



**WORKSHOP OF THE INTERNATIONAL  
RESEARCH CENTER (IRC)  
"France - Arizona Institute for Global  
Grand Challenges"**

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# PARTICIPANTS FROM THE UNIVERSITY OF ARIZONA



THE UNIVERSITY  
OF ARIZONA

Dr. Robert C. Robbins assumed his position as the 22nd president of the University of Arizona on June 1, 2017. Previously, he served as president and CEO of the Texas Medical Center (TMC) in Houston from 2012 to 2017. In this role, he significantly enhanced TMC's commitment to collaboration, introducing five cross-institutional research initiatives centered on innovation, genomics, regenerative medicine, health policy and clinical research. An internationally recognized cardiac surgeon, Robbins has focused his clinical efforts on acquired cardiac diseases with a special expertise in the surgical treatment of congestive heart failure and cardiothoracic transplantation. His research work includes the investigation of stem cells for cardiac regeneration, cardiac transplant allograft vasculopathy, bioengineered blood vessels, and automated vascular anastomotic devices. Robbins is the author of more than 300 peer-reviewed articles and a former guest editor of the *Circulation Surgical Supplement*. His educational background includes a B.S. in chemistry, medical degree from the University of Mississippi, general surgical training, cardiothoracic training at Stanford University, postdoctoral research at Columbia University and the National Institutes of Health.



*Dr. Robert Robbins  
The 22nd president of the University  
of Arizona*

Michael D. Dake, MD, is Senior Vice President for the University of Arizona Health Sciences. As head of the academic medical center, he directs strategic integration of undergraduate and graduate education, research, service and clinical activities in the University of Arizona Health Sciences colleges, centers and clinical affiliates. Dr. Dake is a leading researcher, clinician, teacher, and administrator. He is internationally known for pioneering image-guided therapies and novel approaches in interventional therapy in the fields of vascular imaging, venous thromboembolic disease, aortic aneurysms, and dissection. Dr. Dake made medical history with the implantation of the world's first thoracic stent-graft in 1992 and his groundbreaking research with CT angiography and stent-grafts has re-written medical and surgery textbooks. Prior to joining UArizona Health Sciences, he served at Stanford University as Professor of Cardiothoracic Surgery and Director of the Catheterization and Angiography Laboratories at Stanford Medical Center. He is a graduate of Harvard College and Baylor College of Medicine.



*Dr. Michael Dake  
Senior Vice President for Health  
Sciences*

Dr. Ruiz was appointed Vice President of Global Environmental Futures in 2019 and has served as the Thomas R. Brown Chair and Director of Biosphere 2 since 2013. Dr. Ruiz served as President of the Geological Society of America (2010-2011). He is also a Fellow of the Society of Economic Geologists, and a member of the American Geophysical Union, the American Chemical Society, the Geochemical Society, and the National Research Council of the National Academies of Science. As a scientist with equal abilities in chemistry and in geology, Dr. Ruiz addresses many first-order problems in the Earth Sciences, such as the development of new isotope systems for studying ore deposits and the tectonic processes involved in the growth and evolution of Mexico. His research team addresses problems ranging from the origins of life to present-day climate change.



*Dr. Joaquin Ruiz  
Director, FA Institute for Global  
Grand Challenges, Director of  
Biosphere 2, Professor in  
Geosciences*

Dr. Greg Barron-Gafford is a Biogeographer and has largely been based in the drylands of the world. He has worked for the last 18 years in the southwestern US studying Earth System science, plant ecology, and the impacts of climate and land use change. Since 2011, he has been building the field of 'agrivoltaics' - the concept of collocating agriculture and photovoltaics (renewable energy from solar panels). Professor Barron-Gafford and his team began working in southern Arizona with the Community & School Garden Program to study the benefits across the food-energy-water nexus, and over the years have developed a national and international program connecting with researchers in Colorado and Oregon (USA), and in Africa and the Middle East. Helping develop science-based solutions to help people adapt to the increasing pressures that come from a changing climate being a personal and professional goal.



*Dr. Greg Barron-Gafford  
Professor, Associate Director of the  
Community & School Garden  
Program*



Prof. Buizer is Founding Director of the Arizona Institute for Resilient Environments and Societies (AIRES), Associate Director of the Aegis Consortium, and Professor of Climate Adaptation and International Development in the School of Natural Resources and the Environment at the Arizona. Buizer has published extensively on institutionalizing the science-to-action interface and integrating climate information into international development decision processes. He has served as Chairman of the Board of Directors at the Global Council for Science and the Environment, and as Chairman of the Board of Directors at Second Nature. From 2003-2011, Jim was Senior Advisor to Arizona State University President Michael Crow, and Director for Strategic Institutional Transformation. His degrees are in Oceanography and Marine Resource Economics and Policy from the University of Washington



*Dr. Jim Buizer  
Founding Director, Arizona Institute  
for Resilient Environments &  
Societies (AIRES)*

Dr. Comrie is a geographer, interdisciplinary climate scientist, and former Provost at the University of Arizona. He currently serves as the Chief Academic Officer for the Arizona Board of Regents, where he is responsible for system strategy in academic affairs, including fostering academic access and excellence at all three of Arizona's public universities. In addition to his academic appointment as Professor in the School of Geography, Development & Environment, Dr. Comrie has joint appointments in Hydrology & Atmospheric Sciences and in Public Health. His research is in two broad areas. The first links climate with health, pathogens, and vectors as well as with broader atmospheric environmental issues, and focuses on questions such as 'How do disease patterns shift in space and time with changes in climate?' The second draws on his experience as a senior institutional leader, and examines questions in higher education such as 'How do resources flow to support the university's multiple missions?'



*Dr. Andrew Comrie  
Professor, School of Geography,  
Development & Environment*

Dr. Jon Chorover is Professor and Head, Department of Soil, Water and Environmental Science at the University of Arizona (UA). He received his B.S. (Environmental Science) from University of Michigan, and M.S. (Forest Science) and Ph.D. (Soil and Water Chemistry) from UC Berkeley, worked as an NSF postdoctoral fellow in Analytical Chemistry at University of Geneva, and was on the faculty of Penn State University before joining the faculty of University of Arizona. His research group explores the biogeochemistry of soil, sediment and water through laboratory and field-based experiments probed with advanced analytical chemistry techniques. Of particular interest is resolving how mineral-organic interactions influence the weathering of soils, the stabilization of organic carbon, and the speciation, mobility and bioaccessibility of pollutants. He directs a core analytical chemistry facility, the Arizona Laboratory for Emerging Contaminants and serves as PI of the UA-led, NSF-funded Santa Catalina Mountains – Jemez River Basin Critical Zone Observatory.



*Dr. Jon Chorover  
Department Head of Environmental  
Science*

Sharon B. Megdal, Ph.D. is Director of The University of Arizona Water Resources Research Center (WRRC), a Cooperative Extension center and a research unit in the College of Agriculture and Life Sciences. Other primary titles are Professor and Specialist in the Department of Environmental Science, C.W. & Modene Neely Endowed Professor, and Distinguished Outreach Professor. Sharon Megdal aims to bridge the academic, practitioner, and civil society communities through water policy and management research, education, and engagement programs. The geographic scope of Dr. Megdal's work ranges from local to international. Applied research projects include analysis of water management, policy, and governance in water-scarce regions, groundwater recharge, and transboundary aquifer assessment. Key engagement initiatives are Indigenous Water Dialogues and Diversifying Voices in Water Resources. She holds a Ph.D. degree in Economics from Princeton University.



*Dr. Sharon Megdal  
Director, Water Resources Research  
Center*

Dr. Nikolich-Žugich received his M.D., MSc and Ph.D. in Immunology from Belgrade University School of Medicine. His long-term interests include basic mechanisms of T-cell function, immunity to infection in older adults, vaccines, and biomarkers of declining immunity in the elderly, immune rejuvenation, immune monitoring in chronic conditions of aging and the impact of inflammation and nutritional intervention in aging, immunity and metabolic disorders. Dr. Nikolich-Žugich worked as a Research Associate at the Scripps Clinic and Research Foundation. He then joined the Memorial Sloan-Kettering Cancer Center in New York as Assistant and then Associate Member (Professor) and the Head of both the Flow Cytometry Core Facility and the Laboratory of T Cell Development. In 2001, Dr. Nikolich-Žugich assumed the position of Senior Scientist at the Oregon Health & Science University at the Vaccine and Gene Therapy Institute, along with joint appointments as a tenured Professor in the Department of Molecular Microbiology and Immunology and a Senior Scientist at the Oregon National Primate Research Center. In 2008, Dr. Nikolich-Žugich moved to the University of Arizona to lead the Department of Immunobiology and the Arizona Center on Aging.



*Dr. Janko Nikolich-Žugich  
Head Department and Professor,  
Immunobiology; Director, Aegis  
Consortium for Pandemic-Free  
Future*

Dr. Swindle was director of the University of Arizona's Lunar and Planetary Laboratory for a decade and is now founding director of the Arizona Space Institute. His research measurements of the noble gases in extraterrestrial materials (lunar samples and meteorites) to study the evolution of the solar system. Research projects have included performing Ar-40/Ar-39 dating of shocked lunar samples and meteorites, to study the timing of impacts in the inner Solar system; using I-129, and its decay product Xe-129, to study the timing of the formation of the earliest solids in the solar nebula; analyzing Martian meteorites to study the composition and evolution of the Martian atmosphere, and working on developing techniques to use instruments on spacecraft to measure ages of planetary surfaces in situ.



*Dr. Tim Swindle  
Director, Arizona Space Institute*

Dr. Ferriere is a mathematical ecologist who studies a broad array of questions about life on Earth and off Earth. He is particularly interested in how ecological systems emerge and evolve, how they adapt to environmental challenges and how their adaptation reshapes the environment. He obtained his doctoral degree in mathematical ecology at Paris University and subsequently worked as a research associate at the University of Arizona and the International Institute for Applied Systems Analysis in Laxenburg, Austria. With collaborators in Austria and The Netherlands, Dr. Ferriere pioneered the field of eco-evolutionary mathematics, that he has been expanding ever since. As a professor at Ecole Normale Supérieure in Paris, France, Dr. Ferriere was the founding director of the CNRS-ENS Ecotron IleDeFrance. In 2012, Dr. Ferriere was appointed as an Associate Professor at the University of Arizona. With support from the Partner University Fund, he established a collaboration bridge through research and advanced training between Uarizona, ENS, one of the elite schools of Paris Sciences & Lettres University (PSL). In 2017, he extended the cooperation program as he became director of the iGLOBES (Interdisciplinary and Global Environmental Studies). iGLOBES has been instrumental in the creation, in 2021, of the France-Arizona Institute for Global Grand Challenges.



*Dr. Regis Ferriere  
Deputy Director, France-Arizona  
Institute for Global Grand  
Challenges*

Sky Dominguez completed her Master's degree in environmental microbiology in 2008 at the University of Arizona in Tucson, U.S.A. After completing her master's degree, Sky transitioned out of the lab and to the administrative side of research programs – combining her passion for science with her desire to play a critical role in envisioning the supporting research programs.

After joining the University of Arizona as a staff member, she has managed multiple international research programs and has been the Manager of Administration for the School of Anthropology at the University of Arizona. These positions focused on relationship building, program strategy, budget management (~\$6-8M), grant submissions, staff management, event coordination, and field campaign manager (Northern Sweden and Amazon Forest in Brazil). In addition, Sky is the Owner/Founder of an organizing and goal coaching business since 1997. Sky joined the France-Arizona Institute in March 2022.



*Ms. Sky Dominguez  
Assistant Director, FA Institute for  
Global Grand Challenges*



Emily has a breadth of experience developing programs in higher education and public management. Prior to joining the Research Development Services (RDS) team in RII, Emily focused on partnership development to enhance international collaborations, and has assisted UArizona faculty and students in applying for the Fulbright program. She also served as a Peace Corps Volunteer in Ukraine, where she taught English and conducted youth development and community engagement projects for more than two years. Within RDS, Emily focuses on international research opportunities and scholarly exchange. Emily holds a Master of Public Administration from the University of Kansas, and a Bachelor of Arts from Mount Holyoke College in cultural anthropology.



*Ms. Emily Kotay, Interim Assistant  
Director, Office of International  
Research*

Morgane Noel completed her Master's degree in 2011 in Marketing & Management at the Excelsia Business School in France. Morgane has a non-linear background, nourished by international experiences, in diverse industries, from start-ups to Fortune 500 companies.

This diverse background includes being head of the marketing department for the start-up epermarket.com in Shanghai, China; Area manager of marketing and sales in France for Brioche Pasquier, Unilever, and Heineken; and founder/owner of "Et Voila!", a catering business in the Bay Area; and as a Production Coordinator at the Apple Steve Jobs Theater.

With this extensive skill set, Morgane joined the FA Institute in 2022.



*Ms. Morgane Noel  
Manager, Academic Programs and  
Communication, FA Institute for  
Global Grand Challenges*

Kim Patten leads a team of research development professionals that excel in supporting faculty in their pursuit of extramural funding from federal, corporate, and foundation sponsors resulting in more than \$400 million in awards to campus since 2014. Part of this success is based on a holistic view of research development and the research lifecycle with an emphasis on the societal impacts of research such as the incorporation and promotion of undergraduate research experiences, core community partnerships, and inclusive practices. Prior to joining UA, Patten managed projects and programs in conservation, renewable energy, and distributed data systems both nationally and internationally.

As Associate Director at the Arizona Geological Survey she managed and conducted research on a more than \$30m portfolio, including Co-PI on a \$3.6m National Science Foundation (NSF) project and project manager of a \$22m U.S. Department of Energy project. Prior to her work at AZGS, she was Programs Director at a science-based non-profit organization where she helped develop the organization's research portfolio resulting in the organization's first NSF funding.



*Ms. Kim Patten  
Assistant Vice President for  
Research Development*

# PARTICIPANTS FROM CNRS



Antoine Petit obtained a Masters Degree in Mathematics from University Paris Sud (1981) and then “Agrégation de Mathématiques”, postgraduate teaching diploma (1982). He received his PhD in Computer Science from Université Paris Diderot (1985).

He joined Université d’Orléans as assistant professor in 1984 and worked at Université Paris Sud (now, part of Université Paris-Saclay) as senior lecturer in 1989. In 1994, he joined ENS Paris-Saclay (formerly ENS de Cachan) as full Professor and became head of the Computer science department from 1995 to 2001. In 2002, he was appointed as deputy director at the French Ministry of Research, in charge of mathematics, information and communication science.

In 2004, he joined the CNRS as director of the Information & Communication Sciences and Technologies Department and then as regional director for South West of France. In 2006, he was recruited by INRIA where he served as director of the Paris-Rocquencourt Research, before becoming deputy CEO in 2010 and Chairman and CEO in 2014. Since January 2018, he has been acting as Chairman and CEO of the CNRS.

Antoine Petit is doctor honoris causa et the University of Chile, « Chevalier de la Légion d’honneur » and « Officier de l’ordre national du Mérite ».



*Dr. Antoine Petit  
Chairman and CEO of the CNRS*

Alain Schuhl is the Deputy CEO for research of the CNRS. He coordinates the activities of the ten CNRS Institutes, promotes interdisciplinarity, and organizes partnerships on the regional, national, European, and international levels.

After physics studies at the Ecole Normale Supérieure in Paris, he obtained his PhD in condensed matter physics. Specialist of the magnetic properties of matter, he devotes then a major part of his scientific researches to the fundamental and applicative aspect of spintronics, first as researcher during 12 years at Thales, then as a professor at Nancy University and finally at Grenoble University. Also involved in science management, Alain Schuhl was director of two research laboratories in Grenoble, SPINTEC from 2007 to 2010, and Institute Néel for four years and director of the Physics Institute of the CNRS from February 2015 to April 2018.



*Dr. Alain Schuhl  
CNRS Chief Scientific Officer*



Dr. Gudrun Bornette is an ecologist specialising in the functioning of wetlands. After having linked the geomorphology of fluvial hydrosystems to the hydraulic and hydrogeological functioning of wetlands, she proposed models of the functioning and dynamics of fluvial hydrosystems according to these parameters. She then deciphered the functioning of artificial wetlands (agro-piscicultural ponds, gravel pits) and developed methods for the functional diagnosis of wetlands using aquatic vegetation as a descriptor of the functioning of these ecosystems. For the past ten years, she has been interested in the relationship between the functioning of wetlands and their capacity to host pathogens, by focusing on environmental reservoirs of cholera, the circulation and survival of antibiotic-resistant bacteria in hydrosystems, and angiostrongylosis, in collaboration with French and foreign physicians, geologists, and ecologists (Democratic Republic of Congo, Haiti).



*Dr. Gudrun Bornette  
Senior Research Director*

After a doctorate in neuropharmacology at the University of Paris, Dr. Brouillet obtained a post-doctoral fellowship to study the pathogenesis of Huntington's disease at the neurology department of Massachusetts General Hospital (Harvard Medical School) where he worked with the Professor M. Flint Beal. Since joining the C.N.R.S. in 1993, he has devoted his career to studying the pathogenesis of age-related neurodegenerative diseases, in particular Huntington's, Parkinson's and Alzheimer's diseases. Dr. Brouillet is now research director at the C.N.R.S. and after more than ten years as director of the Neurodegenerative Diseases Laboratory at the C.E.A. near Paris, he recently joined a new research team at Sorbonne University to develop his research on the role of molecular mechanisms of aging in Huntington's disease. Since 2020, he is Head of the Europe and International Office of the Institute of Biological Sciences of the C.N.R.S, which brings together more than 200 laboratories and collaborative networks.

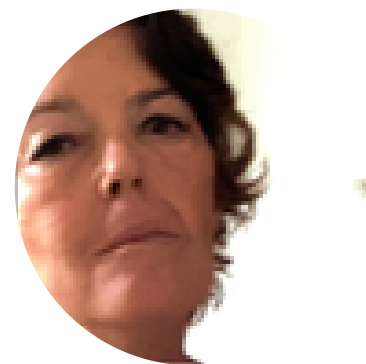


*Dr. Emmanuel Brouillet  
Head, Europe & International  
Affairs, Institute of Biology (INSB)*

Dr. Marie-France Delauw-Cesbron is specialized in molecular and cellular parasitology. After earning a PhD on *Trypanosoma brucei* at the Université Libre de Bruxelles in 1986, she joined the Laboratory of Pr. André Capron at the Institut Pasteur de Lille, where she initiated research on *Toxoplasma gondii* and was recruited as a CNRS researcher in 1990. Since 2001, she is developing her research activity in Grenoble, where she created and headed the CNRS Unit "Laboratory of Adaptation and Pathogenesis of Microorganisms.

Co-author of 95 publications, she contributed to the characterization of a novel secretory organelles in *Toxoplasma gondii*, namely the dense granules which are involved in the biogenesis and the function of the parasite-developing vacuole into the host cell. Her interest in the understanding of toxoplasmosis pathophysiology, led to the discovery of the rat locus *Toxo1* which controls parasite infectivity and thereby, the outcome of infection. Her current goal is to find the parasite gene(s) that elicit(s) the *Toxo1* resistance response to infection.

Marie-France Delauw-Cesbron has been member of several French financing agencies, the section of National committee involved in the evaluation of CNRS laboratories and in the evaluation section of INRAE researchers.



*Dr. Marie-France Delauw-Cesbron  
Research Director, Scientific Adviser  
at the Institute of Biology (INSB)*

Dr. Dia completed her Ph.D. degree in 1988 at the Paris Cité University and the Institut de Physique du Globe de Paris. After a postdoc as a Research Scientist at the Department of Earth Sciences of Cambridge (U.K.), Dr. Dia has been a CNRS Researcher since 1990. Experienced trace-metal and isotope geochemist, Dr. Dia worked on trace metal source fingerprinting and transfer in different Earth's compartments, and processes affecting their fate notably within wetlands and the Critical Zone with a focus on the key role played by colloids and nanoparticles (natural and engineered) as trace element vectors within environment. She has also been working on Rare Earth Elements as source tracers and now considered as both critical elements and emergent contaminants, to understand the parameters and processes governing their transfer and dissemination within environment and especially at the Water/Soil/Plant interfaces. She is currently the Deputy Leader of the running MSCA- "EuroPeAn trAining NetwOrk on Rare eArth elements environMental trAnsfer: from rock to human ITN project" (so-called PANORAMA).



*Dr. Aline Dia  
Research Director, National Institute  
for Earth Sciences and Astronomy  
(INSU)*

Sabine Effosse is Scientific Deputy Director in charge of Europe and International at the Institute for Humanities and Social Sciences (InSHS). She is full professor of contemporary history at the University of Paris Nanterre and researcher at the CNRS laboratory Institutions and Historical Dynamics of the Economy and Society (IDHES, UMR 8533). Her research is focused on the history of credit, housing and consumption, and currently deals with the financial emancipation of women in the twentieth and twenty-first centuries from a comparative perspective. Latest publication : *Quaderni Storici*, « Gendered Finance. Women and Banks in the 20th century », 166, 1/2021.



*Dr. Sabine Effosse  
Scientific Deputy Director in charge  
of Europe and International at the  
Institute for Humanities and Social  
Sciences (InSHS)*

Dr. Bertrand Georgeot received his Ph.D. from the Institute of Nuclear Physics of Orsay, in 1993, followed by a Postdoctoral fellowship at the University of Maryland, USA, and Nils Bohr Institute, Denmark. He has been a CNRS Researcher in Toulouse, since 1996. In 2016, he was named Head of the Laboratoire de Physique Théorique. He is currently the Directeur de Recherche (Group Leader) at CNRS, Laboratoire de Physique Théorique, Université Paul Sabatier Toulouse III, Toulouse. He has authored or coauthored more than 90 publications in peer-reviewed journals, mostly in quantum physics (quantum chaos, Anderson localization, cold atom physics, and multifractal quantum states) but also in interdisciplinary research in dynamical systems, astrophysics, classical and quantum computer sciences, and network theory.



*Dr. Bertrand Georgeot  
Deputy Director, National Institute  
of Physic (INP)*

Professor emeritus of ecology at the University of Burgundy Franche-Comté, distinguished professor at the Yunnan University of Finance and Economics and honorary member of the Institut Universitaire de France, he is the founder and has been the director of several research units and multidisciplinary masters, and of the ILTSE site Arc of the CNRS. His research in landscape and wildlife ecology and its practical development, mainly in France, China and Africa, focuses on the links between ecology and health (e.g., alveolar echinococcosis, cholera, etc.) and the population dynamics of small mammals, their predators and pathogens (parasites, toxins, etc.) in socio-ecosystems. He is currently participating as a lead author in the IPBES nexus assessment.



*Dr. Patrick Giraudoux  
Professor emeritus at the University  
of Burgundy Franche-Comté*

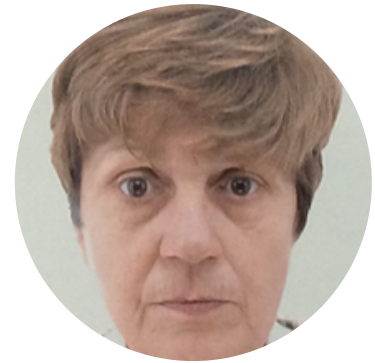
Dr. Anne Marie Gué completed her Ph.D. degree in 1986 in Solid State Physics at Toulouse University. Dr. Gué has been a CNRS Researcher in Toulouse, since 1988. She has been a Scientific officer for Multidisciplinarity INSIS-CNRS since September 2016. She is currently carrying out research in the field of microfluidics for health applications (Lab on Chips). She has published in more than 200 scientific journals and international conferences. She has been the head and founder of the French scientific network MicroNanofluidics from 2008-2014. She has been deputy director of L.A.A.S.-C.N.R.S., 750 pers. (2011-2015).



*Dr. Anne Marie Gué  
Research Director, Institute for  
Engineering and System Sciences  
(INSIS)*



Dr. Guerder performed her PhD work in the Basel Institute of Immunology under the supervision of Poly Matzinger. She then joined the laboratory of Dr. Richard Flavell at Yale for her post-doctoral studies. In 1996 she was recruited as an INSERM researcher and is now developing her research activities in Toulouse. She contributed to our understanding of the mechanisms of central and peripheral T cell tolerance and the mechanism regulating T cell activation. Now, the research focus of her team aims at understanding the molecular mechanisms controlling the functional differentiation of dendritic cells. The overall aim is to find ways to reprogram them to induce either protective anti-tumor immunity or tolerance in the context of autoimmunity. She has been a member of several French financing agencies and of the section of the National committee involved in the evaluation of CNRS laboratories.



*Dr. Sylvie Guerder  
Scientific Deputy Director, Institute  
of Biology (INSB)*

University professor at Clermont Auvergne University, Dr. Guillin is a specialist in probability, with significant results on functional inequalities, the concentration of measurement, and convergence towards the equilibrium of Markovian dynamics. Dr. Guillin works on the interactions between probabilities and partial differential equations by studying the propagation of chaos (granular medium, Landau equation). Dr. Guillin also developed multidisciplinary collaborations with volcanologists, ecologists, and doctors. He has been deputy director of the Blaise Pascal Mathematics Laboratory since 2014. As part of the Auvergne-Rhône-Alpes Mathematics Research Federation, of which he was director from 2017 to 2020, he led the creation of the Mathematics Institute for planet Earth, of which he has been the executive director since 2021.



*Dr. Arnaud Guillin  
Project Manager, PEPR, National  
Institute for Mathematical Sciences  
(INSMI)*

Prof. Henry is Deputy Scientific Director at CNRS, Professor of Sociology at Université Paris Dauphine-PSL. He is currently working on the links between scientific knowledge (and ignorance), expertise, and public policy in the field of public health (mostly regarding occupational and environmental health). His research projects cover two main areas. The first concerns the regulation of chemicals and how scientific knowledge and expertise shape the public policies dealing with toxics and hazards. The second project is a social study of the tools developed within epidemiology to measure the effects of work and environment on the public health, particularly population attributable fractions and other types of impact measures. He will study how those tools were built, how they are used and which effects they produce. This research will help to better understand what kind of issues epidemiology can help to address and what other problems it is less prepared to apprehend.



*Dr. Emmanuel Henry  
Deputy Scientific Director, National  
Institute of Humanities and Social  
Sciences (INSHS)*

Laurent NICOLAS is born in 1960. He is Research Director at the French National Center for Scientific Research (CNRS). He is Scientific Deputy Director of the CNRS Division of Engineering and Systems Sciences (INSIS), in charge of international affairs. He is also supervising the IRC (International Research Center) developments for the CNRS.

He graduated as an engineer from the Ecole Nationale Supérieure d'Ingénieurs Electriciens in Grenoble. He holds a Ph.D. degree in Electrical Engineering in Lyon.

Laurent NICOLAS joined the CNRS in 1986 as researcher in the Electrical Engineering Center of Lyon (CEGELY). His field of interest was computational electromagnetics, electromagnetic compatibility and bio-electromagnetism. He became Director of the CEGELY in 2003, and set up in 2007 the Ampere Lab which he headed until 2011.

From December 2011 to July 2022, he was Scientific Deputy Director of the CNRS-INSIS, in charge of the fields related to micro- and nanotechnologies, micro- and nanosystems, electronics, photonics, electromagnetism and electrical energy.



*Dr. Laurent Nicolas  
Scientific Deputy Director of the  
CNRS Division of Engineering and  
Systems Sciences (INSIS)*

For the last 30 years, Dr Pinay has been working in the scope of ecosystem functioning. He studies the relationships between physical and biogeochemical processes and their contribution to ecosystems' resistance and resilience to natural and anthropogenic disturbances. He is specialized on river and wetland ecosystems with a watershed perspective. He has led researches in Europe and USA on the consequences of human disturbances in river catchments basins on the functioning of stream and wetlands ecosystems. He is working on the quantification of landscapes features such as soils, riparian and hyporheic zones to regulate diffuse nitrogen fluxes and assessing their contribution at the catchment level. He is also interested in deciphering the consequences of particular and cumulative human activities in drainage basins on the water quality of their outlets. During his career, Dr. Pinay has successively been Director of the functional Ecology of the Centre of Ecology of Montpellier, France, Professor of HydroEcology at the University of Birmingham, Director of the Science of the Universe of the CNRS INSU in Rennes, France, and Director of the River Ecosystem Laboratory of INRAE in Lyon, France.



*Dr. Gilles Pinay  
Scientific Deputy Director, National  
Institute of Ecology and  
Environment (INEE)*

After a master's degree in fundamental physics from Bourgogne University and a doctorate in nuclear physics at the University of Strasbourg, Dr. Roy joined the CNRS in 1997 as a research fellow. She became research director in 2010. In 2005, she was appointed deputy director of the Laboratory of Subatomic Physics and Associated Technologies, then in 2009 deputy director of the Institut pluridisciplinaire Hubert Curien (IPHC). She became director in 2011, a position she held until 2017. From 2012 to 2014, she was the vice-president of research and education for the Alsace BioValley competitiveness cluster and from 2017 to March 2021, the vice-president of strategy and development for the University of Strasbourg. From October 2020 to May 2021, Dr. Roy has overseen the "Europe" mission to the CNRS Chief Scientific Officer, Dr. Alain Schuhl. Since May 2022, Dr. Roy is director of the European and International Division at CNRS for 4 years renewable. She is also member of Naval Group Scientific council as well as the one of the Italian national research center, the CNR.



*Dr. Christelle Roy  
Director of the European Research  
and International Cooperation  
Department (DERCI)*

Jean Theves holds a European Master's Degree in Economics of Science and a Master's Degree in Science Communication, both from Strasbourg University. He also graduated from CNAM (Paris) in Science Policy.

From 2000 to 2003, he was acting as Scientific Attache at the French consulate in Toronto.

From 2003 to 2008, he was project manager at OST (Observatory of Science and Technology), Paris, in charge of several European projects on science and technology indicators. He represented the OST in the European Network of Excellence "PRIME" on Research Policies, in charge of the European network of indicators producers. From 2008 to 2012, he was appointed Scientific Attache at the French Embassy in Mexico.

He joined CNRS in 2012, first as deputy director of the CNRS Washington office (2012-2014), then at the DERCI (CNRS headquarters, International Relations Office), as Deputy Director of DERCI, in charge of the Americas.



*Mr. Jean Thèves  
Deputy Director of DERCI, in charge  
of the Americas (CNRS)*



Between 1997 and 2013, Sylvette served as CNRS Research Director in Life Sciences, was the PI of a team entitled: Establishment, maintenance, and epigenetic regulation of Heterochromatin, in the GReD (Genetics, reproduction and Development) laboratory in Clermont-Ferrand (France). Meanwhile, she was the communication- correspondent for the GReD, in charge of the international affairs for the doctoral school in Life Sciences, Health, Agriculture and Environment and scientific delegate for the Hceres (Research and Higher Education Evaluation Committee). In 2013, she joined the French Embassy in Budapest (Hungary) as attaché for science and higher education cooperation and was assigned in Germany as scientific attaché at the French Embassy in Berlin in 2017. On October 1, 2019, she became Director of the CNRS Office for the USA and Mexico, in Washington D.C.



*Dr. Sylvette Tourmente  
Director, CNRS Office for the USA  
and Mexico*

Mathilde Cambournac completed her Master's degree in International Relations and Sociology at Sciences Po Toulouse and Ecole Normale Supérieure of Lyon in 2014.

From 2013 to 2017, she has lived and worked in China. She was first lecturer and research assistant at Peking University and, from 2015, cooperation officer for governance and legal affairs at the French Embassy in Beijing. She then moved back to France in 2017, as project manager at the Maison des Sciences de l'Homme Ange Guépin (Nantes University). She was in charge of the management and coordination of research programmes in the field of social sciences.

In 2019, she has joined the CNRS European Research and International Cooperation Department (DERCI) as project officer in charge of partnership with Europe and, since April 2022, with North America (USA and Canada).



*Ms. Mathilde Cambournac  
Project officer in charge of  
international partnership*

Esa holds a Master's degree in Corporate Communication at CELSA - Sorbonne Université in 2019. She joined the CNRS European Research and International Cooperation Department (DERCI) as Executive Assistant to Director on February 2020.

Before joining the CNRS, Esa has worked with diverse french institutions in Indonesia between 2015 - 2017. She served as Executive assistant to director at Institut Français Indonesia in East Java and then worked as Executive assistant for the President of the Indonesian French chamber of commerce. In her roles, she has been responsible for organizing meetings, handling high level institutional events.



*Ms. Esa Agita Anjani  
Executive Assistant to the Director  
DERCI - CNRS*



Dr Marie-Claude Gregoire is currently Head of Directorate, Isotopes, Radiobiology and Environment at Canadian Nuclear Laboratories.

Marie moved to Australia in 2005 to establish and lead the in vivo molecular imaging platform at Nuclear Science and Technology Organisation. She established and led the LifeSciences division in ANSTO between 2011 and 2016.

Marie-Claude worked in industry for 2 years, and at Mass General Hospital, Boston, for another two years, before being recruited at the Centre National de la Recherche Scientifique (CNRS). She spent 12 years working as a platform and research leader in the field of molecular imaging with nuclear techniques in partnership with the Commissariat des Energies Alternatives (CEA), France.

Her main research interests are in functional exploration of biological pathways with complementary nuclear techniques and multi-modality imaging such as in vivo PET, SPECT, CT, MRI and post mortem imaging. Marie-Claude has produced over 100 journal publications and conference.



*Dr. Marie-Claude Grégoire  
Head of Directorate, Isotopes,  
Radiobiology and Environment at  
Canadian Nuclear Laboratories*



Dr. Eric D. Isaacs began his tenure as the 11th president of the Carnegie Institution in 2018. Isaacs joined Carnegie from the University of Chicago where he was the Robert A. Millikan Distinguished Service Professor, Department of Physics and the James Franck Institute Executive Vice President for Research, Innovation and National Laboratories. Isaacs' research interests are in condensed matter physics and quantum materials. He has a Ph.D. in physics from MIT and a bachelor's degree from Beloit College. From his 15 years at Bell Laboratories, Isaacs developed synchrotron-based X-ray-scattering techniques, including inelastic X-ray scattering and X-ray microscopy that continue to play an important role in materials and nanoscale scientific research. Isaacs has published more than 120 scholarly publications. As president of Carnegie, Isaacs oversees the research and business functions across six research sites on the East and West Coasts. Carnegie scientists are leaders in plant biology, developmental biology, astronomy, materials science, global ecology, and Earth and planetary science.



*Dr. Eric Issacs  
President of the Carnegie Institution*



Gary holds two degrees from UArizona, BSc in Geological Engineering and MSc in Geophysics and worked 24 years in the seismic and well logging industries from 1980-2004. Since 2005, Gary has worked independently as a board member, chairman or director & investor at a variety of technology based start up companies, including Novadrill, Ingrain, Wireless Seismic and Western Alaska Copper & Gold. Novadrill developed an extensive patent portfolio and successfully sold the company based on the technology developed. Western Alaska Copper & Gold is a start up mineral exploration company recently listed on the Toronto Exchange. Gary currently serves on the advisory board to a technology incubator in Utah, Hall Labs as well as a consultant to Western Alaska Copper & Gold.



*Mr. Gary Jones  
Independent Investor and Board  
Member*

Hervé Le Treut is a French climatologist specialized in climate numerical simulation. He is member of the French Academy of Sciences and of the Intergovernmental Panel on Climate Change(IPCC).

Graduated from the École normale supérieure (ENS), Hervé Le Treut has much contributed to the understanding of what is involved in the climate change: interaction between ocean and atmosphere, water cycle effect, and also biochemical effects. He also studied human influence in the greenhouse effect. His work has given rise to some one hundred publications.

From 2008 to 2019, he was Director of the of the Pierre-Simon-Laplace Institute IPSL (Pierre Simon Laplace Institute). Hervé Le Treut is now Professor of Mechanics and Environment Physics at the Laboratoire de météorologie dynamique (LMD) of Université Sorbonne Nouvelle.

In addition, he has been able to convey strong messages to his peers but also to a wider public through conferences and the publication of popularization works.



*Dr. Hervé Le Treut  
Professor of Mechanics and  
Environment Physics, Université  
Sorbonne Nouvelle*

**Sorbonne  
Nouvelle**

Eric has spent his career as a Chemical Engineer in operations, moving things from test tube scale into railcar-scale production volumes. His expertise over the last four decades has been in high volume, low-cost manufacturing, turning operational challenges into new growth opportunities. He has experience with pharmaceutical, biotech and consumer product industries in both North America and Asia. After leadership roles in ADM and Tate + Lyle, he returned to his roots in microalgae as CEO of the Mars Family-funded company Heliae in Phoenix Arizona. Heliae is driven to find solutions to critical issues for survival of the planet, cleverly using classical strain development tools to manipulate secondary metabolic pathways which allows growth of phototrophic strains in dark fermenters. Eric has recently been collaborating with other innovative plant-based food companies as a member of the Google Food Alt Protein advisory group with the primary goal of increasing public acceptance of new plant-based foods.



*Mr. Eric Lichtenheld  
President and CEO of Heliae*



Dr. Bryan Willson is Executive Director of the Energy Institute at Colorado State University where he holds the Presidential Chair in Energy Innovation and serves as a Professor of Mechanical Engineering. Dr. Willson has worked for over 30 years to develop and deploy large-scale technology solutions related to energy, air quality, and human health. He served as a Program Director at DOE's Advanced Research Projects Agency – Energy from 2012-2016 and is currently engaged in the technical leadership of a 4-state hydrogen scaleup effort. As an entrepreneur, Dr. Willson is co-founder of several companies; through his university and DOE roles he helped to launch numerous other companies. His research laboratory, the Engines & Energy Conversion Laboratory, has made important contributions in many areas, including internal combustion engines, natural gas combustion, hydrogen systems, advanced electrical grids, advanced biofuels, energy access for developing nations, and advanced building technologies. Dr. Willson has worked in over 40 countries.



*Dr. Bryan Willson  
Executive Director CSU Energy  
Institute*

