

## Bilateral Workshop

Science of the Polar Regions - Neuroscience - Scientific Challenges of New Energy Technologies

Marina Militare, Circolo Ufficiali "Adriano Foscari", Castello 2168, Fondamenta Arsenale, Venice  
20<sup>th</sup> - 21<sup>st</sup> June 2019

### Agenda

June 20<sup>th</sup>, 2019 - Thursday

12.00	Registration		
	Room "Le Cupole"		
12.15	<b>Welcome Address</b>  <b>Massimo Inguscio</b> (President, CNR) <b>Andrea Romani</b> (Rear Admiral, Commandant of the Italian Naval Staff College)		
12.30-13.00	<b>Plenary Lecture</b>  <b>Massimo Inguscio</b> <i>Making the Revolutions of Quantum Technology Deliver for People and Planet</i>		
13.00-14.30	Lunch		
	Room "Le Cupole"	Room "Burraco"	Room "Rappresentanza"
	<b>SESSION:</b> <b>Science of the Polar Regions</b>  <b>Chairs:</b> <b>Carlo Barbante, Eric Wolff</b>	<b>SESSION:</b> <b>Neuroscience</b>  <b>Chairs:</b> <b>Tullio Pozzan, Angela Vincent</b>	<b>SESSION:</b> <b>Scientific Challenges of New Energy Technologies</b>  <b>Chairs:</b> <b>Peter Bruce, Corrado Spinella</b>
14.30	<b>Jane Francis</b> <i>Impacts of climate change on Antarctica</i>	<b>Tullio Pozzan</b> <i>Neuroscience programs at the CNR</i>	<b>Saiful Islam</b> <i>From Lithium Batteries to Perovskite Solar Cells: Atomic-Scale Insights into Energy Materials</i>
14.50	Q/A	Q/A	Q/A
14.55	<b>Susanna Corti</b> <i>Extended predictions and climate projections in Polar Regions</i>	<b>Karen Steel</b> <i>What can mice tell us about human deafness?</i>	<b>Corrado Spinella</b> <i>Research activity at the National Research Council of Italy in the field of physics of matter</i>
15.15	Q/A	Q/A	Q/A
15.20	<b>Ian Brooks</b> <i>The Arctic Boundary Layer – Coupling Clouds and Sea Ice</i>	<b>Cesare Montecucco</b> <i>Degeneration and Regeneration of the Neuromuscular Junction</i>	<b>Yulong Ding</b> <i>UK Physical Energy Storage Research</i>
15.40	Q/A	Q/A	Q/A
15.45	<b>Angelo Pietro Viola</b> <i>Processes in the Atmospheric Boundary Layer observed at the Climate Change Tower in Ny Ålesund, Svalbard</i>	<b>Elizabeth Fisher</b> <i>Novel mouse models for motor neuron disease</i>	<b>Aurora Rizzo</b> <i>Solution Processable Perovskite-based Solar Cells towards Multifunctional Devices</i>
16.05	Q/A	Q/A	Q/A
16.10-16.45	Coffee Break		

16.45	<b>Karen Heywood</b> <i>Oceans and ice: a climate challenge</i>	<b>Matthew Wood</b> <i>Gene-based therapies for neurological disease</i>	<b>Mauro Pasta</b> <i>Lithium-ion batteries and beyond</i>
17.05	Q/A	Q/A	Q/A
17.10	<b>Andrea Spolaor</b> <i>Has the Svalbard region already undergone a climate regime shift?</i>	<b>Fabrizio Benedetti</b> <i>Placebos, words and drugs: sharing common mechanisms of action</i>	<b>Salvatore Lombardo</b> <i>Activity on Bifacial Solar Cells and Solar Fuels</i>
17.30	Q/A	Q/A	Q/A
17.35	<b>Eric Wolff</b> <i>Glacial cycles and past warmth – perspectives from polar ice cores</i>	<b>Stafford Lightman</b> <i>Brain: hormone interactions. Lessons from the hypothalamic stress response system</i>	<b>Neil McKeown</b> <i>Ultraporous Polymers of Intrinsic Microporosity (PIMs) for Membrane Applications</i>
17.55	Q/A	Q/A	Q/A
18.00	End first day		
19.30	Cocktail		
20.00	Dinner		

#### June 21<sup>st</sup>, 2019 - Friday

	Room “Le Cupole”	Room “Burraco”	Room “Rappresentanza”
	Science of the Polar Regions	Neuroscience	Scientific Challenges of New Energy Technologies
9.00	<b>Tommaso Tesi</b> <i>The permafrost-carbon climate feedback</i>	<b>Michela Matteoli</b> <i>How the immune system controls synapse function</i>	<b>Francesco La Via</b> <i>Silicon carbide: a power devices material for the XXI century</i>
9.20	Q/A	Q/A	Q/A
9.25	<b>Mike Bentley</b> <i>Antarctic ice-sheet reconstructions from geological archives as constraints for ice sheet models</i>	<b>Masud Hussain</b> <i>Mechanisms underlying short-term memory</i>	<b>Serena Corr</b> <i>Designing materials for all solid-state batteries</i>
9.45	Q/A	Q/A	Q/A
9.50	<b>Rosamaria Salvatori</b> <i>Remote and proximal sensing for the Polar environment</i>	<b>Maurizio Corbetta</b> <i>A representational hypothesis of spontaneous brain activity, and its implications for basic and clinical neuroscience</i>	<b>Elisa Sani</b> <i>Novel materials for sunlight absorption and energy transfer</i>
10.10	Q/A	Q/A	Q/A
10.15-10.50	Coffee Break		
10.50	<b>Melody Clark</b> <i>Predicting responses to environmental change in our oceans</i>	<b>Heidi Johansen-Berg</b> <i>Imaging and stimulating adaptive brain plasticity</i>	<b>Clare Grey</b> <i>New Characterization Approaches: Extending Battery Life Time, the Faraday Institution and Grid Scale Storage</i>
11.10	Q/A	Q/A	Q/A
11.15	<b>Rosabruna La Ferla</b> <i>Functioning of microbial world in polar environments</i>	<b>Matteo Caleo</b> <i>Combinatorial therapies for stroke recovery</i>	<b>Gianluigi Seriani</b> <i>Main scientific challenges for the operation of ITER negative ion beams and R&amp;D carried out at CNR</i>
11.35	Q/A	Q/A	Q/A

11.40-11.45	<i>To reach room "Le Cupole"</i>
11.45-12.30	<b><i>Wrap-up (all co-chairs)</i></b>
12.30-13.00	<b><i>Plenary Lecture</i></b>  <b>Paolo Matthiae</b> (Professor, National Academy of Lincei) <i>Cultural Heritage and Science</i>
13.00-13.15	<b><i>Thank you</i></b>  <b>Jill Morris CMG</b> (Ambassador, British Embassy Rome) <b>Richard Catlow FRS</b> (Foreign Secretary and Vice-President, The Royal Society) <b>Massimo Inguscio</b> (President, CNR)
13.15-14.30	Lunch
14.30	End of Meeting

## List of Participants

Carlo Barbante	Full Professor, University of Venice; Associate Researcher, Institute for the Dynamics of Environmental Processes - CNR
Gabriele Beccaria	Science Editor, TuttoScienze - La Stampa Daily
Fabrizio Benedetti	Full Professor, University of Turin Medical School, Neuroscience Dept.,; Director, Medicine & Physiology of Hypoxia, Plateau Rosà, Switzerland
Mike Bentley	Professor, Durham University
Ian Brooks	Professor, University of Leeds
Peter Bruce FRS	Physical Secretary and Vice-President, The Royal Society and Professor, University of Oxford
Matteo Caleo	Full Professor, Dept. of Biomedical Sciences, University of Padua; Associate Researcher, Neuroscience Institute - CNR
Rita Carbonetti	Administrative Secretariat, Institute of Translational Pharmacology - CNR
Richard Catlow FRS	Foreign Secretary and Vice-President, The Royal Society
Melody Clark	Project Leader, British Antarctic Survey
Virginia Coda Nunziante	Head of International Relation Office - CNR
Maurizio Corbetta	Full Professor, Dept. of Neuroscience and Padova Neuroscience Center, University of Padova
Serena Corr	Professor, University of Sheffield
Susanna Corti	Senior Scientist, Institute of Atmospheric Sciences and Climate - CNR
Emma Critchley	Artist, Award Earth Water Sky Residency, University of Venice
Ilaria Dantone	Administrative Secretariat, Institute of Translational Pharmacology - CNR
Yulong Ding	Professor, University of Birmingham
Elizabeth Fisher	Professor, University College London
Jane Francis DCMG	Director, British Antarctic Survey
Clare Grey FRS	Professor, University of Cambridge
Karen Heywood	Professor, University of East Anglia
Masud Husain FmedSci	Professor, University of Oxford

Massimo Inguscio	President of the Italian National Research Council
Saiful Islam	Professor, University of Bath
Sofie Jaeger	Scientific Programmes Officer, The Royal Society
Heidi Johansen-Berg	Professor, University of Oxford
Ariane Koek	Director, Science Gallery, University of Venice
Rosabruna La Ferla	Senior Scientist, Institute of Polar Sciences - CNR
Francesco La Via	Senior Scientist, Institute for Microelectronics and Microsystems - CNR
Cecilia Lalle	International Organizations Responsible, International Relation Office - CNR
Leonardo Langone	Research Director, Institute of Polar Sciences - CNR
Stafford Lightman FRS	Professor, University of Bristol
Maurizio Loi	Captain (N), President of the Italian Navy Officers' Club "Adriano Foscari"
Salvatore Lombardo	Research Director, Institute for Microelectronics and Microsystems - CNR
Michela Matteoli	Professor, Humanitas University; appointed Director of Neuroscience Institute - CNR
Paolo Matthiae	Emeritus Professor of Archaeology and Art History of the Ancient Near East; National Academy of Lincei
Julie Maxton CBE	Executive Director, The Royal Society
Neil McKeown	Professor, University of Edinburgh
Max Mizzau Perczel	President Spokesperson - CNR
Cesare Montecucco	Full Professor Dept. of Biomedical Sciences, University of Padova; Senior Scientist, Institute of Neuroscience - CNR
Jill Morris CMG	Ambassador, British Embassy Rome
Laura Nuccilli	Science and Innovation Officer, British Embassy Rome
Mauro Pasta	Professor, University of Oxford
Angela Pomaro	Senior Research Technologist, Institute of Marine Sciences - CNR
Tullio Pozzan	Director of Department of Biomedical Sciences - CNR
Aurora Rizzo	Researcher, Institute of Nanotechnology - CNR

Andrea Romani	Rear Admiral, Commandant of the Italian Naval Staff College; Commandant of the Navy district of Venice
Gianluca Rossi	System manager, Institute for Photonics and Nanotechnologies - CNR
Rosa Maria Salvatori	Senior Scientist, Institute of Atmospheric Pollution Research / Institute of Polar Sciences - CNR
Elisa Sani	Researcher, National Institute of Optics - CNR
Rosalia Santoleri	Director of Institute of Marine Sciences - CNR
Gianluigi Serianni	Researcher, Institute for Plasma Science and Technology - CNR
Corrado Spinella	Director of Department of Physical Sciences and Technologies of Matter - CNR
Andrea Spolaor	Researcher, Institute of Polar Sciences - CNR; University of Venice
Karen Steel FMedSci FRS	Professor, King's College London
Antonella Tajani	Scientific Secretariat of Department of Physical Sciences and Technologies of Matter - CNR
Tommaso Tesi	Researcher, Institute of Polar Sciences - CNR
Luisa Tondelli	Scientific Attachée, Embassy of Italy in London
Fabio Trincardi	Director of Department Earth System Science and Environmental Technologies - CNR
Angela Vincent FMedSci FRS	Professor, University of Oxford
Angelo Pietro Viola	Senior Scientist, Institute of Polar Sciences - CNR
Polly Williams	Head of Scientific Programmes, The Royal Society
Laura Wilton	Head of International Affairs, The Royal Society
Eric Wolff FRS	Professor, University of Cambridge
Frances Wood	Regional Director, UK Science and Innovation Network Europe
Matthew Wood	Professor, University of Oxford