over the running of the European Union Contest for Young Scientists in 1989, the position of President of the Jury was held by:

- Sir Peter Swinnerton-Dyer, Trinity College Cambridge, 1989-1991
- Professor Galo Ramirez, Universidad Autónoma de Madrid, 1992-1994
- Professor Gisela Anton, Universität Nurnberg, 1995-1996
- Professor Sue Kingsman, Trinity College Oxford, 1997
- Professor Pedro Guerreiro, Universidade Nova de Lisboa, 1998-1999
- Professor Pauline Slosse, Université Libre de Bruxelles, 2000-2002
- Dr Ulf Merbold, ESA/ESTEC Noordwijk, 2003-2005
- Professor Jane Grimson, Trinity College Dublin, 2006 and 2008
- Professor Hansen Vagn Lundsgaarg, Technical University of Denmark, 2007.

## THE 2009 EUCYS JURY

### *President of the Jury*

**Chris Phillips**  
**Imperial College, London, United Kingdom**

Chris is Dean of the Faculty of Natural Sciences at Imperial College, London. He got his doctorate working with picoseconds lasers. After a spell travelling in the developing world, and working for the BBC, he was appointed to a University lectureship, at the age of 28, as part of the newly established semiconductor research activity at Imperial. Apart from the odd year in California, he has worked there ever since. His research is in the area of laser spectroscopy and semiconductor opto-electronics, developing a range of experimental techniques and device ideas which has led to over 200 publications. He was appointed to a full professorship in 2000 and was elected a Fellow of the Institute of Physics in 2006. Lately, he has become interested in using artificially structured quantum semiconductors as "Artificial atoms". These are a means of duplicating, in solid state crystals, the intriguing quantum optical effects, such as ultra slow light propagation, which have been seen by the atom spectroscopists. He also works on novel imaging techniques for Cancer detection. Chris is also a committed teacher and science communicator, who's lively lecturing style and taste for live demonstrations, has led to numerous TV and Radio appearances, and has won him many awards.

## *Members of the Jury*

### **Attila Borics** **Hungarian Academy of Sciences**

Attila obtained his PhD degree in 2005 at Creighton University in Omaha in the US. Upon his return to his home country he started to work at the Biological Research Centre of the Hungarian Academy of Sciences as a research associate. His research focuses on biomolecular structure and includes many parts of the field: protein and peptide structure and interactions, conformational analysis, structural aspects of cell membrane environment, etc. Furthermore, an alternative approach for conformational analysis of short, biologically important molecules is under development, combining chiroptical spectroscopy and various computational chemistry methods. Attila maintains a good collaborative relationship with scientists from the US, Poland and Belgium besides his colleagues from Hungary. He takes part in mentoring of graduate and undergraduate students. Funding for his research was provided by grants from the Cleveland Hungarian Development Panel and the Hungarian Science Foundation (OTKA). For the latter he also serves as referee as well as for several international scientific journals of his field.

### **Peter Celec** **Comenius University of Bratislava, Slovak Republic**

Peter Celec graduated in Medicine (MD) and in Molecular biology (MSc) at the Comenius University. He also graduated in Banking and Investments (Dipl. Ing.) at the Economic University and in Health care management (MPH) at the Slovak Medical University in Bratislava. The topic of his PhD thesis was the infradian dynamics of testosterone in men. Since 2003 he is teaching at the Faculty of Medicine and at the Faculty of Natural Sciences. Currently he is working at the Institute of Molecular Biomedicine leading a young team focusing on experimental gene therapy and the use of bacteria for gene transfer. He developed a new statistical method Analysis of rhythmic variance (ANORVA) and found a circalunar cycle of testosterone in men. His research interests include molecular medicine, gene therapy, salivary markers of oxidative stress, chronobiology and testosterone.

### **Stavros C. Kassinos** **University of Cyprus**

Professor Kassinos (Associate Professor) has been a faculty member in the Department of Mechanical and Manufacturing Engineering at the University of Cyprus since 2003. He completed his undergraduate studies at the University of Texas at Austin (BSc in Mechanical Engineering, 1986) while on a CASP/USIA scholarship. He then moved to the Mechanical Engineering Department at Stanford University in California, where he received his MSc in 1989 and his PhD in 1995. He continued to work in the Mechanical Engineering Department at Stanford University as a Postdoctoral Fellow till 1997, when he joined the Research Staff at the Stanford/NASA-Ames Centre for Turbulence Research (CTR). Between 1999 and 2003 he also held a joint appointment at the DOE Centre for Integrated Turbulence Simulations (CITS) at Stanford University. He joined the University of Cyprus in 2003 as an Assistant Professor, where he is currently an Associate Professor and Associate Dean of Engineering. He is the Head of two Research Laboratories: the Computational Sciences Laboratory at the University of Cyprus (UCY-CompSci) and the Fusion Transnational Unit for Research in Cyprus (FUTURE-CY) and leads a team of 6

post-doctoral fellows, 2 PhD students and 2 MSc Students. He has been the coordinator of the Marie Curie TOK Action “Transfer of knowledge for the creation of a multidisciplinary core of excellence in the computational sciences at the University of Cyprus (UCY)” and a member of the core team and governing board of the International Water Research Centre recently established in Cyprus. His research interests centre on the numerical simulation and modelling of complex physical systems including fluid flow in connection with environmental, biomedical and technological applications. He teaches in the area of thermofluids and computational engineering. He has published over 34 papers in international peer-reviewed journals and has over 200 citations. Since joining the University of Cyprus, he has coordinated or participated as a partner in several research projects, receiving a total funding of over 2.3 million € for his research activities.

**Elzbieta Kochanska-Czembor**  
**Plant Breeding and Acclimatization Institute, Poland**

Elzbieta is a plant pathologist with a MS degree from the Plant Breeding Department, Agriculture University, SGGW-AR, Poland and a Ph.D. degree in Plant Breeding and Acclimatization Institute (IHAR Radzikow), Poland. She participated in a Postgraduate Study on Plant Pathology in Plant Pathology Department, Montana State University, Bozeman, USA.

Her research is focused on fungal diseases of maize and grasses involving screening of landraces and wild forms for resistance. She specialised in genetics and breeding of fodder crops and maize. Lately, she has become interested and involved in research on mechanisms of plant resistance to fungal pathogens, evaluation of genetic resources, food quality and safety, breeding for organic farming, environmental protection, ecology and bioethics. She has presented lectures and posters on more than 50 international conferences and seminars. She has published more than 35 scientific papers and she is involved in several national and international projects. Elzbieta is an active science communicator as a member of Polish Plant Pathology and Polish Genetics Societies.

**Alain Lambert**  
**European Patent Office**

Alain graduated from the "Ecole Nationale Supérieure d'Informatique et de Mathématiques Appliquées de Grenoble (ENSIMAG)" in 1978 and has spent his entire career in commercial computing. As a young engineer, he carried out his military service at the computing department of the "Armée de Terre" in Paris before joining a branch of France Telecom at the end of 1979 as Systems engineer where he was involved in a major project of revision of telephone billing. From 1981, Alain took part in the creation and start up of two big data processing centres, one for UNEDIC in France (unemployment insurance) and the other one for MGEN (General Health Insurance of the State Education) with responsibility for Systems and Operations. In 1992, wanting experience in a major European organisation, Alain joined the European Patent Office in The Hague (The Netherlands) where he has pursued his carrier as Director of Operational Services, then as Principal Director of the IT Infrastructure and Services Department. In his role of Chief Technology Officer, Alain is responsible of the whole of the Office's technical infrastructure (servers, network and workstations) and leads a department of 260 persons.

**Hagit Messer-Yaron**  
**Tel Aviv University, Israel**

Hagit Messer obtained her PhD in Electrical Engineering at Tel Aviv University (TAU), Israel, and after a post-doctoral fellowship at Yale University, she joined the faculty of Engineering at Tel Aviv University in 1986, where she is a Professor of Electrical Engineering. Between 2000 and 2003 she was been on leave from TAU, serving as the Chief Scientist at the Ministry of Science, Israel. After returning to TAU she was the head of the Porter school of environmental studies (2004-2006), and the Vice-President for Research and Development (2006-2008). Since October 1, 2008 she is the President of the Open University in Israel. Professor Hagit Messer, Fellow of the IEEE, is an expert in statistical signal processing with applications to source localization, communication and environmental monitoring. She has published numerous journal and conference papers, including the pioneering recent publication: Messer, H.; Zinevich, A.; Alpert, P., *Environmental monitoring by wireless communication networks*, SCIENCE, 312 (5774): 713-713 May 5, 2006; and has supervised tens of graduate students. She is a member of Technical committees of the Signal Processing society since 1993 and has been an associate editor of the *IEEE Transactions on Signal Processing* and of the *IEEE Signal Processing Letters* for parameter estimation, detection and performance analysis. Hagit Messer is currently on the editorial board of the IEEE journal of selected topics in signal processing (J-STSP) and on the Overview Editorial Board of the Signal Processing Society journals.

**Johannes Pollak**  
**Austrian Academy of Sciences, Institute for European Integration Research**

Associate Professor Johannes Pollak obtained his Masters in political science and philosophy from the University of Vienna and the London School of Economics and Political Science, his Doctorate from the University of Vienna. Postgraduate Studies at the Institute for Advanced Studies in Vienna. Johannes Pollak has been Jean Monnet Fellow at the Schuman Centre for Advanced Studies at the European University Institute in Florence, Leverhulme Visiting Fellow at the University of Reading and Senior Visiting Fellow at the London School of Economics. Currently, Johannes Pollak is Senior Research Fellow at the Institute for European Integration Research at the Austrian Academy of Sciences. His main research interests comprise the European integration process and the history of political ideas, in particular the development of new modes of democracy at the supranational level.

**Marlene Rau**  
**European Molecular Biology Laboratory (EMBL)**

Marlene Rau graduated in biology from Philips-University Marburg and the German Cancer Research Centre (DKFZ), before carrying out a PhD at the European Molecular Biology Laboratory in Heidelberg, working on zebra fish development. After continuing her research as a post-doctorate, she went into science communication, and is presently working as editor of *Science in School*, a European journal promoting inspiring science teaching. It covers not only biology, physics and chemistry, but also maths and earth sciences, highlighting the best in teaching and cutting-edge research, and focusing on interdisciplinary work. Originally supported by the European Commission, the journal is

published and fully funded by EIROforum, a collaboration of Europe's seven largest intergovernmental research organisations.

**Anu Reinart**  
**Tartu Observatory, Estonia**

Anu Reinart holds a PhD in environmental physics (2000, Tartu University, Estonia) and is a specialist in remote sensing in optically complex environment. She graduated from Tartu University as physicist (optics) and, since 1995 she has worked at the Estonia Marine Institute as research associate. From 2002 to 2004 she was working as EC Marie Curie Fellow at Uppsala University, Sweden. In 2005 she returned to Estonia to the Department of Atmospheric physics of the Tartu Observatory. Anu Reinart is a member of the Estonian remote sensing committee, and is the Estonian representative in the EC GMES Bureau Advisory Council. She has been leading research projects financed by the Swedish National Space Board, the Estonian Science Foundation and the EC 7<sup>th</sup> Framework Programme (Regpot EstSpacE). She is currently supervising two PhD dissertations, and she has published 32 peer-reviewed papers.

**Rita Sketerskiene**  
**Ministry of Health of the Republic of Lithuania**

Rita Sketerskiene is a Doctor in public health science. She completed her doctoral studies at Vilnius University within the field of Public Health, and defended a thesis of study entitled "Educational load and its links with health among students of sixth and eighth grades in Lithuanian schools of general education". She started her public health specialist career by graduating in 1993 from the Faculty of Medicine of Vilnius University, obtaining a doctor hygienist qualification. In 1996, as the result of two years of post-graduate studies, she obtained the professional qualification of children hygiene doctor. Dr Rita Sketerskiene is currently leading the Public Health Care Division at the Ministry of Health of Lithuania. Together with highly competitive administrative commitments in her daily work, she carries the responsibility for children's and youth health in Lithuania. It can be mentioned that Dr Rita Sketerskiene has experience in the preparation of Lithuanian national programs and legal acts in the field of children's health prevention and promotion, and has been involved in several national and international projects. She also shares her experience through lectures in seminars at national level for public health specialists and teachers. Finally, Dr Rita Sketerskiene is keen on trying to apply her theoretical knowledge in her everyday life in being a mother of three children.

**Federico Tibone**  
**Digitalia, Italy**

Federico graduated in physics at Turin University in 1982. Over the years 1984 to 1993 he carried out research on controlled thermonuclear fusion within the Theory Division at the JET laboratory (a Joint Undertaking of the European Commission) near Oxford, United Kingdom. Since 1994, he has been working in Italy as author and designer of educational projects such as:

- multimedia-based science teaching (e.g. [www.zanichelli.it/lafisicadiamaldi/cdrom.html](http://www.zanichelli.it/lafisicadiamaldi/cdrom.html));
- web sites for the popularization of science ([www.torinoscienza.it](http://www.torinoscienza.it));
- web-based automatic testing systems ([www.zanichelli.it/zte](http://www.zanichelli.it/zte));

- science textbooks for middle level schools ([scuola.zanichelli.it/online/facciamo-scienze](http://scuola.zanichelli.it/online/facciamo-scienze));
- computer science textbooks ([www.zanichelli.it/materiali/patente](http://www.zanichelli.it/materiali/patente)).

**Karin Tonderski**  
**Linköping University, Sweden**

Karin Tonderski is an Associate Professor at Linköping University, Sweden. She completed her BSc in Biology and Chemistry at Uppsala University, and a PhD studying nutrient cycling in constructed wetlands at the multidisciplinary department of Water and Environmental Studies of Linköping University. Since 1996, she is a lecturer and researcher at the department of Physics, Chemistry and Biology of Linköping University. Her research is focused on applied aspects of nitrogen and phosphorus biogeochemistry and microbiology in constructed wetlands and river basins, and implications for water management issues. She has worked with several research and educational projects in developing countries, with a main focus on low-cost sanitation. The current scientific cooperation extends to East Africa and Vietnam, where she is also coordinating an educational exchange programme. Her scientific work has resulted in about 70 publications and chapters in international books, and she serves on the editorial board of the journal *Ecological Engineering*.

**Paolo Tonella**  
**Fondazione Bruno Kessler, Italy**

Paolo Tonella is a senior researcher at Fondazione Bruno Kessler-IRST, Trento, Italy, where he leads the Software Engineering research unit. He completed his laurea degree cum laude in Electronic Engineering at the University of Padova, Italy, in 1992, and his PhD degree in Software Engineering at the same University, in 1999, with the thesis "Code Analysis in Support to Software Maintenance". He is the author of "Reverse Engineering of Object Oriented Code", Springer, 2005. He has been ranked among the top-50 Software Engineering scholars in an article published by the *Communications of the ACM* (vol. 50, n. 6, pp. 81-85, June 2007). He has participated in several industrial and European Community projects about software analysis and testing. His current research interests include reverse engineering, program transformations and testing.

**Inger Torhild Gram**  
**University of Tromsø, Norway**

Inger Torhild Gram became the first female physician with medical training from the University of Tromsø to be appointed a full Professor in 1999. Since 2006, she has had a secondary appointment as a Senior Consultant at the Norwegian Centre for Telemedicine - a WHO Collaborating Centre for Telemedicine. Dr Gram earned her both MD degrees in 1982 and PhD in 1992, at the University of Tromsø. During her career as a cancer epidemiologist Professor Gram has worked as a Visiting Scientist for five years in the US at different Universities and six months at the International Agency of Cancer Research, Lyon, France. Her main research interests are the causes and prevention of breast cancer <http://uit.no/density> and cancers that may be smoking-related <http://uit.no/smoking>. Dr Gram has published many papers on these topics and has given talks all over the world. Dr Gram has also worked with tobacco control, both at local and national levels, for many

years. She is a committed teacher at the Medical School and at the School of Public Health.

**Harry Verelst**  
**Free University of Brussels, Belgium**

Harry Verelst obtained his Master Degree in Chemical Engineering in 1980 at the Dutch speaking Vrije Universiteit Brussels (VUB). He started his professional career at the Belgian National Fund for Scientific Research (NFWO). He then spent two years at the Technical High school of Mechelen and went back to university to finish his PhD within the field of gas separation. After working as teaching assistant, he was appointed Assistant Professor at the VUB, within the department of Chemical Engineering, in 1989. He specialised in the area of production of clean fuel gases from gasification processes, within environmental engineering. In 2000 he was appointed as Associate Professor at the VUB. His teaching activities were within the field of environmental and chemical engineering. Later on, his research activity switched to transport phenomena in micro porous structures. His scientific activity was published in about 70 publications, presented in journals and congress proceedings. In the period 2000-2006, he also was appointed as part-time Associate Professor at the Vesalius College (English language university programme in Brussels). Since 2007, he is part-time Associate Professor at the French speaking Université de Bruxelles (ULB). Harry Verelst also teaches within the programme of Human Ecology, mainly followed by students from developing or semi-developed countries. He has also obtained scientific prizes, and is active within the Best Program and the AIESEC organisation.

**Maria Ana Viana-Baptista**  
**Centro de Geofisica Uni Lisboa, Portugal**

Maria Ana Viana-Baptista was born in Lisbon, Portugal, in October 1960. She is married with two sons, and lives in Lisbon. She graduated in Physics in 1984, and completed her PhD in Geophysics at the University of Lisbon. She is a Professor at the Engineering Institute of Lisbon, of which she was the President from 2003 to 2006. She is a tsunami scientist and research leader in Geohazards and Warning Systems at Dom Luiz Institute (Lisbon). She is currently the Vice-Chairman of the ICG/NEAMTWS of IOC/UNESCO (Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas).