

Biographies

of

JRC Honorary Fellows

(of those attending the ceremony on 25 September 2017 in person, see Annex for full list)

(in alphabetical order)

1. Spyros P. Arsenis

For his achievements in the application of Statistical Science to the modelling of fraud detection, monitoring and control

Spyros Arsenis studied Mathematics and Statistics at Columbia University (B.A. Cum Laude 1975, M.A. 1977) and MIT (Ph.D., 1985). He started his professional career at the University of Crete and the Foundation for Research and Technology (FORTH), as an adjunct Scientist. In 1990, he joined the JRC to work in Statistics on reliability data, under the Reactor Safety program.

From 1995, Dr. Arsenis' Statistics work focused on the protection of the EU and Member States' budgets from financial fraud. He took the lead on a series of administrative agreements between the JRC and the European Anti-Fraud Office (OLAF). The scope of this work grew to include: Commission internal data; publicly available trade data; customs declarations owned by customs services in the Member States; and data on the production and trade of rough diamonds from Kimberley Process participants.

While the variety and extent of problems of fraud detection, monitoring and control are formidable, Dr. Arsenis and his colleagues' work demonstrates that the application of Statistical Science to the modelling of these problems and the use of statistical results to guide investigations can bring infinite added value, benefiting the EU, Member States and international society as a whole.

His findings have been reported in more than sixty technical reports, and procedures developed have enriched the JRC's web based anti-fraud resource THESEUS (<https://theseus.jrc.ec.europa.eu/>) of which Dr. Arsenis was editor from 2004-2013.

Dr. Arsenis represented the JRC at the European Safety, Reliability and Data Association (ESReDa) in its formative years, 1992-1995. From 2008-2013, he co-represented the EU at the Working Group on Statistics of the Kimberley Process.

Dr. Arsenis retired in 2017 and has relocated to Athens, from where he continues his affiliation with the JRC and his former colleagues as an Active Senior.

2. Michael Balls CBE MA DPhil FRSB

For his achievements in the establishment of the European Centre for the Validation of Alternative Methods (ECVAM)

Michael Balls read Zoology at Oxford University, and, after post-graduate studies in Switzerland and post-doctoral research in the USA, returned to Britain in 1966 to become a Lecturer in the School of Biological Sciences at the University of East Anglia. In 1975, he moved to the University of Nottingham as a Senior Lecturer in the Department of Human Morphology, later becoming Reader and then Professor of Medical Cell Biology. In 1995, he was made an Emeritus Professor of the University.

Professor Balls became a Trustee of the Fund for the Replacement of Animals in Medical Experiments (FRAME) in 1979, and was Chairman of the Trustees from 1981 until 2013. He has been Editor of FRAME's journal, *Alternatives to Laboratory Animals (ATLA)*, since 1983.

He advised the British Government on the *Animals (Scientific Procedures) Act 1986*, and, from 1987-1995, was a founder member of the Animal Procedures Committee, which advised the Home Secretary on all matters related to animal experimentation.

In 1993, Professor Balls became the first Head of the European Centre for the Validation of Alternative Methods (ECVAM), which later became part of the Institute for Health & Consumer Protection at the JRC. ECVAM is responsible for leading and coordinating EU-level efforts aimed at reducing, refining and replacing the use of laboratory animal procedures in research, education and testing. He retired from ECVAM in 2002.

In June 2002, Professor Balls was appointed a Commander of the Most Excellent Order of the British Empire (CBE) on the Queen's Birthday Honours List.

3. Étienne Bartholomé

For his achievements in space observation, in particular in the Global Monitoring for Environment and Security (GMES) and the Copernicus earth observation programme

Étienne Bartholomé received a PhD from the Catholic University of Louvain in 1989. His thesis was based on research work carried out as a JRC grant-holder, looking at remote sensing-based monitoring methods of rain-fed crops at regional level in Sudano-Sahelian Africa. He has since authored or contributed to around 100 scientific publications, one of which has been cited over twelve hundred times.

Dr. Bartholomé joined the JRC as a temporary agent in 1986 and has contributed throughout his career to research and development activities as well as technical support for several EU-funded sub-continental and continental-scale projects in Africa. He has also worked as a European Commission detached expert to the African Union Commission.

From 1992 – 2014, Dr. Batholomé carried out various scientific and administrative tasks in the framework of the VEGETATION programme, the very first space borne Earth Observation instrument co-funded by the European Commission. He has also been task manager of the JRC contribution to several EU Framework Programme (FP) large share-cost action projects related to space observation, including Global Monitoring for Environment and Security (GMES) and the Copernicus earth observation programme.

He was technical coordinator of the JRC-led GLC2000 global land cover mapping project from 2000–2004 and later scientific officer in charge of the implementation of the first

version of the Copernicus / GIO Global Land Component, from 2011 until his retirement in 2014.

4. Marc Cuypers

For his achievements in the JRC's nuclear safeguards activities

Marc Cuypers obtained a degree in Chemistry from the University of Liège in 1960 and a PhD in 'Sciences Physiques' at the University of Paris (Sorbonne) in 1964.

He joined the JRC's Radiochemistry Division in 1968. There he established the non-destructive measurements laboratory for nuclear safeguards which made significant contributions to the field, before he became Programme Manager of the JRC's nuclear safeguards programme in 1978. In this role he developed an international research and development network and negotiated cooperation agreements with several national and international atomic energy institutions. He also prepared the basic strategy papers for all six multi-annual framework programmes in the field of nuclear safeguards between 1978 and 2000.

In 1989 he was appointed Head of Division of nuclear safeguards, working on the establishment of unique test and training facilities, as well as cooperating on the management of important support programmes with EURATOM and the International Atomic Energy Agency (IAEA). In 1994 he was heavily involved in the development of a strategy and cooperation programme with the Russian Federation.

Dr. Cuypers has also been actively involved in several international organisations throughout his career, including serving as Deputy Director of the Institute for Science and International Security (ISIS) and as scientific Secretary, member of the Steering Committee and twice chairman of the European Safeguards Research and Development Association (ESARDA).

In 2000 he received the Distinguished Service Award of the US Institute of Nuclear Materials Management (INMM) in recognition of his contribution to domestic and international safeguards, project and programme management, measurements, professional societies and international cooperation.

5. Horst Liskien

For his achievements in establishing and heading of the Van de Graaff laboratory

Horst Liskien was born in 1933 in what was then known as Königsberg in Germany, but became Kaliningrad in Russia after the Second World War. He studied under Professor Willibald Jentschke, the founding father of the Deutsches Elektronen-Synchrotron (DESY) and graduated with a diploma in Physics from the University of Hamburg in 1961. He would later obtain a Dr.rer.nat (equivalent to PhD) from the same University in 1967.

His professional life began at EURATOM as a trainee in 1961, and he was engaged as an official from September of that year. Between 1961-1962, he went on mission to the Atomic Energy Research Establishment (AERE) in the UK and carried out a neutron experiment on the facility's IBIS accelerator.

His career also included a detachment to the Organisation for Economic Co-operation and Development (OECD) from 1969-1971, where he worked as head of the nuclear data centre belonging to the Nuclear Energy Agency (NEA).

From 1962-1963, he worked on the establishment of the Van de Graaff laboratory at the Central Bureau of Nuclear Measurements (CBNM) in Geel, a facility carrying out fast neutron experiments with two accelerators. He would later head the laboratory, from 1973 until his retirement in 1990. During the same period, he was also a Member – including a period as chairman - of the International Nuclear Data Committee (INDC) of the International Atomic Energy Agency (IAEA) in Vienna.

6. Jean Paul Malingreau

For his achievements in the Global Monitoring of Environment and Security

Jean Paul Malingreau obtained his first degree in Tropical Agronomy at the Catholic University of Louvain in 1970 before obtaining a Master of Science in Hydrology in 1972 and PhD in Ecology in 1980 from the University of California in Davis.

After starting his career in 1975 with the Food and Agriculture Organisation (FAO), in 1983 Dr. Malingreau joined the NASA Goddard Space Flight Centre, where his research contributed to the development of global vegetation monitoring and assessment. Together with colleagues in the US and in Brazil he brought the attention of the world to the rapid deforestation taking place in some parts of the Amazon Basin.

From 1986-1997, Dr. Malingreau built and directed a research laboratory dedicated to the development of vegetation monitoring techniques using satellite data at the JRC. In 1998, he joined the Programme Directorate of the JRC in Brussels as Adviser to the director of Science Strategy. From 2000-2010, he was the Head of Unit of the JRC's Scientific Programme, concentrating on the definition and development of scientific activities to support EU policies.

In the late 90's he developed the original concept of the EU - GMES (Global Monitoring of Environment and Security) Programme and maintained an active role in the development of that initiative (now COPERNICUS) throughout the years. He later became Adviser to the director general of the JRC on Scientific Foresight and Policy Anticipation.

He retired from the European Commission in 2013 but continues to be involved in activities dedicated to foresight studies, notably in the area of global food security.

7. Frank Raes (award picked up by Paul Hearn)

For his achievements in Climate Change and Air Quality

Frank Raes is a former Head of the JRC's Climate Risk Management Unit (2012-2015) and Climate Change and Air Quality Unit (1999 – 2011).

He obtained his PhD at the University of Ghent in Belgium before post-doctoral research at the University of California Los Angeles in the USA. He was visiting professor at Bocconi

University, Milan from 2005 to 2015 and the California Institute of Technology, Pasadena in 2009.

His scientific background is in atmospheric sciences and he has authored around 80 peer-reviewed papers. His research and that of his team at JRC supported the development of an integrated EU climate change and air quality policy.

In 2013, he authored: *Air and Climate: conversations about molecules, and planets, with humans in between*, in which he collated interviews with leading climate scientists. In 2015, he curated the *RESONANCES* Festival, the first JRC-wide project in which science, art and politics were combined to address a major societal issue: food, in this case.

Since 2015, he acts as consultant for the JRC in support of the newly-established SciArt project as well as the second *RESONANCES* Festival, which will take place this year. He continues to give public climate change lectures in Dutch, English and Italian. He founded the “Museum of Anthropocene Technology” in 2017 (www.museumofanthropocenetechology.org).

8. Jean Meyer-Roux

For his achievements in the use of satellite applications for the forecasting agricultural yields and measuring environmental changes

After graduating with degrees in both agronomy and statistics, Jean Meyer-Roux took up a position with the French agricultural statistics department. He worked as head of the regional office in Orleans, before taking up an offer from the US Department of Agriculture (USDA) for a year's exchange to Washington, to see firsthand the use of Landsat satellite imagery for agricultural statistics.

He returned to Paris the following year to prepare for the *Satellite Pour l'Observation de la Terre* (SPOT) launching. Aerial photography was used to simulate satellite results and during these experiments, a group was sent from the JRC to work with Mr. Meyer-Roux and his team. This auspicious encounter led to a job in Ispra.

Mr. Meyer-Roux was hired to test satellite applications as scientific support to DG AGRI and Eurostat. He headed the MARS project, set up in 1989 to forecast crop yield and control fraud in subsidy attribution. While initially foreseen as a pilot project to test satellite applications, it developed as a full operational activity for crop forecasting and is still operational.

Mr. Meyer-Roux later headed a new unit which had various titles (ARIS, EGEO, Land Management) but essentially similar activities. The unit was tasked with taking the tools and models created for DG AGRI and adapting them in order to predict fires or floods and measure environmental changes.

After retiring from the Commission in 2003, Mr. Meyer-Roux eventually moved back to France, where he has been involved in local politics and enjoys canoeing and hiking.

9. Heinz Ossenbrink

For his achievements in the field of renewable energy

Heinz Ossenbrink obtained a PhD in Nuclear Physics from Hahn Meitner Institute, Berlin and joined the JRC in 1982. He developed the JRC's activity on photovoltaics as the EU started its research and pilot programme for photovoltaic systems.

In 1995 he became Head of Unit for Renewable Energy, expanding research and support activities to energy efficiency and bio-energy, notably biofuels. His work was dedicated to the scientific support of EU legislation for renewable energies and energy efficiency. More recently, he worked on developing the Unit's portfolio to support Africa's efforts for a renewable energy supply and also on science support to the Covenant of Mayors.

He led a multidisciplinary team of about 50 scientists covering materials science, physics, electrical and building engineering, energy economy, agriculture and geographical information systems.

Dr. Ossenbrink has authored over 100 publications covering measurement and testing methods for photovoltaic generators, economic assessment of renewable energy, global environmental impacts of extended bio-fuel use and energy efficiency policies as a crucial means for climate change mitigation.

From 1995 until his retirement, he chaired the Technical Committee on solar photovoltaic energy systems of the International Electrotechnical Commission. Under his guidance many successful international standards on photovoltaic technology have been published.

He also served for 20 years as Programme Chair for the series of European Photovoltaic Solar Energy Conferences, and still advises them on scientific content.

He continues to be deeply interested in global sustainability issues, engaging in particular on the architectural and ecological footprints of photovoltaic arrays.

10. Herbert Ottmar

For his achievements in the field of nuclear safeguards and measurement techniques

Herbert Ottmar was born in 1940 in Altensteig, a small town in the Black Forest region in Germany, where he was educated until passing the final high-school exam. His interests in Mathematics and Physics led him to enrol in 1960 at the University of Karlsruhe to study Physics, which he later continued at the Technical University of Berlin.

From 1965-1970 he returned to the Kernforschungszentrum Karlsruhe (KfK) and completed diploma and thesis work, both dealing with experimental basic nuclear structure studies. As a scientific staff member of KfK, he continued his nuclear research from 1970-1973.

After joining the Nuclear Safeguards Project at KfK in 1974, he devoted his scientific work to the development of gamma-ray, X-ray and neutron measurement techniques for the non-destructive assay of nuclear materials, at that time urgently needed as technical measures for the practical implementation of the Nuclear Non-Proliferation Treaty (NPT). In 1983 he developed a novel X-ray technique specially designed for high-accuracy measurements of uranium and plutonium in all types of process solutions in a nuclear reprocessing plant. The adjacent JRC Institute for Transuranium Elements (ITU) provided the facilities for the

successful demonstration of the technique, which was later implemented in all existing major reprocessing plants worldwide.

After a long-standing fruitful cooperation with ITU, he joined the JRC institute in 1994, taking responsibility for the further development of non-destructive assay techniques in general, and for their implementation in the forthcoming analytical on-site laboratories in particular, a challenging novelty in international nuclear safeguards.

11. Jean Auguste Pauwels (takes also the award of his wife Marie Andrée Lamberty)

For his achievements production and certification of the internationally accepted European Certified Reference Materials trademark

Jean Pauwels obtained a PhD in Chemistry from Ghent University in 1969. From 1969-1975 he worked as Scientific Officer at Bureau Eurisotop (Euratom, Brussels), where he was in charge of the coordination of Community programmes using nuclear analysis techniques for industrial applications. In 1975 he joined the Central Bureau for Nuclear Measurements (CBNM) - which later became the Institute for Reference Materials and Measurements (IRMM) - in Geel, where he was in charge of nuclear target preparation.

In 1995 he became Head of the Reference Materials Unit and was responsible for the production and certification of the internationally accepted European Certified Reference Materials trademark. He played a pioneering role in the management of the BSE crisis, the control of genetically modified organisms and the production of clinical reference materials through cooperation with the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC). He also had a major part to play in the development and international acceptance of European certified reference materials and in the development of new guidelines for the certification of reference materials, laid down in fundamental publications and ISO guides and standards.

He has received awards of recognition for his scientific achievements from the International Nuclear Target Development Society in 1996 and from the Technical Division on Reference Materials of AOAC International in 2004.

12. Jean-Marie Salomé

For his achievements for the Geel Electron LINear Accelerator (GELINA)

Jean-Marie Salomé graduated from the Faculté des Sciences in Paris. He has an additional degree from the Institut national des sciences et techniques nucléaires (INSTN) in Saclay and he defended a third-cycle (*Doctorat de 3ème cycle*) thesis on high power microwave windows at the Laboratoire de l'Accélérateur linéaire d'Orsay.

From 1962-1964 he worked at the IBM Research Lab at La Gaude in France. After two years he was recruited by the JRC Central Bureau for Nuclear Measurements (CBNM) in Geel to proceed with the installation of a new pulsed Electron Linear Accelerator to be used in Neutron Physics on the basis of the Time of Flight (TOF) method.

This preliminary equipment was successfully put into operation in 1966. In order to increase the electron beam power and the neutron TOF resolution, the accelerator, which had been

named the Geel Electron LINear Accelerator (GELINA), was "modernised" and "refurbished". To enhance the neutron flux, a mercury cooled rotary target in depleted uranium was successfully developed. In 1985 a very large compression magnet was introduced in the target room to structure the beam to high intensity (100 A) and short time (1 ns) electron bursts.

In 1994 he was appointed Head of the Accelerators and Applications Unit and in 1999 he became Head of the Neutron Physics Unit.

With only some improvements, GELINA is still being used with the same basic structure as designed many years ago.

13. Alois J. Sieber

For his achievements in the field of civil security and security research

Alois J. Sieber has a Master's Degree and PhD in Solid State Physics and has been active as a senior University Lecturer (Habilitation) in Remote Sensing. He is also the author of numerous publications.

From 1974-1986 he was in charge of various projects related to earth observation with special emphasis on radar remote sensing at the German Centre for Aerospace Research (DLR). He was the principle investigator for space shuttle experiments and experiments with the European remote sensing satellite ERS. He was also a member of the Institute of Electrical and Electronics Engineers (IEEE) Geoscience and Remote Sensing Society, where he served as Vice President and Guest Editor for its *Transactions* publication.

He worked for the JRC in Ispra from 1986-2012 and was responsible for a number of unique experimental facilities. He was also involved in efforts to find advanced tools to make humanitarian mine clearance faster, safer and more cost-effective as well as being active in the field of security research. He has chaired working groups on standards for the security and protection of the citizen for the European Committee for Standardisation (CEN) and on innovation for the European Security Research and Innovation Forum (ESRIF).

Since May 2012 he has provided expert support to DG Enterprise and was rapporteur for the pilot study on impact assessment of Framework Programme in support to civil security research. He also provided expert support to the JRC as well as various national research programmes. He has also been a frequently invited speaker to scientific events.

14. Erik van der Goot

For his achievements in text information mining and analysis and the development of the Europe Media Monitor (EMM)

Erik van der Goot is a Senior Expert at the Text Mining and Analysis Competence Centre of the JRC. Previously he helped establish the Text and Data Mining unit, where he has also been acting Head of Unit.

Before this Erik led a team of 25 developers and researchers working on open source text information mining and analysis within the context of the Europe Media Monitor project (EMM). The project also includes the Medical Information System MediSys, a desktop open source intelligence suite, Open Source Intelligence (OSINT) Suite, and various customised installations of the EMM system for security and Early Warning.

Erik is one of the original developers of EMM and started work on open source monitoring and analysis early in 2002. He has developed many of the EMM components, is responsible for the overall system design and is still actively developing software.

When he joined the JRC in 1994, Erik initially worked in the field of Agrometeorological modelling. Prior to joining, Erik worked from 1985 for the Commission at the Joint European Torus (JET) Nuclear Fusion Research project at Culham, UK.

Erik's first job was with the Dutch Energy Research Centre ECN, where he started work in 1981. He has a background in Mechanical Engineering (HTS Haarlem, the Netherlands) and an MSc in Computer Science (Brunel University, London).

His career spans more than 30 years of software and system design, development and implementation, mostly in a research environment.

Annex

	Name	Surname
1	Spyros	Arsenis
2	Michael	Balls
3	Walter	Bambynek
4	Etienne	Bartholomé
5	Andries	Brandsma
6	Marc	Cuypers
7	Steven	Eisenreich
8	Silvio	Funtowicz
9	Jean-Marie	Grégoire
10	Marie Andrée	Lamberty
11	Horst	Liskien
12	Jean-Paul	Malingrau
13	Jacques	Mégier
14	Jean	Meyer-Roux
15	Heinz	Ossenbrink
16	Herbert	Ottmar
17	Jean	Pauwels
18	Frank	Raes
19	Claudio	Ronchi
20	Jean-Marie	Salomé
21	Andrea	Saltelli
22	Alois	Sieber
23	Erik	van der Goot
24	Guido	Verzeletti