

THE JURY

THE CONTEST JURY IS COMPOSED OF 22 HIGHLY QUALIFIED SCIENTISTS AND ENGINEERS WITH WORLDWIDE REPUTATIONS IN THEIR CHOSEN FIELD, INCLUDING 3 THAT HAVE BEEN SPECIALLY SELECTED TO JUDGE THE EXPO FEEDING THE PLANET CATEGORY.

The jury carry out their duties at the contest as independent scientific experts and not as representatives of any institution, organisation or country.

The European Commission appoints the Jury annually, basing its selection on the scientific and technological needs of the contest. The jury members are selected both from academia and industry. The Commission ensures an appropriate geographical and gender balance. Jury members can remain on the jury for up to 5 years. In exceptional circumstances the EC reserves the right to appoint Jury members for more than 5 terms.

The role of the Jury at EUCYS is of the utmost importance. The jury follow the Jury Rules and Guidelines established by the EC. The Jury assess and score the competing projects based on the written descriptions submitted by the projects and through interviews with the Contestants carried out during the Contest. Based on their assessment of the projects and on lengthy discussions with other jury members, the jury draw up the lists of winners of the core prizes and the special prizes. The decision of the jury is final.

This year the Commission is delighted to point out that two members of the jury are previous first prize winners of the contest. Furthermore, the president of this year's jury, Dr. Lina Tomasella, won first prize at the first European Union Contest for Young Scientists in Brussels in 1989.

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 has been held by:

- **Sir Peter Swinnerton-Dyer**, Trinity College Cambridge, 1989-1991
- **Professor Galo Ramirez**, Universidad Autonoma de Madrid, 1992-1994
- **Professor Gisela Anton**, Universitat 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 Lundsgaard**, Technical University of Denmark, 2007
- **Professor Chris Phillips**, Imperial College, London, United Kingdom, 2009
- **Professor Hagit Messer-Yaron**, The Open University of Israel, Israel, 2010
- **Professor Maria Ana Viana-Baptista**, Lisbon Engineering Institute, 2011
- **Professor Maria Ana Viana-Baptista**, Lisbon Engineering Institute, 2012
- **Dr. Henrik Aronsson**, University of Gothenburg, 2013-2014

PRESIDENT OF THE JURY

LINA TOMASELLA



Astronomical Observatory Italy

Lina Tomasella is an astronomer at INAF OAPd (Italian National Institute for Astrophysics - Astronomical Observatory of Padova).

She has a degree in physics and a PhD in astronomy from the University of Padova.

Her research interests are devoted to the physical properties of explosive astrophysical objects, supernovae and optical transients, in collaboration with Padova-Asiago SN Group. The whole scientific production is summarized in about fifty refereed papers and in over 550 between IAU Astronomical Circulars and ATel (the Astronomer's Telegram). She was member of the Time Allocation Committee for TNG (Galileo National Telescope, La Palma) and LBT (Large Binocular Telescope, Arizona) from 2012 to 2014. She lives and works mainly in Asiago, where there are the telescopes and instruments operated by the Astronomical Observatory of Padova.

In Asiago she is also the Institute based coordinator and head of outreach activities. Lina won a top prize in the 1st EUCYS, Bruxelles 1989.

MEMBER OF THE JURY

HENRIK ARONSSON



University of Gothenburg Sweden

He pursued his PhD degree in Plant Physiology at the University of Gothenburg. He graduated in 2001 and spent the following year and

a half as a postdoctoral student at Leicester University. The next year he spent at Gotland University and Skövde University as a senior lecturer.

He then returned to the University of Gothenburg in 2004, where he attained Associate Professorship in 2007. As a graduate student, he studied protein targeting of a chlorophyll related protein to the envelope and the thylakoid membrane.

He then switched during his postdoctoral period to study the chloroplast protein import machinery with a focus on the components that make up the machinery. His research group has in recent years started to study vesicle transport inside chloroplasts between the envelope and the thylakoid in the plant model system of Arabidopsis, interestingly, similar systems in the mammalian system have shown immense importance for having links to different human diseases.

He has several international collaborations e.g. a project in Bangladesh with the aim to produce salt tolerant non-GM wheat to increase the crop yield and thereby the daily food intake for the people of that country. He is one of the vice prefects at his department, and founder of a small plant biotech company.





MEMBER OF THE JURY

KATRIN AUDEL



Institute for Advanced Studies, Vienna Austria

Katrin Auel is associate professor at the Institute for Advanced Studies, Vienna. After completing her studies in public administration at

the University of Konstanz, she received her PhD in Political Science from the University of Hagen. She has held positions at the University of Halle-Wittenberg and the European University Viadrina and spent several years at Mansfield College / the Department of Politics and international Relations of the University of Oxford. She has also held visiting posts at Waseda University, Tokyo, the University of Halle-Wittenberg, Stanford University (in Oxford) and at the Centre d'études européennes at Sciences Po Paris. Her research focuses on Europeanisation, legislative studies, and the democratic legitimacy of governance in multilevel systems, especially the European Union. Her current research analyses the role of national parliaments in the EU, and she has published widely on legislative behaviour in European affairs. She also regularly advises national parliaments on scrutiny provisions in EU affairs.

MEMBER OF THE JURY

DEREK BELL



College of Teachers United Kingdom

Derek Bell is a teacher, researcher, advisor and advocate for improving and enriching education for all. He worked in schools and univer-

sities before becoming Chief Executive of the Association for Science Education (ASE) and Head of Education at the Wellcome Trust.

Throughout his career Derek has maintained a strong and active interest in the enhancement of teaching and learning in science and helping children develop their understanding of the world around them. He was a member of the SPACE (Science Processes and Concept Exploration) Project team based at the University of Liverpool and co-ordinated the Nuffield Primary Science Project.

Derek remains very active in education, nationally and internationally, through his consultancy (Campanula Consulting), committee and advisory work and has a wide range of publications.

Derek is keen to enhance the links between science, technology, engineering and mathematics through partnerships across the education, industrial and business sectors.

He is currently a trustee of the IBM Trust UK, Understanding Animal Research and Centre of the Cell in the UK, a member of the Inter Academies Panel Global Education Committee and on the judging panel for the European Union Contest for Young Scientists.

Derek is Director of LEARNUS, Professor of Education in the College of Teachers and a visiting research associate at the Institute of Education, University of London. He was awarded an honorary Doctorate of Education by Manchester Metropolitan University in 2011.

MEMBER OF THE JURY

ATTILA BORICS



Institute of Biochemistry of Hungarian Academy of Sciences Hungary

Dr. Attila Borics received his PhD degree in 2005 from Creighton University (USA) for his contribution to the field of

chiroptical spectroscopy and conformational studies of peptides.

Then he joined the ranks of the Biological Research Center of the Hungarian Academy of Sciences in Szeged (Hungary) as a research associate. His research focuses on biomolecular structure, more specifically protein and peptide structure and interactions, conformational analysis and structure-activity studies. This includes the investigation of the three dimensional structural determinants of the biological activity of various neuropeptides, structural explanation of the mechanism of action of enzymes and receptors, location of interaction sites of proteins and the study of the interactions between semi-synthetic proteins and cell membrane.

MEMBER OF THE JURY

MARIA CORDINA



University of Malta Malta

Prof. Maria Cordina graduated in Pharmacy from the University of Malta in 1992. She was awarded a scholarship to read for a PhD at the Queen's University of Belfast in Northern Ireland and graduated 1998.

Her research focused on pharmaceutical care of asthma patients. She has since followed various courses and additionally holds a diploma in Health Outcomes Research.

She has published extensively in the fields related to therapeutic management of respiratory disease, professional practice and pharmacy practice, mainly delivery of pharmaceutical care, medicines use incorporating also gender issues and social pharmacy. She has been a guest speaker at numerous national and international conferences in addition to organising and chairing multiple conferences.

In addition to supervising students at the University of Malta, she has supervised/co-supervised various students reading for MSc and PhDs at The University of Helsinki and Robert Gordon University. She has also acted as external examiner for PhD for the University of Sydney, the University of Helsinki and the University of Lisbon.

Prof. Cordina founded the Malta College of Pharmacy Practice in 1996. She has been president since and she is also the editor of the Journal of the Malta College of Pharmacy Practice.

Prof. Cordina also acts as temporary advisor to WHO in relation to pharmaceutical matters and as expert evaluator for the European Commission's research framework programme (DG Research).

MEMBER OF THE JURY

EVELYNE COTTEREAU



Institut de Physique Nucléaire, Université Orsay France

Evelyne Cottereau has an engineering degree from the Ecole Supérieure de Physique et Chimie Industrielles of Paris (France) and received a

M.S. degree from Berkeley (USA).

She has been working in different laboratories since 1982 in the field of ion implantation and radioactive beams. In 1997 she designed the on line isotope separator PARRNe at the ALTO facility at Institut de Physique Nucléaire at Orsay. In 2003 she set up a national radiocarbon facility based on a 3 MV electrostatic tandem.

She is currently in charge of the project Andromede for surface analysis designed around a 4 MV electrostatic single ended electrostatic accelerator to accelerate cluster beams.

MEMBER OF THE JURY

TONY FAGAN



University College Dublin Ireland

Professor Anthony Fagan received his PhD in Electronic Engineering from University College Dublin (UCD) in 1978. He then spent two years working

on advance modem design at Marconi Research laboratories in England.

On his return to UCD in 1980 he established the DSP research group there.

Through this group he has helped establish a strong signal processing industry in Ireland with many companies being founded by his research graduates, especially in the area of physical-layer communications design.

Well over 100 research graduates have been produced by the group.

Co-operation with industry has been a distinguishing feature of his academic career with much of his funding coming directly from these contacts.

On a number of occasions, in order to expedite product development, he has temporarily taken direct charge of industrial signal processing design groups and given them their day-to-day direction while still tending to his academic duties in UCD.

Several spin-off companies have emerged from his research group. He was a founding director of Decawave, a pioneering fabless semiconductor company that designs ultrawideband communications devices with a built in ranging capability.

He was also a co-founder and director of WirelessLab, a Centre of Excellence designed to provide a collaborative environment for Ireland's wireless industries.

He is an associate professor at UCD and was the first Director of the Communications and Optoelectronics Research Centre.

MEMBER OF THE JURY

MELLA FREWEN



Food Drink Europe Belgium

Director General of FoodDrinkEurope, representing Europe's largest manufacturing industry, since July 2007.

Mella Frewen's previous positions include Director for

Government Affairs EMEA at Monsanto, dealing with agricultural biotechnology, conventional agriculture and agri-chemistry. Prior to that, she was Director, International Relations for Cerestar, then Europe's biggest starch producer. Thanks to this role and her earlier ones in the Ferruzzi and Eridania Bégin-Say Groups stationed in Brussels, she has a wide experience of relations with relevant International institutions, with the Institutions of the European Union and trade associations within the food chain, as well as with the agricultural and chemical sectors. Ms. Frewen has represented the Food Industry in the EU Commission's Advisory Committee on Arable Crops, in the Commission's Standing Committee on Renewable Energy and in the Commission's Advisory Committee on Non-Food and Textile crops. She is currently member of the EU Commission's High Level Steering Board for the European Innovation Partnership for Agricultural Productivity and Sustainability, and of the EU Commission's Scientific Steering Committee for EXPO2015. She is also member of several food industry-related Boards.

Ms. Frewen is Chair of the ACEI (the Alliance for a Competitive European Industry) and Vice President of the OECD's Advisory Group for Responsible Business Conduct along Agricultural Supply Chains. She is Co-chair of the Supply Chain Initiative for fair business practices across the food chain. She has worked in the Agri-food sector in Europe for 25 years.

She has a Master of Science degree from the National University of Ireland, and completed a post-graduate course at the University of Brussels (ULB). She also holds a Harvard certificate on Agribusiness and an INSEAD certificate on International Operations Management.

MEMBER OF THE JURY

MILENA HORVAT



Institut Jozef Stefan Slovenia

Prof. dr. Milena Horvat is a Head of the Department of Environmental Sciences of the Jožef Stefan Institute and a Head of the Ecotechnology

programme of the International Postgraduate School Jožef Stefan.

Her main expertise is in the area of environmental analytical chemistry with a focus on trace metals analysis and speciation.

She has been an author and co-author of over 170 SCI journal articles and several book chapters related to the development of analytical methods in areas of characterization and identification of mercury contaminates sites, biogeochemical cycling of mercury in terrestrial and aquatic environment, mercury in industry and biomonitoring as part of the exposure assessment of humans and ecosystems.



MEMBER OF THE JURY

MORTEN LENNHOLM



**EUROfusion (JET),
Culham Science
Centre
United Kingdom**

Morten Lennholm has worked in the field of Nuclear Fusion Research for the last 25 year. From a microwave and control engineering

education, he developed his knowledge of plasma physics and much of his work has involved a combination of engineering and plasma physics. He has published in journals such as 'Physical Review Letters' and 'Nuclear Fusion' on the control of fusion plasma, plus in 'Nature Communications' to describe the potential for control of certain plasma instabilities through 'phase space engineering'. He received his PhD degree from Eindhoven University of Technology in 2014 for his work on 'Real Time Control of the Sawtooth Instability in Fusion Plasmas with Large Fast Ion Populations'. Based at the Culham laboratories in Abingdon, England, Morten conducts, manages and coordinates work involved in the operation of the JET Tokamak (Joint European Torus), including engineering and physics studies associated with this projects. His main areas of interest include: radio frequency heating employed in Tokamak fusion experiments; plus, plasma control systems, which allow the control of a number of plasma parameters including the location of the plasma itself inside the Tokamak vacuum vessel.

MEMBER OF THE JURY

MARIYA LYUBENOVA



**Kapteyn
Astronomical
Institute, University
of Groningen
The Netherlands**

Mariya Lyubanova holds a doctorate in astronomy from the Ludwig-Maximilians-Universitaet after pursuing 3 years

of research at the European Southern Observatory in Munich, Germany. In her work she observes and uses the motions and chemical properties of stars in galaxies as fossil records to unravel the build-up and evolution of galaxies. Well before she started her university studies in her home country Bulgaria, she was already an active astronomy club member and editor of an astronomy magazine and a newspaper. After the completion of her PhD in 2009, Mariya took a leading role in publishing the book "An Expanded View of the Universe - Science with the European Extremely Large Telescope" where the key science cases for the E-ELT are summarised. Next, she worked for several years at the Max Planck Institute for Astronomy in Heidelberg, Germany, in parallel as a researcher and an equal opportunity officer. In addition, she became a parent of a daughter who (at her current stage of research) is equally passionate about the fossil record of past times, but with emphasis on dinosaurs and all the like. Currently, Mariya is a researcher at the Kapteyn Astronomical Institute of the University of Groningen, the Netherlands.

MEMBER OF THE JURY

MILAN MACEK



**Charles University,
Prague
Czech Republic**

Professor Milan Macek Jr. MD, DSc is the chairman of the largest academic medical molecular genetics institution in the Czech Republic, which

also comprises a research/diagnostics reproductive genetics centre [/ublg.lf2.cuni.cz/](http://ublg.lf2.cuni.cz/). He is also the past President of the European Society of Human Genetics (www.eshg.org), ex-board member of the European Society for Human Reproduction and Embryology (ESHRE.com) and of the European Cystic Fibrosis Society (ECFS.eu). His institute is a "clearing centre" for dissemination of knowledge in genetics gathered within various international European projects, such as CF Thematic Network, EuroGentest, EuroCareCF, Techgene or RD-Connect to Central and Eastern Europe. Prof. Macek did his first postdoc at the Institut of Human Genetics in Berlin, continued as a postdoctoral fellow at the McKusick-Nathans Centre for Genetic Medicine, Johns Hopkins University in Baltimore and during that time he was also a fellow at Harvard School of Medicine in Boston. He was the local host of the 1995 HUGO Mutation Detection Course in Brno, the 2005 European Society of Human Genetics conference and of the 2008 European Cystic Fibrosis Conference, both held in Prague. Prof. Macek is national coordinator of Orphanet (www.orpha.net), active member of Eurogentest (www.eurogentest.org), has been the chief advisor of the Czech EU Council Presidency under which the "EU Council recommendation on an action in the field of rare diseases" was adopted in June 2009. Prof. Macek is a medical molecular geneticist whose main interest is in rare diseases (H-index 29), medical student education and promotion of rare disease awareness amongst the professional and lay public.

MEMBER OF THE JURY

SERGEJ MAKOVEJEV



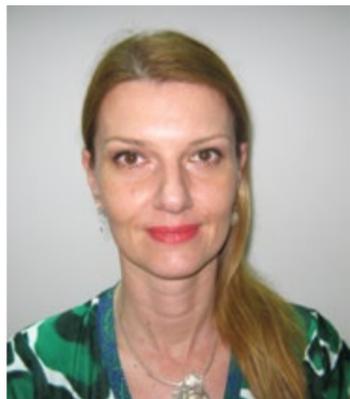
**Incize
Belgium**

Sergej Makovejev holds a PhD from the School of Electrical and Electronic Engineering at Newcastle University, UK. In 2012 he joined the electrical

engineering department at Université Catholique de Louvain, Belgium as post-doctoral researcher. He was working on design, fabrication, experimental characterisation, simulations and modelling of state-of-the-art silicon devices for microelectronics, communications and medical applications. His scientific interests are focused on wide frequency range and thermal characterisation of devices and materials in silicon-on-insulator, FinFET and nanowire technologies. In 2015 he made the transition to industry by joining Incize, a spin-off from Université Catholique de Louvain, in a senior engineer position. Currently he is working on semiconductor characterisation for digital, analogue and radio frequency applications. At Incize he is in charge of a long-term research project on radiation effects on electronic systems for space applications.

MEMBER OF THE JURY

LIDJA MATIJA



**University of
Belgrade
Serbia**

Lidja Matija is an associate professor at the University of Belgrade Faculty of Mechanical Engineering where she received her PhD in Control Engineering in 1997.

She has been working in the Institute for Chemical PowerSources, Belgrade, Serbia, in the field of fullerenes based materials, its production and application for battery production.

In 2002 she has changed her field of research and moved to the Institute of Technical Sciences, Serbian Academy of Science and Arts, where she investigated fullerene and carbon based materials for biomedical applications.

In 2005 professor Lidja Matija moved back to the University of Belgrade Faculty of Mechanical Engineering, where she joined the group for Biomedical Engineering within the department for control engineering and became the Chair of NanoLaboratory.

In the period from 2008 - 2010 she was appointed as Seconded National expert (SNE) in European Commission, DG RTD, Marie Currie Networks, FP7 Framework Programme, Brussels, where she worked as scientific officer. Her main fields of research are: Control Systems, Early Detection of Skin Cancer and Melanoma, Intelligent Materials, Fullerenes and Carbon Nanotubes, STM/AFM, Nanotechnology, Nanomedicine.

Professor's Matija fields of teaching are: Control Systems, Biomedical Engineering, Nanotechnology, Nanomedicine.

She was several times awarded in her country for her research achievements in the field of nanotechnology and she was the coordinator of several national research projects of which more than half had industry involvement.

MEMBER OF THE JURY

ESTELLE MOSSOU



**Institute Laue-
Langevin
France**

Half Gabonese, half Belgian, Estelle Mossou grew up in Gabon (central Africa). She obtained a scholarship from Shell in 2001 to study in the U.K.,

where she attended Bath University and graduated with a Master of Physics in 2006.

She then moved to Grenoble (France) to carry out her PhD (completed in 2010) at the Institut Laue-Langevin, which operates the brightest neutron source in the world.

Her research interest lies in the study of self-assembling filamentous systems having biomedical and biotechnological interest (especially amyloid type systems). These are of particular interest because of their link to diseases like Alzheimer's, type II diabetes and Creutzfeldt-Jakob disease amongst others.

As a postdoctoral researcher in the Partnership for Structural Biology Life sciences group, she worked on developing common interfaces for neutron and X-ray structural studies of biological samples.

She is now an instrument scientist on a single crystal diffractometer at the Institut Laue-Langevin. Their main aim is to provide support to users during their experiments, develop the instrument as well as their own research programme.

MEMBER OF THE JURY

MARGUS NIITSOO



**Music Education
LLC, Tartu
Estonia**

Margus Niitsoo was a competitor at EUCYS 2005 where he learned that the ability to communicate his findings is at least as important a skill as actually doing

research.

While studying for his degrees in mathematics and computer science in University of Tartu, he actively sought ways to also improve his skills in communication, becoming a teaching assistant in university, joining a science popularization initiative and also taking as many psychology courses as he could fit into his timetable among his own courses.

However, his love of mathematics did not fade, and despite the new interests, he still managed to finish his BSc and MSc together in just 3 years instead of the usual 5, which was followed by another 3 years of PhD studies in theoretical cryptography.

This briefly made him famous, as he was the youngest person to get a PhD in Estonia at just 24 years of age.

Obsessed with teaching and finding ways to improve it, he was then offered the job of curriculum manager which allowed him to work not only on his own teaching but also to find better ways of organizing the curriculum and finding means to support both students and lecturers in their pursuits.

He thoroughly enjoyed the work, but felt that he needed to see the world outside the academia as well and so headed for the industry.

Currently, Margus is the CTO of a small music education startup that is developing a tool for automatic assessment and feedback of musical performance, which again allows him to combine his twin passions of teaching and computer science.

MEMBER OF THE JURY

YANN OLLIVIER



**Ecole Normale
Supérieure
France**

Yann Ollivier is a research scientist at the CNRS, the French national research center, specializing in mathematics and computer science, and currently

working at Paris-Sud university in Orsay.

He is also a former participant in the European Union Contest for Young Scientists, having won a first prize in Helsinki in 1996. After obtaining his PhD in Mathematics in 2003, he worked for several years in various areas of pure mathematics, especially group theory, differential geometry and probability theory.

In 2011 he was awarded the bronze medal of the CNRS. He is currently exploring practical applications of mathematics to the problem of artificial intelligence.



MEMBER OF THE JURY

LUIISA PEREIRA



Institute of Molecular Pathology and Immunology, University of Porto Portugal

Luísa Pereira has a degree in Biology and a PhD in Human Population Genetics. She is a senior researcher and

group leader at IPATIMUP (Institute of Molecular Pathology and Immunology of the University of Porto), being interested in using genetics to infer the past and evolution of human populations as well as on disentangling between neutral and pathological diversities.

She has been working on the genetic diversity of European, African, Near Eastern and Arabian Peninsula human populations.

She is co-author of 80 peer-reviewed papers in international journals and a book on popular science. She has been engaged in presenting her work to the general public, including young students in high schools, and regularly collaborates with local media.

MEMBER OF THE JURY

CLAUDIA SORLINI



University of Milan Italy

Claudia Sorlini is a past full professor of Agricultural Microbiology, Department of Food, Environmental and Nutritional Sciences, University of Milan until

October 2013 where she has been Dean of the Faculty of Agriculture (2004-2010) and chief of department (2002-2004).

Since 2013 she is the President of the Scientific Committee for EXPO set up by the Municipality of Milan. She is editor in chief of the peer-reviewed, impact factor-rated, scientific journal "Annals of Microbiology" and member of the Steering Committee of the EU Scientific Programme for EXPO 2015.

Author of several publications on agricultural and environmental microbiology, she has coordinated national and international projects.

Awarded by the President of the Republic of Italy with the honour of Commendatore (March 2015).

MEMBER OF THE JURY

JÜRGEN STOLZ



Technical University Munich Germany

Jürgen Stolz is a biologist who did his studies at the University of Regensburg, Germany. He is an expert in the field of plasma-membrane transport proteins

and has worked on plant transporters for glucose and sucrose, bacterial and yeast transporters for water-soluble vitamins and most recently also on transporters for amino acids and peptides from mammals.

Besides being deeply involved in the teaching activities of two study programs at TUM, his research focuses on transport processes, vitamins and vitamin-derived coenzymes, metabolism and metabolomics and biochemistry in its broadest sense.

Another interest lies on protein modification in the secretory pathway.

MEMBER OF THE JURY

ZUZANNA SZYMAŃSKA



University of Warsaw Poland

Zuzanna Szymańska, PhD graduated in mathematics and computer science from the Faculty of Mathematics, Informatics and Mechanics

University of Warsaw.

In 2010, at the Polish Academy of Sciences she obtained her PhD degree with distinction in biology with a specialization in biophysics.

She is an Assistant Professor at the Interdisciplinary Centre for Mathematical and Computational Modelling (ICM) at the University of Warsaw.

Her main area of research involves developing multi-scale mathematical models for the growth and spread of cancer.