



**Barcelona  
Supercomputing  
Center**  
*Centro Nacional de Supercomputación*

# The BSC Scientific Advisory Board

BSC is a public consortium made up of:





Chair

**Dr. Ron Perrott**

University of Oxford, UK **CHAIR.**

Ron Perrott is a Visiting Professor at the eResearch Centre, University of Oxford, UK. He has a long established and well documented record of research in the areas of parallel and distributed computing. This work started when he was employed at the NASA Ames Research Center in California where he developed a software system for the world's first supercomputer, the Illiac 4.

He chaired the UK's Supercomputing Strategy Committee for six years; it advised the UK's Research Councils on strategic issues and policy initiatives. He led UK Government Research Delegations to the US, China, and Japan. These visits helped formulate UK policy and strategy as well as further develop international cooperation and collaboration. He has acted as an Adviser to numerous international Research Councils/Funding bodies and since the 80s was involved with the EU's R&D Programmes. He chaired and sat on Working Groups, acted as Rapporteur to strategy committees as well as a technical reviewer.

In 1996 he was elected a Fellow of US Association of Computing Machinery and the following year a Fellow of the IEEE, for contributions towards the understanding of software for parallel computers. In 2015 he received the ACM Distinguished Service Award. He was Editor in Chief of the Journal of Scientific Programming for 21 years.



**Dr. Jean-Yves Berthou**

Executive Director at Inria Saclay Research Center,  
France

Jean-Yves Berthou has been appointed Executive Director at Inria, Delegate for Site Policy (Directeur Général Délégué Politique de Site, DGD PS) in October 2024. The DGD PS aims to strengthen the collective dynamics of higher education, research and innovation that form the basis of the Institute's territorial strategy. As such, DGD PS coordinates and steer the implementation of the Institute's site policy in all its dimensions: research, including European and international strategy, transfer and innovation, participation in training initiatives, articulation of support functions, and relations with local players. DGD PS's mission is to embody Inria's presence in the French territory through the coordination and the development of the Inria research centers in and through digital science and technology.

From February 2019 to September 2024, Jean-Yves Berthou was the director of the Inria Saclay research center. During this period, he set up the two components of the Inria Saclay research center, the Paris Saclay University Inria center and the Institut Polytechnique de Paris Inria center. During this period, the center has experienced strong growth. From 28 teams in 2019, the center now has 42 Inria research teams.

Jean-Yves Berthou holds a PhD in computer science from Sorbonne University. He is a specialist in simulation and high-performance scientific computing. He is co-director of the French Exascale program (NumPEX). For the past twenty years, Jean-Yves Berthou has been regularly called upon by the European Commission for expert missions, particularly in the fields of high-performance computing, open science and research and innovation strategies.



**Dr. Bonnie Berger**

Simons professor of Mathematics and head of the Communication and Biology Group at the Computer Science and AI Laboratory, MIT, USA



**Dr. Carlos Henrique de Brito Cruz**

Senior Vice-President Research Networks,  
Elsevier

Brito Cruz is the Senior Vice-President, Research Networks, at Elsevier and a Professor Emeritus at the University of Campinas (Unicamp), Brazil.

Brito Cruz was a resident visitor at AT&T Bell Laboratories, visiting researcher at the University of Rome and at the University Pierre et Marie Curie, Paris. He has been a Professor at the Physics Institute, Unicamp, where he worked in experimental physics on the topic of ultrafast phenomena. He directed the Physics Institute at Unicamp, was the Dean of Research, President of the São Paulo Research Foundation, FAPESP, and the Rector of Unicamp. From 2005 to 2020 he was the Science Director at the São Paulo Research Foundation, FAPESP. Brito Cruz is a member of the Brazilian Academy of Sciences, Fellow of the AAAS, and Fellow of the American Physical Society. He received the Order of Scientific Merit (Brazil), the Ordre des Palmes Académiques (France) and the Order of the British Empire (OBE).



**Dr. Pascale Braconnot**

Researcher Laboratory for Climate and Environmental Sciences (LSCE) France

Pascale Braconnot is senior researcher at the Laboratory for Climate and Environmental Sciences (LSCE) - Institut Pierre-Simon Laplace (IPSL) in Saclay, France. She is a specialist in climate modelling to study climate change and climate variability at different time scales. She shares her research activity between model development with a focus on the ocean-atmosphere coupling, and paleoclimate simulations with a focus on change in the water cycle and interannual to multidecadal variability. She developed the first version of the IPSL model, and has led the IPSL modelling centre from 2000 to 2008, and the LSCE modelling group from 2010 to 2013. She is now in charge of the climate modelling infrastructure CLIMERI-France that is strongly connected to the ENES-RI European climate modelling research infrastructure network. She was appointed as a member of the World Climate Research Programme Joint Scientific Committee (JSC) in 2019, and has been elected as Vice-Chair in 2023. She received the Milutin Milanković Medal from the European Geophysical Union in 2009 and the Legion d'Honneur in 2012. She has contributed to IPCC AR4, AR5 WG1 IPCC report as a lead author, and AR6 as a review editor.



**Dr. Jack Dongarra**

University of Tennessee, Knoxville, TN, USA

Jack Dongarra holds appointments at the University of Tennessee, Oak Ridge National Laboratory, and the University of Manchester. He specializes in numerical algorithms in linear algebra, parallel computing, the use of advanced computer architectures, programming methodology, and tools for parallel computers. He was chosen for the IEEE Sid Fernbach Award in 2004; in 2008, he was the recipient of the first IEEE Medal of Excellence in Scalable Computing; in 2010, he was the first recipient of the SIAM Special Interest Group on Supercomputing's award for Career Achievement; in 2011 he was the recipient of the IEEE Charles Babbage Award; in 2013 he received the ACM/IEEE Ken Kennedy Award; in 2019 he received the ACM/SIAM Computational Science and Engineering Prize, in 2020 he received the IEEE-CS Computer Pioneer Award, and in 2022 he received the ACM A.M. Turing Award for pioneering contributions to numerical algorithms and software that have driven decades of extraordinary progress in computing performance and applications. He is a Fellow of the AAAS, ACM, IEEE, and SIAM and a foreign member of the Russian Academy of Science, a foreign member of the British Royal Society, and a member of the US National Academy of Sciences and the National Academy of Engineering.



**Dr. Qian Depei**

Beihang University, China

Qian Depei, professor of Beihang University, Beijing, China, academician of Chinese Academy of Sciences. He has been working on computer architecture and computer networks for many years. His current research interests include high performance computer architecture and implementation technologies, distributed systems, network computing, and multicore/manycore programming. He has published over 400 papers in journals and conferences.

He served as a member of the expert group and expert committee of the National High-tech Research & Development Program in information technology from 1996 to 2010. He was the director of the expert group of 4 national key R&D projects on high performance computing from 2002 to 2020.



**Dr. Christian Hasse**

Professor at TU Darmstadt, Germany

Christian Hasse is full professor in the Department of Mechanical Engineering at Darmstadt University of Technology. He holds the chair of Simulation of reactive Thermo-Fluid Systems ([Homepage](#), [LinkedIn](#)) with currently more than 30 PhD candidates and postdoctoral researchers. He is elected Fellow of the Combustion Institute for his contributions on turbulent combustion, solid fuel combustion, multi-phase flow and soot formation. His main research interests are modeling and simulation of reactive and non-reactive flows, especially for CO<sub>2</sub>-free and CO<sub>2</sub>-neutral fuels such as hydrogen, ammonia, biomass, E-fuels and metals. In addition to fundamental studies on flame structures and dynamics, his main areas of application are combustion in (aero-)engines, boilers and chemical engineering. For these topics, his group has developed a number of high-fidelity software applications that are deployed national Tier-2 and European Tier-0/1 supercomputers.



**Dr. Bryan Lawrence**

Univ. of Reading, UK

Bryan is Professor of Weather and Climate Computing at the University of Reading and the UK National Centre for Atmospheric Science (NCAS). He began his academic career at the University of Canterbury (New Zealand), where he gained a doctorate in atmospheric physics using radar remote sensing to understand middle atmosphere dynamics. He then moved to Oxford University in the UK where he initially worked on satellite data analysis before moving into modelling. After a period back in NZ as a university physics lecturer he returned to the UK, where his focus turned to data analysis, climate modelling, and supercomputing. Previous roles have included being Director of the UK Centre for Environmental Data Analysis (CEDA), Director of the JASMIN data analysis facility, and assisting with the procurement for the last two generations of UK supercomputers (ARCHER and ARCHER2). He has a leadership role within the European Network for Earth system (ENES) modelling and serves on both the ENES HPC and Data task forces. His current scientific interests range from distributed data analytics to machine learning and porting and optimising climate models in support of large ensemble and high-resolution climate simulations.



**Dr. Satoshi Matsuoka**

Director of the RIKEN Center for Computational Science, Japan

Satoshi Matsuoka has been the director of RIKEN Center for Computational Science (R-CCS) since 2018. He is responsible for developing the supercomputer Fugaku which has become the fastest supercomputer in the world in all four major supercomputer rankings in 2020 and 2021 (Top500, HPCG, HPL-AI, Graph500), along with multitudes of ongoing cutting edge HPC research being conducted, including investigating Post-Moore era computing, especially the future Fugaku NEXT supercomputer.

He was the leader of the TSUBAME series of supercomputers that had also received many international acclaims, at the Tokyo Institute of Technology, where he still holds a professor position, to continue his research activities in HPC as well as scalable Big Data and AI.

Other accolades include the Fellow positions in societies/conferences ACM, ISC, JSSST (Japan Society for Software Science and Technology) and IPSJ (Information Processing Society of Japan); the ACM Gordon Bell Prizes in 2011 & 2021; the IEEE-CS Sidney Fernbach Award in 2014 as well as the IEEE-CS Computer Society Seymour Cray Computer Engineering Award in 2022, both being the highest awards in the field of HPC, and the only individual to receive both awards; the Technical Papers Chair and the Program Chair for ACM/IEEE Supercomputing 2009 and 2013 (SC09 and SC13) respectively as well as many other conference chairs, and the ACM Gordon Bell Prize selection committee chair in 2018. His longtime contribution for the computer science research was commended with the Medal of Honor with Purple ribbon by his Majesty Emperor of Japan in 2022.



**Dr. Bob Lucas**

"Ansys Fellow", Los Angeles, CA, USA

Dr. Robert F. Lucas is an Ansys Fellow. He is responsible for scalable linear and eigenvalue solvers. From 2001 until 2016, he was a Division Director and later a Deputy Director of the University of Southern California's Information Sciences Institute (ISI), where he was also the Operational Director of the USC-Lockheed Martin Quantum Computing Center and a Research Associate Professor of Computer Science. Prior to joining ISI, he was the Head of the High-Performance Computing Research Department in the National Energy Research Scientific Computing Center (NERSC) at Lawrence Berkeley National Laboratory. Prior to joining NERSC, Dr. Lucas was the Deputy Director of DARPA's Information Technology Office. From 1988 to 1998 he was a member of the research staff of the Institute for Defense Analyses Center for Computing Sciences. From 1979 to 1984 he was a member of the Technical Staff of the Hughes Aircraft Company. Dr. Lucas received his BS, MS, and PhD degrees in Electrical Engineering from Stanford University in 1980, 1983, and 1988 respectively.



Honorary Member

**Dr. Paul Messina**

Argonne Distinguished Fellow, Argonne National Laboratory (retired), USA

Paul Messina is an Argonne Associate in the Computing, Environment, and Life Sciences Directorate of Argonne National Laboratory and an Argonne Distinguished Fellow, the laboratory's highest scientific and engineering rank. Dr. Messina retired from Argonne in 2019 having served as founding Director of the Computational Science Division, founding Project Director for the U.S. DOE Exascale Computing Project, Director of Science for the Argonne Leadership Computing Facility and founding Director of the Mathematics and Computer Science Division. From 1987-2002, He served as founding Director of California Institute of Technology's (Caltech) Center for Advanced Computing Research, as Assistant Vice President for Scientific Computing, and as Faculty Associate for Scientific Computing, Caltech. During a leave from Caltech in 1999-2000, he led the DOE-NNSA Accelerated Strategic Computing Initiative.



**Dr. Irene Qualters**

Irene Qualters serves as Associate Laboratory Director for Simulation and Computation at Los Alamos National Laboratory, a U.S. Department of Energy national laboratory. She previously served as a Senior Science Advisor in the Computing and Information Science and Engineering (CISE) Directorate of the National Science Foundation (NSF), and has played a leadership role in interagency, industry, and academic engagements to advance computing. Prior to her NSF career, Irene had a distinguished 30-year career in industry, with a number of executive leadership positions in research and development in the technology sector. This includes 20 years at Cray Research where she was a pioneer in the development of high performance parallel processing technologies to accelerate scientific discovery. Subsequently as Vice President, she led Information Systems for Merck Research Labs, focusing on software, data and computing capabilities to advance all phases of pharmaceutical R&D.



**Dr. Reinhard Schneider**

Head of bioinformatics core facility, University of Luxembourg, Luxembourg

Prof. Dr. Reinhard Schneider is a full professor for bioinformatics at the University of Luxembourg. He established and is heading the Bioinformatics Core facility at the Luxembourg Centre for Systems Biomedicine (LCSB) and since 2017 heading the ELIXIR node in Luxembourg. Between 2004-2010 he was a Team Leader at the European Molecular Biology Laboratory (EMBL) in Heidelberg. Before he was co-founder and CIO in the LION bioscience AG and CEO of LION bioscience Research Inc., Cambridge, Massachusetts, establishing an IT based knowledge management system for Bayer. Till 1997 he was a postdoc in the biocomputing department at the EMBL, where he studied various aspects of protein structures and became an expert in HPC. He received his Ph.D. in biology at the University of Heidelberg.

He is a member and fellow of the International Society for Computational Biology where he served in various positions including 7 years as treasurer.



**Dr. Francesca Rossi**

IBM AI Ethics Global Leader, AAAI President, USA

Francesca Rossi is an IBM Fellow and the IBM AI Ethics Global Leader.

She is based at the T.J. Watson IBM Research Lab, New York, USA, where she leads research projects and co-chairs the IBM AI Ethics board. Her research interests focus on artificial intelligence, with special focus on constraint reasoning, preferences, multi-agent systems, computational social choice, neuro-symbolic AI, cognitive architectures, and value alignment.

On these topics, she has published over 220 scientific articles in journals and conference proceedings, and as book chapters. She is a fellow of both the worldwide association of AI (AAAI) and the European one (EurAI). She has been president of IJCAI (International Joint Conference on AI) and she is the current president of AAAI. She is a member of the scientific advisory board of the Future of Life Institute, the board of the Partnership on AI, the steering committee of the Global Partnership on AI, and she will chair the next AAAI/ACM Conference on AI, Ethics, and Society. She has been a member of the European Commission High Level Expert Group on AI, that worked in 2018/2020 to support the European Commission on defining the AI ethics guidelines that led to the design of the current draft of the EU AI Act.



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