

INTERNATIONAL CONFERENCE

Flanders' Future as a Knowledge Society (F2KS) in perspective

November 28, 2014
Palace of the Academies
Albert II auditorium
Brussels - Belgium

"A knowledge society generates, processes, shares and makes available to all members of the society knowledge that may be used to improve the human condition."

(Definition provided by the UNESCO World Summit 2005)



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November 28, 2014 - Palace of the Academies - Brussels

Program

08:30	Registration & coffee
09:00	Irina Veretennicoff - Coordinator of the F2KS Thinker in Residence Project, member of the KVAB <i>Setting the scene</i>
09:15	International perspectives on science education Chair: José Mariano Gago – KVAB F2KS Thinker in Residence Svein Sjoberg – Professor emeritus in Science education, Oslo University <i>Creating a sustainable scientific culture among young people: the importance of interest, joy and motivation, and the curses of testing and ranking.</i> - Q & A
09:45	STEM education in Flanders - PART I Chair: Irina Veretennicoff – Member of the KVAB, VUB <i>A provocative round table discussion followed by a debate with the audience</i> <i>Flanders' STEM deficit in perspective: Are we lacking STEM students and graduates, either in general, in specific domains or not at all? What should we do about this? Is the STEM education adequate?</i> Kurt Meeus – ASO GO! Joos Vandewalle – KVAB, KU Leuven Discussant: José Mariano Gago Bernadette Hendrickx – VeLeWe Andreas Frans – VVS Q&A
10:45	Coffee break
11:15	Facts and Figures about Flanders as a Knowledge Society Chair: Dirk Van Dyck – Member of the KVAB, UAntwerpen Koen Debackere – Professor innovation management and policy, KU Leuven Q & A
11:45	STEM education in Flanders - PART II Chair: Veronique Van Speybroeck – Member of the KVAB, UGent <i>A provocative round table discussion followed by a debate with the audience</i> <i>Flanders' approach to informal STEM education.</i> Kathleen Kuypers – Teacher ICT and CS Erik Jacquemyn – Technopolis, STEM Academies Jo Decuyper – RVO Society, IMEC Q&A
12:30	Lunch

Registration: kvab.fikket.be



Met steun van de
Vlaamse overheid



Vlaanderen
In Actie
Pact 2020

- 14:00 Address from the Flemish minister of Innovation**
Chair: **Ludo Gelders** – President of the KVAB
- Philippe Muyters** – Flemish Minister for Work, Economics, Innovation and Sports
The need for science and innovation in Flanders: food for thought.
- 14:20 Evidence, doubts and thoughts about Flanders on its way to a knowledge society**
Chair: **Alexandre Sevrin** – Member of the KVAB, VUB
- Eric Corijn** – Cultural philosopher and social scientist, Founder COSMOPOLIS, VUB
Are our universities ready for the knowledge society?
- Conny Aerts** – Vice-dean communication & Outreach, Faculty of Science, KU Leuven, KVAB
A natural scientist to bear witness - Q & A
- 15:05 International perspectives on knowledge-based societies and economies**
Chair: **José Mariano Gago** – KVAB F2KS Thinker in Residence
- Joaquim Oliveira Martins** – Head, OECD Regional Development Policy Division, Paris
How are regional and national policies addressing the challenges of supporting knowledge-based economies? - Q & A
- 15:35 Break**
- 16:05 Flanders economic development in perspective**
Chair: **Christiane Malcorps** – Member of the KVAB, Executive vice-president at Solvay S.A.
- Luc Soete** – Former director UNU-MERIT, Rector Magnificus Maastricht University
Flanders economic development in perspective: how can society sustain a performing knowledge-based economy? - Q & A
- A provocative round table discussion followed by a debate with the audience*
- Flanders towards a creative, innovation driven knowledge economy?*
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| Koen Laenens – Essenscia | Charles Hirsch – KVAB, VUB, Numeca |
| Marie Claire Van de Velde – UGent | Wim Dehaene – KU Leuven, MICAS |
| Lena Bondue – NFTE | Q&A |
- 17:15 Conclusions and recommendations**
Jose Mariano Gago – KVAB F2KS Thinker in Residence
A knowledge-based society under catalysis: a personal summary, and some naïve proposals for action.
- 17:45 Official closing**
Ludo Gelders – President of the KVAB
- 17:50 Reception and room for further informal discussions**

Is Flanders indeed on its way to a curiosity and innovation driven knowledge society? This is the question that we intend to address today during this international Conference entitled "**Flanders Future as a knowledge society (F2KS) in perspective**".

Welcome to you, esteemed 25 experts and stakeholders who will throw their own light on the question. Welcome to you, the 150 ladies and gentlemen from many horizons who decided to attend the Conference and hopefully contribute to a debate that will for sure not be closed tonight!

Most of you may know that our Academy has committed itself to organize nine "Thinkers in Residence" programs in the period 2013-2017. These programs aim at giving the Flemish Government but also our society at large, an independent, high level, "academic" opinion on a topic of concern today and a source of even more concern for tomorrow.

The rules of the game are the following:

- **the topic** is determined by one or more of the four classes of the Academy. In our case, it were the members of the class of Natural Sciences - that I had the privilege to direct last year- who came up with the Flanders' Future as a Knowledge Society (F2KS) theme. We were very fortunate that two eminent members of the class of the Technical Sciences joined the steering committee.
- **the process** is guided by a well-known international expert in the field, a "Thinker" invited to spend about 45 days - fortunately not in a row! - at the Academy. His/her responsibility is to feed the discussions, inspire and interrogate its members and hopefully many other stakeholders in Flanders. And vice-versa. By the end of his/her stay the Thinker is expected to organize a Conference ... such as the one we are having today.

It didn't take very long to identify Professor José Mariano Gago as probably the best possible candidate " Thinker" for our project. I hope that his short CV, to be found in this conference brochure will convince you that we made the right choice.

Let us not anticipate here on what will be discussed today. Let me just tell you that Flanders has made great progress on its way to a Knowledge Society especially in the last decade. Innumerable programs, actions and instruments to stimulate research, education, and innovation for business and industry have been launched. But we have to admit that the return on these investments is not as strong as expected. Can one identify some of the origins of this problem? Can solutions be proposed?

During this Conference our concept of a Knowledge Society will we confronted with the Flemish realities, starting from present day trends in education, society and economy. We are fortunate to have three international experts with us, who will bring our questions in perspective. Although most presentations will be given in English, your interventions, questions and remarks in Dutch or in French are more than welcome.

A twitter account has been opened to collect your first reactions: #F2KS.

On behalf of Prof JM Gago and the steering committee of this Thinkers in Residence program, I wish you a most interesting and enjoyable day!

Irina Veretennicoff
Coordinator of the F2KS Thinker in Residence Project



José Mariano Gago – KVAB F2KS Thinker in residence

Former Minister of Portugal, in charge of Science and Technology, Information Society and Higher Education (1995-2002 and 2005-2011).

Professor José Mariano Gago is an experimental high energy physicist and a Professor at IST (Instituto Superior Técnico, Lisbon). He graduated as an electrical engineer by the Technical University of Lisbon and obtained a PhD in Physics at École Polytechnique and Université Pierre et Marie Curie, in Paris. He worked for many years as a researcher at the European Organisation for Nuclear Physics (CERN), Geneva, and in Portugal's Laboratory for Particle Physics (LIP) that he created and currently chairs.

He has also created and chairs a think-tank for forward-looking studies, Instituto de Prospectiva, responsible for the annual Arrabida meetings on prospective studies (since 1991).

He launched the Ciência Viva movement to promote S&T culture and S&T in society. He was responsible for the reform of Higher Education and for the policies leading to the fast development of Science and Technology in Portugal. During the Portuguese EU presidency (2000), he prepared, along with the European Commission, the Lisbon Strategy for the European Research Area and for the Information Society in Europe. He also launched in 1998 the Eureka-Asia Initiative in Macao. During the 2007 Portuguese EU Presidency he promoted the adoption of a strategy for the future of S&T in Europe and for the modernisation of



Universities in the EU. He was responsible, with M. Heitor, for the launching of large scale collaborative programs with US universities (MIT-Portugal, as well as with CMU, UTA and Harvard Medical). Prof. Gago has also prepared, with UNESCO and CPLP, a new initiative and a new UNESCO Centre for the advanced training of scientists from developing countries, Ciência Global.

He chaired the Initiative for Science in Europe (ISE) and campaigned for the creation of the European Research Council. He also chaired the High Level Group on Human Resources for Science and Technology in Europe and coordinated the European report Europe Needs More Scientists (2004). Prof. Gago was the first President of the International Risk Governance Council (IRGC) in Geneva and is a member of IRGC Board. He is a member of the Board of INSERM (France), a policy advisor to the European Cancer Organisation (ECCO), a member of the Board of Trustees of the Cyprus Institute, and a member of the Governing Board of Euroscience. He is special advisor to the European Space Agency (ESA) Director-General. He is a member of the Academia Europaea and was elected Honorary Member of the European Physical Society.

Steering Committee F2KS

Conny	Aerts	Institute of Astronomy, KU Leuven
Yvan	Bruynseraede	Laboratory for Solid-State Physics and Magnetism, KU Leuven
Jean	De Cannière	Executive Director United Fund for Belgium
José Mariano	Gago	Former Minister of Portugal
Charles	Hirsch	President NUMECA International, VUB
Dirk	Inzé	Plant Systems Biology, UGent
Christiane	Malcorps	Executive Vice President Solvay SA/NV
Niceas	Schamp	Chemistry, UGent
Alexandre	Sevrin	Theoretical Physics, VUB
Dirk	Van Dyck	Physics, UAntwerpen
Paul	Van Houtte	Metallurgy and Materials Engineering, KU Leuven
Joos	Vandewalle	Electrical Engineering, KU Leuven
Irina	Veretennicoff	Photonics Science and Engineering, VUB
Christoffel	Waelkens	Institute of Astronomy, KU Leuven

In order of appearance

Svein Sjøberg – Professor emeritus in Science Education, Oslo University

Svein Sjøberg is professor emeritus in science education at Oslo University, Norway. He has worked extensively with international and comparative aspects of science education through e.g. UNESCO, OECD, ICSU and the EU, and has won several prizes and awards for his research and promotion of science literacy and public understanding of science. He is member of the two Norwegian academies: Norwegian Academy of Science and Letters and Norwegian Technical Science Academy.



Creating a sustainable scientific culture among young people: The importance of interest, joy and motivation, and the curses of testing and ranking.

School science is often perceived to be dull, boring, closed and authoritarian, and when science is no longer an obligatory part of the curriculum, many students opt out of science. Students' attitudes to and perceptions of science and technology (S&T) are strong determinants for their choice of studies and careers. Moreover, attitudes are more lasting than the actual knowledge that has been learned, and may determine how students relate to S&T as adults, as voters and consumers.

International comparisons are important; we can learn from others and get inspiration. But when international comparisons take the form of country rankings according to universal, global (and hence decontextualized) criteria, the results may be damaging and detrimental to a sustainable interest in S&T. The global discourse on education is increasingly being dominated by the OECD-study PISA. The race to improve PISA-rankings has become high priority in many countries. National curricula, values and priorities are pushed aside. The battle to improve test results may conflict with the task to make science relevant, interesting and motivating for the learners. The presentation will raise some of the problems caused by PISA as a global measure of quality.

Koen Debackere – Professor innovation management and policy, KU Leuven

Koenraad Debackere became professor at KU Leuven in 1995 where he teaches Technology and Innovation Management. He has won Best Research Paper Awards from the American Academy of Management and the Decision Sciences Institute. His research has focused on the area of technology and innovation management and policy. He is also actively engaged in technology transfer activities as managing director of KU Leuven Research & Development and Chairman of the Gemma Frisius Fonds of the KU Leuven.



He is the co-founder and chairman of Leuven.Inc, the innovation network of Leuven high-tech entrepreneurs. He is a board member of IWT-Vlaanderen, the Flemish government agency that supports science and technology development in Flemish industry. Since 2005, he is the general manager of KU Leuven.

Facts and Figures about Flanders as a Knowledge Society.

The focus of the presentation is on the indicator base to map the knowledge and innovation intensity of the Flemish region. Data and indicators on R&D expenditures, participation in higher education programs, participation in the European Research Area, publication and patent output, and the innovation performance of Flemish companies underpin the innovation performance of Flanders. Time series data show that the Flemish region is oscillating between being an innovation leader and an innovation follower.

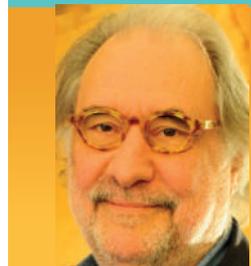
Philippe Muyters – Vlaams Minister van Werk, Economie, Innovatie en Sport



The need for science and innovation in Flanders: food for thought.

Philippe Muyters was born in Antwerp on 6 December 1961. After his economic studies, he started his career as an economic advisor. At the age of 32, he became head of the SERV (Flanders' Social and Economic Council). From 2000 until 2009 he was the Managing Director of VOKA (Flemish Chamber of Commerce and Industry). In 2009 he joined the Flemish Government, where he was responsible for Finance, Budget, Work, Town and Country Planning and Sports. After the elections of June, Philippe Muyters became Flemish Minister for Work, Economics, Innovation and Sports, a portfolio that might have been written for him.

Eric Corijn – Cultural philosopher and social scientist, Founder COSMOPOLIS, VUB



Eric Corijn, cultural philosopher and social scientist, professor of urban studies at the Vrije Universiteit Brussel, founder of Cosmopolis, Centre for Urban Research, vice chair of the Brussels Studies Institute and director of Brussels Academy, coordinator of 4Cities, an Erasmus Mundus Master in Urban Studies with the universities of Brussels (VUB and ULB), Vienna, Copenhagen and Madrid (Complutense and Autonoma), author of more than 250 publications.

Are our universities ready for the knowledge society?

The hypothesis of a "knowledge society", where innovation and creativity are essential and immediate tools for socialisation, questions the town gown relationship. Are universities adapted to this knowledge

society? Are the production conditions of academic knowledge suited for contextual social challenges? This contribution will advance some sceptic observations on the “really existing academy” and suggest paths to a better relation with knowledge society. It will define the importance of innovation and creativity in relation with the processes of globalisation, urbanization and postindustrial transition. It will then contrast the origin, structure and functioning of the universities related with the nation state, with scientific disciplines and with commodification of knowledge. It will finally draw some arguments from the “slow science” movement to improve the relationship between town and gown.

Conny Aerts – Vice-dean communication & Outreach, Faculty of Science, KU Leuven, KVAB



Conny Aerts studied mathematics at Antwerp University and astrophysics at KU Leuven. She is currently Director of the Institute of Astronomy and Vice-Dean Communication & Outreach of the Faculty of Science, KU Leuven. She also occupies the Chair in Asteroseismology at the Radboud University Nijmegen in the Netherlands. Conny Aerts is an expert in stellar astrophysics and a pioneer of the research field of asteroseismology. She was awarded with an ERC Advanced Grant in 2008 and was the first woman to receive the Francqui Prize in Exact Sciences in 2012. Conny Aerts holds numerous international responsibilities worldwide, in particular at space and research agencies such as ESA, ESO, and ERC.

A natural scientist to bear witness.

Conny Aerts will stress the importance of motivation and fun as basis to choose studies in the natural sciences and mathematics. Her talk also contains a plea to adopt research-oriented active learning in lecturing and to avoid inappropriate stereotypical representations of scientists in the press and media. The importance of collaborative efforts between secondary schools and universities to attract more students to STEM education will also be stressed, with specific emphasis on the need for more female and allochthonous populations at universities.

Joaquim Oliveira Martins – Head, OECD Regional Development Policy Division, Paris



Joaquim Oliveira Martins is the Head of the OECD Regional Development Policy Division, where he supervises projects on regional and urban development, multi-level governance issues, regional statistics and well-being. He was former Head of the Structural Economic Statistics Division, where he developed Trade & Globalisation studies, Productivity measurement and Business statistics. He

was also Senior Economist at the OECD Economics Department, where he managed projects on Health Expenditures, the Economics of Education and Ageing and Growth. As Head of Desk for Emerging markets, he was in charge of the first Economic Surveys of Brazil, Chile and several transition countries. Before the OECD, he was Research Fellow at the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII, Paris). He holds a PhD in Economics from the University of Paris-I, Panthéon-Sorbonne, and is currently Associate Professor at the University of Paris-Dauphine.

How are regional and national policies addressing the challenges of supporting knowledge-based economies?

The traditional macro and sectoral engines of growth seem to be stalled in Europe. Although there is evidence that economy-wide structural policies and sound macroeconomic conditions are good for regional productivity convergence, the particular (power-law) distribution of the contribution of the different types of regions to aggregate growth, implies that uniform, economy-wide policies alone are unlikely to achieve all efficiency gains. This granularity of the sources of growth implies that economy-wide structural policies supporting growth and innovation may need to be completed by spatially-targeted policies. The latter can also increase policy complementarity, and, in this way, contribute to enhancing the return of individual reforms across all levels of government. In this regard, there is a “good governance premium” to be mobilised, for which regional policies can contribute.

Luc Soete – Former director UNU-MERIT, Rector Magnificus Maastricht University



Luc Soete is Rector Magnificus of Maastricht University. Professor Soete is a member of the Royal Dutch Academy of Sciences (KNAW) and the Advisory Council for Science and Technology Policy (AWT). He is Chairman of the High Level Group “Research, Innovation and Science Policy Experts”(RISE) at the

European Commission. Professor Soete obtained his PhD in economics at the University of Sussex. He worked at the Department of Economics of the University of Antwerp, the Institute of Development Studies and the Science Policy Research Unit both at the University of Sussex, and the Department of Economics at Stanford University. In 1986, he was appointed Professor of International Economic Relations at Maastricht University. In 2002, he was awarded the Maastricht School of Management Honorary Fellow Award. In 2006 he obtained the Commander in the Order of the Crown, a national decoration of Belgium. In 2010 he received a Doctor Honoris Causa from the University of Ghent.

Flanders economic development in perspective: how can society sustain a performing knowledge-based economy?

Panel discussion on STEM education in Flanders - PART I

Flanders' STEM deficit in perspective: Are we lacking STEM students and graduates, either in general, in specific domains or not at all? What should we do about this? Is the STEM education adequate?

Members of the panel:

1. Kurt Meeus

General Director, Scholengroep Midden-Brabant, GO! Onderwijs van de Vlaamse Gemeenschap
Headmaster of Koninklijk Atheneum Vilvoorde (ASO)
Teacher Physics and ICT at secondary level
Ingenieur

Van een complexe structuur met een eenvoudige en duidelijk afgebakende taak voor een leerkracht naar een eenvoudige structuur met een complexere taak voor een team van leerkrachten? Zelfsturende teams als "systeem" als basis voor actueel wetenschapsonderwijs?

2. Bernadette Hendrickx

Member of the Association of Science Teachers (VeLeWe)
Teacher in physics Heilig-Hart&College, Halle
Representative of the science teachers in the ASO

"Optimizing science education to make students like studying"

In a knowledge society sciences are present in everyone's daily life. In a knowledge society there is a great need for scientists. Therefore we have to invest in science education to offer quality and motivate young people to choose for science studies.

A central examination can make students work regularly and continuously to really enjoy sciences and to be well prepared for science education at the university.

3. Joos Vandewalle

Joos Vandewalle obtained the electrical engineering degree and doctorate in applied sciences from KU Leuven in 1971 and 1976. Until October 2013 he was a full professor at the Department Electrical Engineering (ESAT), KU Leuven, and head of the SCD division at ESAT, with more than 150 researchers. Since October 2013 he is a professor emeritus with assignments at KU Leuven. He held visiting positions at University of California, Berkeley and I3S CNRS Sophia Antipolis, France. He taught courses in linear algebra, linear and nonlinear system and circuit theory, signal processing and neural networks. His research interests are in mathematical system theory and its applications in circuit theory, control, signal processing, cryptography and neural networks. He is a Fellow of IEEE, IET, and EURASIP and member of the Academia Europaea and of the Belgian Academy of Sciences.

"Bridging the gap between high schools and universities"



Andreas Frans

Better preparation and realistic views on his/her capacities with a positioning test at the end of high school can help the student to confirm or modify the study program selection. This leads to a better success rate in the first academic year and more STEM graduates.

4. Andreas Frans

International officer, VVS - National Union of Flemish Students
Student, Faculty of Medical and Biomedical Sciences, KU Leuven



Kurt Meeus

Panel discussion on STEM education in Flanders - PART II

Flanders' approach to informal STEM education.

Members of the panel:

1. Kathleen Kuypers

Kathleen Kuypers is passionate about teaching ICT and CS. As a master in mathematics and computer science at the university of Antwerp she worked as a software engineer at Ordina Denkart and as a network engineer at Digipolis and Azlan. She also trained future IT teachers as a lecturer at Thomas Moore higher Education institute. When the domain "IT and networks" was launched in the technical secondary education (TSO), she was eager to bring her experience to a new generation of students. She is determined to show them the way to become not only consumers but also creators in the digital world. Now she is a driving force translating this idea into concrete actions. As a result, her school has become a "STEM school of excellence". Her continuing challenge is to convince young students that STEM is not nerdy but a fascinating topic with a great future.



Bernadette Hendrickx

"Moving up from digital consumers to creators, how to lead students the way."

As digital natives, today's students take modern technology for granted. They simply can't imagine a world without it... By showing them what technology is driving the tools they use in daily life, we try to make students curious about the possibilities of ICT. This is an effective way to make students eager to design and create their own applications instead of merely use tools.

In secondary school we should train students to become smart consumers as well as creators of digital technology. To achieve this, the current subject Informatics should be split up into two. An Applications subject in which students learn to use tools in a smart way and a Computer science subject which deals with creation of digital solutions. It is also very important to inspire and impassion students, therefore teachers should tease them by showing the omnipresence of technology in daily life. This omnipresence proves that STEM is relevant to society and to the future.



Kathleen Kuypers



Joos Vandewalle

2. Jo De Cuyper

Jo Decuyper studied physics and obtained his PhD in 1993 on cognitive models of the physical world and their relation to common sense reasoning at the Artificial Intelligence lab of the Vrije Universiteit Brussel in 1993. He joined the Flemish administration for science policy. Among other tasks he was responsible for a program devoted to the public understanding of science and technology. Since 2000 he is directing the Roger Van Overstraeten Society VZW (rvo-society), a not-for-profit organisation founded by imec, the universities, industrial partners and a number of close friends of Professor Van Overstraeten.

The RVO Society was established in 2000 in fond memory of Prof. Dr. Ir. Roger Van Overstraeten (RVO), the founder and first CEO of Imec. The RVO Society has the ambition to be kind of a "logic gate" between research and scientific and technical education so as to convey, in an interesting and relevant way, awareness and practical skills to young people and the public-at-large.

During this panel discussion, we want to present some elements of thought that can serve as building blocks of a more efficient STEM-based education system and lead to a broader public support for STEM activities in general. They might also pave Flanders' way towards a knowledge society.



Jo De Cuyper



Erik Jacquemyn

3. Erik Jacquemyn

Erik Jacquemyn is CEO of Technopolis®, the Flemish Science Centre (Mechelen, Belgium). As CEO -since 1988 - of the F.T.I Foundation (set up by the Flemish Government), he coordinates numerous activities bringing science and technology to different target groups. The science centre (open February 2000) and its outreach activities reach over 500 000 people/year. Erik Jacquemyn served on the Boards of Ecsite (European Network of Science Centres and Museums) and ASTC (Association of Science-Technology Centers) and sits on different committees and juries active in the field of science communication.

"On Technopolis® and STEM Academies"

Technopolis® is the Flemish centre for science communication, with its science centre in Mechelen (opened in 2000) and numerous innovative outreach projects for specific target groups. Technopolis®' mission is to Bring science and technology closer to people. Technopolis® aims to go further than just heightening public awareness of or insight into sciences and technology. Its objective is to involve the public at large in sciences and technology.

With its activities, Technopolis® is a complement to the formal education system. Informal learning, also called "free choice learning", is an important tool for getting both young and old interested, educated and involved in science and technology.

Internationally Technopolis® is considered one of the leaders in the field. From 17 till 19 March 2014, Technopolis® hosted the Science Centre World Summit, a unique high-level, global gathering that brought together CEO's, managers, decision makers and experts from within and outside the science centre field. In total, 464 participants from 58 different countries attended the World Summit.

Panel discussion on Flanders economic development

Flanders towards a creative, innovation driven knowledge economy?

Members of the panel:

1. Koen Laenens

Secretary General, Director Social Affairs, Essenscia

2. Charles Hirsch

Founder of Numeca International (Software for Computational Fluid Dynamics (CFD) design and automation), VUB
Member of the KVAB, initiator of the KVAB publication: "Innovative entrepreneurship by spin-offs of knowledge centra"



Koen Laenens



Charles Hirsch



Marie Claire Van de Velde



Wim Dehaene



Lena Bondue

3. Marie Claire Van de Velde

Advisor Vice-Rector UGent

4. Wim Dehaene

KU Leuven, ESAT-MICAS

Micro-electronics engineer with projects on bridging the gap between high tech development at universities and secondary education.

5. Lena Bondue

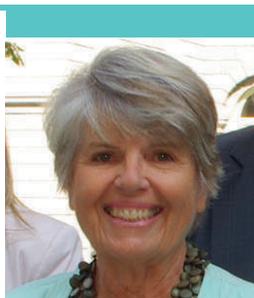
Director NFTE, Network for Training Entrepreneurship Belgium

Chairpersons

Irina Veretennicoff

Member of the KVAB, VUB

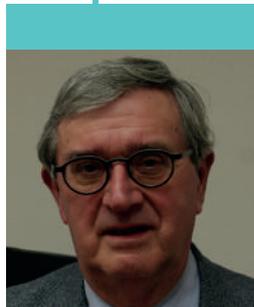
Irina Veretennicoff obtained her PhD in Physics from the Vrije Universiteit Brussel (VUB) in 1973. She became full professor at its Faculty of Engineering in 1990 in a new department, devoted to research and education in applied physics and photonics, that she contributed to establish and expand. Irina has been serving as an expert in many European, Federal and Flemish advisory boards and research programs. She is member of the Flemish Academy for Science and Literature and Fine Arts and was the first woman to direct the Class of Natural Sciences in 2012 and 2013.



Ludo Gelders

President of the KVAB, KU Leuven

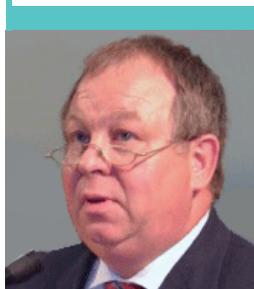
Ludo Gelders is emeritus professor of Industrial Management at KU Leuven. He holds degrees in electromechanical engineering (Ghent) and Industrial Management (Louvain). He studied management at the MIT-Sloan School and holds a PhD in Industrial Management. After work experience in jet-engine manufacturing, he took up an academic career. He served as chairman of the Department of Mechanical Engineering and the Center for Industrial Management (KU Leuven). He published on logistics, production, maintenance and quality management. He has been active in private and public companies. He was President of the Flemish Water Supply Company, vice-president of UHasselt and President of KVIV (Royal Flemish Engineering Society). Currently he is President of the Royal Belgian Academy for Sciences and the Arts (KVAB).



Dirk Van Dyck

Member of the KVAB, UAntwerpen

Dirk Van Dyck is professor emeritus in physics and honorary vice-rector for research of the University of Antwerp. He is known for his work on electron microscopy and microtomography. He is the codeveloper of the first desk-top X-ray microtomograph and founder of 4 spin-off companies including SKYSCAN. Dirk Van Dyck is manager of UBCA - Research Park of UAntwerpen. He published about 300 scientific papers and several books and holds 4 patents. In 2001 he received the Francqui Chair of the KU Leuven for his scientific work in electron microscopy and holography.



Alexandre Sevrin

Member of the KVAB, VUB

Alexander Sevrin got his physics degree in 1985 from UGent. In 1988 he obtained his PhD from KU Leuven. He performed postdoctoral research at the C.N. Yang Institute for Theoretical Physics at Stony Brook (New York), the University of California at Berkeley, the Lawrence Berkeley Laboratory and at CERN. At the end of 1994 he got tenure at the Physics Department of the Vrije Universiteit Brussel. He founded there the Theoretical High Energy Physics Group whose members



investigate theoretical aspects of elementary particle physics and cosmology.

He is the deputy director for physics of the International Solvay Institutes for Physics and Chemistry and he serves on numerous boards among which the board of the Francqui Foundation and the one of the Vlaamse Wetenschappelijke Stichting which he also presides. He is a guest professor at UAntwerpen and KU Leuven.

Veronique Van Speybroeck

Member of the KVAB, UGent

Veronique Van Speybroeck is full professor at UGent within the Faculty of Engineering and Architecture. She also holds a position as Research Professor at UGent. She graduated as engineer in physics at UGent in 1997 and obtained her PhD in 2001 on a subject dealing with theoretical simulations of chemical reactions with static and dynamical approaches. She was co-founder of the Center for Molecular Modeling (CMM), which is now composed of about 35 researchers. In this Center, she is leading the "Computational Molecular Modeling" division. Her current research interests primarily comprise study of the kinetics of chemical reactions with state of the art molecular modeling techniques. She is member of the STEM-platform which was installed by the Flemish government to promote Science, Technology, Engineering and Mathematics training and careers.



Christiane Malcorps

Member of the KVAB, Solvay S.A.

Christiane Malcorps is Head of Global Facility Management and Country Manager for Belgium for SOLVAY S.A. Throughout her career she gained extensive experience in business management, always with a special attention for safety, quality and innovation to ensure that sustainable development creates value. She is active in several organizations striving for a direct contribution of business and academic experience to find solutions for societal needs. She is member of the



Business-Academia Board for university qualified engineering at the Flemish universities of Louvain & Ghent. She is also member of the Board of several professional organizations in Belgium (essenscia, UWE, VOKA, BECI, de Warande). She is engaged in teaching on Skill Development of PhD students preparing them for a successful business – academia interface and helping them to develop as better citizens of the world. Christiane Malcorps studied university qualified chemical engineering at the Catholic University of Louvain and completed a PhD with major in Veterinary Science and minor in Biomedical Engineering at the University of Wisconsin, Madison, USA in 1983.

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