EXPERTS, INTERNATIONAL, EVALUATION

A revised composition for the committee of experts in charge of assessing the CNRS

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Hcéres has published on January 9, 2023, a press release giving the composition of the international committee of 16 experts in charge of the assessment of the CNRS in 2023.

For personal reasons, two of the experts have decided in February to withdraw from the assessment committee, and two new members have joined the committee, whose new composition is as follows:

- Martin Vetterli, president of the Swiss Federal institute of technology in Lausanne (EPFL), chair of the assessment committee;
- Sophie D'Amours, rector of *Université Laval* in Quebec (Canada), vice-chair of the assessment committee;
- Michael Bronstein, DeepMind professor of artificial intelligence, University of Oxford;
- Lorraine Daston, director emerita, Max Planck Institute for the history of science in Berlin, and Committee on social thought, University of Chicago;
- Jo De Boeck, executive vice-president, chief strategy officer, Imec (Leuven, Belgium);
- Sandra Díaz, professor of ecology at the National University of Córdoba (Argentina);
- Jérôme Faist, professor of physics at the Swiss Federal institute of technology in Zurich (ETHZ);
- Timothy Gowers, professeur titulaire of the Combinatorics chair at the Collège de France, and fellow of Trinity College, University of Cambridge;
- Hervé Guillou, former chairman and chief executive officer of Naval Group;
- Regine Kahmann, director emerita, Max Planck Institute for terrestrial microbiology (Marburg);
- Ilan Marek, distinguished professor of chemistry at the Technion (Israel Institute of technology, Haifa);
- Friederike Otto, senior lecturer at the Grantham Institute for climate change and the environment, Imperial College London;
- Riccardo Pozzo, professor of philosophy at Tor Vergata University of Rome;
- Richard Riman, professor of material sciences and engineering, Rutgers University;
- Chiara Sabatti, professor of biomedical data science and statistics, Stanford University;
- Christopher Stubbs, professor of physics and astronomy, dean of science, Harvard University.

Martin Vetterli

Chair of the assessment committee

President of the Swiss Federal institute of technology in Lausanne (*EPFL*, Switzerland).
After completing his PhD at *EPFL* in 1986, Martin Vetterli taught electrical engineering in the Engineering department at Columbia University. In 1993, he joined the University of California Berkeley as a professor in the department of electrical engineering and computer science. In 1995, he was appointed professor at *EPFL* where, among other things, he was responsible for the field of communication systems and headed the audio-visual communication laboratory. Vice-president of *EPFL* from 2004 to 2011, he became dean of the School of computer and communication sciences in 2011. At the same time, he also taught at the Swiss federal institute of technology in Zurich (*ETHZ*) and at Stanford University. From 2013 to 2016, he chaired the National research Council of the Swiss National Science Foundation. He has been president of *EPFL* since 2017.
His research activity concerns several areas in electrical engineering, computer science and applied mathematics. His work covers several fields including wavelet theory and applications, image and video compression, fast algorithms and self-organised communication systems. He is the author of about fifty patents, which have led to the creation of several startups and to technology transfers to companies. He has been awarded numerous national and international awards.

Sophie D'Amours

Vice-chair of the assessment committee

Rector of Université Laval (Canada).
After her PhD in applied mathematics, Sophie D'Amours joined Université Laval in 1995, as a professor in the department of mechanical engineering. Her research works concern business engineering, supply chain management and decision processes. She has held three research chairs, including two Canada research chairs. In Université Laval, she was appointed as vice-dean for development and research in the Faculty of science and engineering (2011-2012), and then vice-rector for research (2012-2015). She has been rector of Université Laval since 2017.
She founded and headed the research consortium Forac, which brings together the R&D leaders of the Canadian forestry industry (2002-2011) and provided the scientific leadership of a Canadian research strategic network. She is a member of the Engineering Academy of Canada, of the Order of engineers of Quebec, and of the Royal Academy of agriculture and forestry in Sweden.

Michael Bronstein

DeepMind professor of artificial intelligence at the University of Oxford.
Michael Bronstein received his PhD from the Technion in 2007. In 2010, he joined the University of Lugano (Switzerland) as a professor at the Institute of computational science. In 2018, he was appointed as a professor in the department of computing at Imperial College London. In 2022, he joined the University of Oxford. He has held visiting appointments at Stanford, MIT and Harvard, and has been affiliated with three Institutes for advanced studies: at the *Technische Universität München* as a Rudolf Diesel fellow (2017-2019), at Harvard as a Radcliffe fellow (2017-2018), and at Princeton (2020). He has been awarded five ERC grants (European research council) and has received several international awards. He is a member of the *Academia Europaea*.
In addition to his academic career, Michael Bronstein has a serial entrepreneurial activity. He has founded multiple startup companies, including Novafora, Invision (acquired by Intel in 2012), Videocites, and Fabula AI (acquired by Twitter in 2019).

Lorraine Daston

Director emerita, Max Planck Institute for the history of science (Berlin), and Committee on social thought, University of Chicago.
Lorraine Daston received her PhD in the history of science from Harvard University in 1979. She has taught at Harvard, Princeton, Brandeis, Göttingen and Chicago. Since 1995, she has been director at the Max Planck Institute for the history of science in Berlin. She is also a regular visiting professor at the University of Chicago and a permanent

fellow at the Wissenschaftskolleg zu Berlin. Her work spans a broad range of topics in the early modern and modern history of science, including probability and statistics, wonders and the order of nature, scientific images, objectivity and other epistemic virtues, quantification, observation, algorithms, and the moral authority of nature. The theme that unites all of her work is the history of rationality, both its ideals and practices. She is a fellow of the American Academy of arts and sciences, a member of the Berlin-Brandenburg Academy of sciences, and a corresponding member of the British Academy. Her work won her numerous national and international awards.

Jo De Boeck

Executive vice-president and chief strategy officer, Imec (Leuven, Belgium).
Jo De Boeck obtained his PhD in 1991 at the University (KU) of Leuven (Belgium) and joined Imec, an inter-university research institute in microelectronics and nanotechnology created in 1984. He was a NATO fellow at Bellcore in the USA (1991-1992), and a visiting researcher at the Joint research center for atom technology in Japan (1998). In his research career, he has led activities on integration of novel materials at device level and new functionalities at systems level. In 2003, he became vice-president of Imec in charge of the Microsystems division, and in 2005 he started the Holst Center (Eindhoven), a joint open innovation initiative between Imec and TNO. From 2010, he headed the Smart systems and energy technology business unit of Imec. He is a part-time professor at the Engineering department of the KU Leuven, and a visiting professor at the TU Delft in the Netherlands. He was appointed chief technology officer of Imec in 2011 and chief strategy officer in 2018. He is responsible for steering Imec's investment portfolio in R&D, innovation and spin-offs, and strategic relationships with academic partners.

Sandra Díaz

Professor of ecology at National University of Córdoba (Argentina).
Sandra Díaz obtained her PhD from the National University of Córdoba in 1989. Her research activities focus on plant functional traits and syndromes, their effects on ecosystem properties and their interactions with global change factors. She developed a new methodology to quantify plant biodiversity and was the first to provide a global picture of the functional diversity of vascular plants, covering the whole spectrum of plant form and function. She is involved in interdisciplinary work on how societies value and reconfigure nature. She is a professor of ecology at the National University of Córdoba, a senior member of the Argentine National Research Council, and a visiting professor at the School of geography and the environment at the University of Oxford. She served as co-chair of the IPBES global assessment on biodiversity and ecosystem services from 2016 to 2019. She is a member of the Academies of sciences of Argentina, Latin America, France, Norway and USA, and is a foreign fellow of the British Royal Society. Her work was recognized with numerous international awards.

Jérôme Faist

Professor in the physics department at the Swiss Federal institute of technology in Zurich (ETHZ).
Jérôme Faist obtained his PhD in physics at EPFL in 1989. He then worked as a postdoc and finally as a member of the technical staff at IBM Rüschlikon (1989-1991) and at Bell Laboratories (1991-1997), where he played a key role in the first quantum cascade laser (QCL) experiment. This major contribution was recognized by a number of international awards. He was then appointed full professor in the physics institute of the University of Neuchâtel (1997). In 1998, he founded the startup company Alpes Laser to commercialize the QCL for scientific, industrial and medical use. In 2007, he became a professor in the institute for quantum electronics of ETHZ. He contributed to the FIRST-Centre for micro and nanoscience. His research interests broadened from the QCL to circuit-based THz lasers, ultra-strong light-matter coupling as well as QCL optical frequency combs, which his group demonstrated first in 2012. His present interests are the development of high performance QCLs in the mid- and far-infrared and the physics of coherence in inter-subband transitions in the presence of strong magnetic fields. He is a member of the US national Academy of engineering.

Timothy Gowers

Professeur titulaire of the Combinatorics chair at the Collège de France.
Timothy Gowers obtained his PhD in mathematics at Trinity College, University of Cambridge (UK), in 1990. After his PhD, he was elected to a junior research fellowship at Trinity College. In 1991, he became a lecturer at University College London, and then returned to the University of Cambridge in 1995. He was an invited professor at Princeton between 2000 and 2002. In 2020, he joined the Collège de France in Paris as professeur titulaire of the Combinatorics chair, while still holding a part-time position in the Department of pure mathematics and mathematical statistics at the University of Cambridge, where he continues to lecture and to supervise research students. His early research work was in functional analysis and the structures of the Banach spaces, which he investigated using combinatorial tools. He then broadened his research interests, which combine several branches of mathematics, namely analysis, probability, number theory and combinatorics, among others. He is also recognized for his contributions to the popularisation of mathematics, and to "collaborative mathematics" with the online Polymath project. Sir William Timothy Gowers received many international awards. He won the Fields medal in 1998.

Hervé Guillou

Former chairman and chief executive officer of Naval Group.
After graduating from the *École polytechnique*, the *École nationale supérieure des techniques avancées* and the *Institut national des techniques nucléaires*, Hervé Guillou began his career in the *Direction des constructions navales* and participated, in various positions, in the French nuclear submarine development and launch programmes.
Between 1993 and 1996, he directed the British-French-Italian programme on anti-aircraft frigates Horizon, in London.
In 1996, he became deputy CEO of Technicatome, and chairman of Principia (engineering solutions for the naval, offshore and energy fields) and of Technoplus Industries.
In 2003, he joined the EADS group, where he headed the French-German Space transportation business unit in charge of the programme of the Ariane launcher and of the programme of the ballistic missiles M51, then the Defence and communications systems and later the Cyber security business units. In 2014, he became chairman and CEO of Naval Group, a French industrial group specialized in naval defence.
He is a member of the French Academy of technologies and *Académie de marine*, and non executive chairman of Exail.

Regine Kahmann

Director emerita, Max Planck Institute for terrestrial microbiology (Marburg) Regine Kahmann obtained her PhD in biology from the Free University of Berlin in 1974. She worked at the Cold Spring Harbor Laboratory, the Max Planck Institute for biochemistry, the Max Planck Institute for genetics, the IGF Berlin GmbH and the Ludwig-Maximilian-University in München. Between 2000 and 2019 she was director and head of the department of organismic interactions at the Max Planck Institute for terrestrial microbiology in Marburg, while also serving as a professor of genetics at the Philipps-Universität in Marburg. Her work started out with phage genetics and then shifted to the question how fungi colonize plants and cause disease. This led to new insights into how fungal parasites suppress host immune responses, and modulate plant processes for the pathogen's benefit. More recent work involved the functional analysis of secreted fungal effectors and revealed how a subset of them are taken up by cells of the host plant. Among her many honors, she has won the Leibniz Prize of the German Research Foundation and the Gregor Mendel Medal. She is a member of several German academies and of the Academia Europaea ; she is a foreign member of the Royal Society, and an international member of the National Academy of sciences in the United States.

Ilan Marek

Distinguished professor of chemistry at the Technion (Israel Institute of technology, Haifa).
Born in Haifa, Ilan Marek received his PhD in 1988 from the Université Pierre et Marie Curie in Paris. After a post-doctorate at the Catholic University of Louvain (Belgium), he joined the CNRS in 1990. In 1997, he was appointed assistant professor at the Technion, where he became a full professor in 2004; he has held the Sir Michael and Lady

Sobell academic chair since 2005. In the field of organic chemistry, his research focuses on the design and development of new stereo- and enantio-selective strategies for the synthesis of complex molecular structures. In particular, he is interested in developing carboncarbon bond forming processes that allow the creation of multiple stereocenters from alkynes and alkenes. His work has received numerous national and international awards. He is a member of the French Academy of sciences (2017), the Israel Academy of sciences and humanities (2019) and the Academia Europaea (2021).

Friederike Otto

Senior lecturer at the Grantham Institute for climate change and the environment at Imperial College London.
Friederike Otto is a physicist by training; she received a PhD in philosophy of science from the Freie Universität Berlin in 2011. In the same year, she joined the Environmental change Institute at the University of Oxford which she led as director from 2018 to 2021. In 2021, she joined the Grantham Institute for climate change and the environment, one of Imperial's six hubs for research, innovation and influence on global challenges. Her main research interest is on understanding whether and to what extent extreme weather events (droughts, heat waves and storms) are made more likely or intense due to climate change. She co-founded and leads the World weather attribution (WWA), an international effort to analyse and communicate the possible influence of climate change on extreme weather events. She is one of the authors of the IPCC's Sixth report published in August 2021, and of the Synthesis report to be published in March 2023. The influence of her work has been featured extensively in numerous articles in global media; she was deemed one of the world's 100 most influential people by Time Magazine in 2021.

Riccardo Pozzo

Professor of philosophy at Tor Vergata University of Rome.
Graduated from the State University of Milan in 1983, Riccardo Pozzo completed his education in Germany: PhD at the University of Saarland in 1988 and Habilitation at the University of Trier in 1995. In 1996 he was appointed at the Catholic University of America in Washington, D.C. In 2003 he came back to Italy on the chair of the history of philosophy at the University of Verona. From 2009 to 2012 he directed the Institute for the European intellectual lexicon and history of ideas of the National Research Council (CNR) of Italy. From 2012 to 2017, he was head of the department of social sciences, humanities and cultural heritage of the CNR, and he implemented Italy's participation in the European research infrastructures for social and cultural innovation. His research focuses on reflection and inclusion as social processes that shape our understanding of what constitutes cultural innovation, a new category of innovation economics, of which he has indicated dimensions, processes and outcomes, while showing their operationalization in empirical case studies. He is titular member of the Institut international de philosophie, ordinary member of the European Academy of sciences and arts, ordinary member of the Pontifical Academy of social sciences, corresponding member of the Accademia degli agiati di scienze, lettere ed arti.

Richard Riman

Professor of material sciences and engineering at Rutgers University.
Richard Riman joined Rutgers University's Department of materials science and engineering in 1986 as an assistant professor after earning his PhD at MIT. In his research, he explores engineering principles for synthesizing and processing ceramics and aims to make low-temperature processes that match or improve high-temperature processes for making ceramic materials. Aside from structural materials, his expertise includes electronic-, optical-, and bio-materials. He has received many national and international awards in recognition of his work. He is the author or co-author of nearly 200 patents. Around the world, Richard Riman has established cooperative agreements with private companies, government laboratories and government agencies. He has founded 5 cleantech companies to manufacture innovative materials, including Solidia Technologies, RRTC, and Queens Carbon; they focus on green manufacturing methods for construction materials useful for consumer, building, and infrastructure applications.

Chiara Sabatti

Professor of biomedical data science and statistics at Stanford University.
Chiara Sabatti obtained her PhD in statistics at Stanford in 1998, followed by a postdoctoral fellowship in the Genetics department of the Stanford medical school (1998-2000). She then spent 11 years at University of California Los Angeles, as an assistant professor and associate professor in human genetics and statistics. She returned to Stanford in 2015 as an associate professor in health research and policy, and later in biomedical data science and statistics; she became a full professor in 2016. She is a member of Bio-X and of the biomedical informatics training program; she is also associate director of Stanford Data science and of the interdisciplinary major in mathematical and computational science.
Her research work is centered on the development of statistical methods for highdimensional data mining. This entails both reducing computational barriers and ensuring that the results obtained by sifting through a large number of variables are reliable, reproducible, and robust. Her work is by nature interdisciplinary: she has enjoyed collaborating with neuroscientists, engineers, chemists, psychiatrists, oncologists, and others. Her pioneering work in data sciences and her contributions to biomedical statistics are internationally recognized.

Christopher Stubb

Professor of physics and astronomy and dean of science at Harvard University.
Christopher Stubbs obtained his PhD in physics from the University of Washington in 1988. He joined the Center for particle astrophysics of the University of California Berkeley (1988-1991), and then became an assistant and later associate professor of physics at the University of California Santa Barbara. He was appointed as professor of physics and astronomy at the University of Washington in 1994. In 2003 he joined the departments of physics and astronomy at Harvard University, where he became the dean of science in the faculty of arts and sciences in 2018. Christopher Stubbs is an experimental physicist working at the interface between particle physics, cosmology and gravitation. His research interests include experimental tests of the foundations of gravitational physics, searches for dark matter, characterizing the dark energy, and observational cosmology. He was part of one of the two teams that first discovered the dark energy by using supernovae to map out the history of cosmic expansion. He is one of the principal investigators on an ambitious survey that will use hundreds of supernovae to map out the recent expansion history of the Universe. His contributions have been recognized with many national and international awards.