

## KEYNOTE SPEAKERS

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### **Carlos Henrique de Brito Cruz - FAPESP, Brazil**

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An electronic engineer and a physicist, he is a professor at the Gleb Wataghin Physics Institute, of the State University of Campinas (Unicamp), where he was the rector from 2002 to 2005.

He graduated in electronic engineering at the Technological Institute of Aeronautics (ITA in the Portuguese acronym). He took a master's degree and a doctorate at Unicamp's Gleb Wataghin Physics Institute, and at this institution in 1982, he started his teaching career and today is a full professor of Quantum Electronics.

Brito Cruz was a resident researcher at the AT&T's Bell Laboratories, in Holmdel, New Jersey and was also the Director of Unicamp's Physics Institute from 1991 to 1994 and from 1998 to 2002; Rector for Research at this University from 1994 to 1998, and the President of FAPESP from 1996 to 2002.

He is a member of the Brazilian Academy of Sciences since 2000, and the Scientific Director of FAPESP since 2004.

### **Isaias de Carvalho Macedo - State University of Campinas, Brazil**

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Isaias Macedo has worked in the energy technology area since 1970; after 1980, he has been for twenty years in the Centro de Tecnologia Copersucar (today, Centro de Tecnologia Canavieira, Brazil) heading the Industrial area and later the whole Center, in the planning and implementation of the research in sugar cane and ethanol production.

Main activities today involve consultancy in energy technology and sustainability of ethanol production for the private sector (UNICA, in Brazil, and industrial groups); governments (Brazil, Latin American

countries) and financing institutions.

#### **Francis X. Johnson - Stockholm Environment Institute, Sweden**

Francis X. Johnson conducts interdisciplinary energy/climate analyses, capacity-building and research, focusing especially on biomass energy in developing countries and including techno-economic feasibility, environmental impacts, socio-technical innovation, international market development and the policy linkages across different scales and end-use sectors.

He has over twenty years of experience in economic and environmental analysis of biofuels, bioenergy strategies, climate mitigation, and energy efficiency. Prior to joining SEI, he was a Senior Research Associate in the Energy Analysis program at Lawrence Berkeley National Laboratory, USA: He has served as an advisor or expert for international initiatives run by UNIDO, FAO, European Commission, and the Environment Committee of the European Parliament. He has project experience in several different countries in Africa and Asia and has managed or coordinated two international bioenergy networks. He has been co-editor of three books and two conference proceedings and served as Editor of the periodical *Renewable Energy for Development* for 8 years.

He holds a Bachelor of Science in Systems Science and Engineering from the University of Pennsylvania, a Master of Science in Operations Research from the George Washington University and a Master of Arts in Public Policy from the University of Wisconsin-Madison. He also completed the pre-dissertation phase of PhD studies in Geography and Environmental Engineering at The Johns Hopkins University and is now completing the PhD dissertation in cooperation with the Energy and Climate Studies Division at KTH Royal Institute of Technology in Stockholm.

#### **Paulo Eduardo Artaxo Netto - University of São Paulo, Brazil**

Paulo Eduardo Artaxo Netto received a bachelor's degree in physics from the *Universidade de São Paulo* (USP, University of São Paulo) in 1977. In 1980, he received a master's degree in nuclear physics from USP. In 1985, he received a doctoral degree in atmospheric physics from USP. He has held positions at the National Aeronautics and Space Administration (United States), the University of Antwerp

(Belgium), Lund University (Sweden), and Harvard University (United States).

Dr. Artaxo Netto is a full professor in and former head of the Applied Physics Department of the USP Institute of Physics. He works in the field of physics applied to environmental problems, focusing primarily on global climate change, the Amazon environment, physics of atmospheric aerosols, and urban air pollution.

Dr. Artaxo Netto is a full member of the Brazilian Academy of Sciences, the coordinator of the Large-Scale Biosphere-Atmosphere Experiment in Amazônia, associated with the Millennium Institutes Project, and a member of the Intergovernmental Panel on Climate Change (IPCC), as well as a member of seven other international scientific panels.

In 2004, Dr. Artaxo Netto was recognized by the Brazilian Senate for his scientific research into the Amazon environment. In 2006, he was elected a Fellow of the American Association for the Advancement of Sciences. As a member of the IPCC, he was awarded the 2007 Nobel Peace Prize. In 2007, he won the Academy of Sciences for the Developing World Prize for Earth Sciences and received the Dorothy Stang Award from the São Paulo City Legislature.

#### **Erick Fernandes - World Bank, USA**

Erick Fernandes holds a BS in Forestry from the University of Aberdeen and a PhD in Soil Science from North Carolina State University. He was appointed as an International Professor of Crop and Soil Sciences at Cornell University (1995-2005) with research and teaching programs on tropical agroecosystems, cropping systems, and agroforestry. At Cornell, he also served on the Program Committee of Cornell's International Institute for Food, Agriculture, and Development (CIIFAD), as the Global Coordinator of the GEF-UNDP-CGIAR program on "Alternatives to Slash and Burn Agriculture" (ASB), and as a Principle Investigator in the NASA-supported, Large Scale Biosphere-Atmosphere (LBA-Eco) program in the Brazilian Amazon.

## **Helena Chum - National Renewable Energy Laboratory, USA**

Dr. Helena Chum is a Research Fellow in the Renewable Fuels and Vehicle Systems Directorate at the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) and a member of the NREL Research Fellows Council that reports to the Science and Technology Deputy Director. Her expertise is in renewable fuels, transportation systems, and international renewable energy activities including biomass, biofuels, and biorefineries.

Dr. Chum conducts research on the sustainability of biomass and biofuels in the global context. She has developed technologies for the conversion of biomass and a variety of organic wastes into fuels, including hydrogen, chemicals, electricity, and high value materials. She directed analytical chemical research and the development of standards and reference materials for biomass. To these and other fields she has contributed more than 110 papers and 20 patents, has lectured and participated in seminars and conferences worldwide, and is a co-inventor on 20 patents. She participated in the development of the Office of Science and Technology Policy's National Environmental Technology Strategy, released in 1995.

Dr. Chum is a Fellow of the American Association for the Advancement of Science, of the International Academy of Wood Science, of the Cellulose and Renewable Materials Division of the American Chemical Society, and of the American Chemical Society. She served as a member of the Hydrogen Technical Advisory Panel from 1998 to 2003. She received the Individual Trail Blazer Award in Green Engineering, presented by HENAAC Inc. and Green Technology Magazine, in 2006. She has served on several Advisory Boards of universities and organizations and represented NREL in the Council for Chemical Research. She served in the Office of Industrial Technologies' Industry of the Future Program, representing NREL on the Laboratory Coordinating Council and chairing this Council in 1997. She was an Associate Editor of the Clean Processes and Products journal (Springer) and Editor of CHEMTECH (ACS).

**Simon J McQueen-Mason - University of York, UK**

2014 - present: CNAP Director - Centre for Novel Agricultural Products (CNAP), Department of Biology, University of York

2001 - 2013: Chair in Materials Biology - Centre for Novel Agricultural Products, Department of Biology, University of York

1994 - 2002: Royal Society University Research Fellow - Department of Biology, University of York

1993 - 1994: Post-doctoral Research Assistant - The Pennsylvania State University

1993: PhD (Plant Physiology) - The Pennsylvania State University

1987: BSc Biology (CNA) Honours (1st Class) - Portsmouth Polytechnic School of Biological Sciences

Current Projects:

- New tools for the realization of cost-effective liquid biofuels from plant biomass. (Funding body: BBSRC)
- Cell wall lignin programme: Manipulating lignin to improve biofuel conversion of plant biomass. (Funding body: BBSRC)
- Establishment of an aspergillus-based production system for the biorefinery industry.(Funding body: BBSRC)
- Multipurpose hemp for industrial bioproducts and biomass. (Funding body: EU)
- SUNLIBB: Sustainable liquid Biofuels from Biomass Biorefining. (Funding body: EU)
- Targeted analysis of lignocellulolytic secretomes-a new approach to enzyme discovery. (Funding body: BBSRC)

**Duncan Eggar - BBSRC, UK**

Duncan Eggar is the Bioenergy Champion of the Biotechnology and Biological Sciences Research Council (BBSRC). In this role he has coordinated the work of the BBSRC Sustainable Bioenergy Centre (BSBEC), as well as forging links with national and international policymakers and other funders of sustainable bioenergy research. Prior to joining BBSRC in 2009 he worked for BP plc for 28 years in a variety of upstream and downstream roles including postings to New Zealand and Southern Africa, working on business sustainability issues and their strategic implications and a two-year secondment to the UK Sustainable Development Commission.