

**THE SYNERGY ON  
CLIMATE CHANGE RESEARCH  
IN CHINA AND IN SÃO PAULO  
WORKSHOP**

November,  
22<sup>nd</sup>-23<sup>rd</sup>  
**2021**

6 pm (Chinese time)  
7 am (São Paulo time)

# SPEAKERS



Support:



**FAPESP**  
CLIMATE  
CHANGE





**Paulo Eduardo Artaxo Netto (co-Chair)**

Institute of Physics/University of São Paulo (USP)

Paulo Artaxo is an expert in the links between Amazonia and climate change. He dedicated 40 years studying the effects of deforestation on carbon and hydrological cycles and in the functioning of the Amazonian ecosystem. He worked at NASA, Lund and Stockholm Universities. Prof. Artaxo published more than 400 papers, 26 of them in the Science and Nature group. He is one of the most cited Brazilian researchers with an h-index of Google Scholar of 104, and 81 in the Web of Science. Among the prizes received, he was elected a fellow of the American Association for the Advancement of Science (AAAS), received the TWAS Earth Science Prize, received the title of Doctorate of Philosophy Honoris Causa of the University of Stockholm, Sweden. He received in 2010 the Ordem do Mérito Científico Nacional medal, and in 2016 received the “Premio Almirante Álvaro Alberto” from MCTI, the most prestigious scientific prize in Brazil. He is listed in Clarivate Analytics Highly Cited Researchers in 2014, 2015, 2018 and 2019. Recently, participated in the 2021 United Nations Climate Change Conference (COP-26).



**Denise Helena Silva Duarte**

School of Architecture and Urbanism (FAU/USP)

Dr. Duarte is Full Professor at the School of Architecture and Urbanism, University of Sao Paulo, and Visiting Professor at the Erasmus Mundus Joint Master’s Degree on Urban Climate and Sustainability (EU). She works in interdisciplinary projects funded by FAPESP, CNPq and USP, regarding climate change adaptation for cities and buildings, and by EU/H2020, linking nature-based solutions to urban sustainability. She serves as Expert Reviewer for IPCC/WGII and in technical counselling for the public administration.



**Celso Luis Marino**

São Paulo State University (IBB/UNESP)

Graduate at Biological Sciences from Universidade Estadual Paulista Júlio de Mesquita Filho (1986), master’s at Genetics from Universidade Estadual Paulista Júlio de Mesquita Filho (1991) and ph.d. at Genetics from Universidade Estadual Paulista Júlio de Mesquita Filho (1995). Has experience in Genetics, focusing on Molecular Genetics and of Microorganisms, acting on the following subjects: eucalyptus, eucalyptus grandis, rapd, variabilidade genética and expressed sequence tags.

## BRAZILIAN SPEAKERS

### THE SYNERGY ON CLIMATE CHANGE RESEARCH IN CHINA AND IN SÃO PAULO WORKSHOP



#### Sérgio Almeida Pacca

School of Arts, Sciences and Humanities (EACH/USP)

Sergio Pacca is an associate professor at the School of Arts, Sciences and Humanities (EACH) of the University of São Paulo (USP). At USP, he advises students in the graduate programs in Sustainability and Energy. He teaches in the Environmental Management Undergraduate Program. He is associate editor of the journal *Resources Conservation & Recycling* (Elsevier) and member of the International Society for Industrial Ecology (ISIE). He was the co-lead scholar of the Fulbright Nexus Program (2015-2016) and principal investigator in the Interamerican Development Bank project on Marginal Abatement Carbon Emission Cost Curve for the Sao Paulo State. In 2018 he was a visiting professor at the City University of New York and taught an introductory energy course. His research focus on climate change mitigation policies through the assessment of low carbon technologies for the industry, including construction activities. He has collaborated in the assessment of bioenergy, especially sugarcane-based carriers. The goal of such studies is determining the carbon balance of the system based on a comprehensive view of the carbon stocks and flows and considering multiple Technologies such as hybrid vehicles and bioenergy carbon capture and storage (BECCS).



#### Gabriela Marques Di Giulio

School of Public Health (FSP/USP)

Professor Gabriela Di Giulio is an expert on Environment and Society, with focus on human dimensions of climate change; crises, risks and uncertainties; science-policy-communication interactions; and global health and sustainability. She is Associate Professor in the Health Department, School of Public Health, University of Sao Paulo (USP) and Visiting Researcher in the Politics Department, University of York (UK). Her current studies focus on climate adaptation and cities; water-energy-food nexus; and Covid-19 crisis.



#### Luiz Carlos Ruiz Pessenda

Center for Nuclear Energy in Agriculture/CENA/USP, represented by  
Dr. Marcelo Cancela Lisboa Cohen - Universidade Federal do Pará

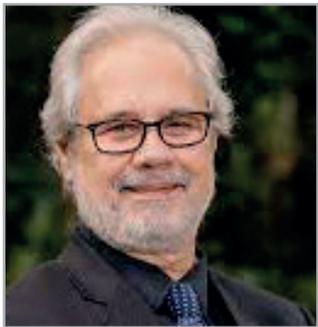
Graduate at Licenciatura Em Física from Universidade Estadual Paulista Júlio de Mesquita Filho (1977), master's at Energia Nuclear na Agricultura from Universidade de São Paulo (1982) and ph.d. at Solos e Nutrição de Plantas from Universidade de São Paulo (1987). Has experience in Chemistry, acting on the following subjects: isótopos do carbono, paleoclima, paleovegetação, solo and datação por c-14.



**Maria Imaculada Zucchi**

São Paulo Agribusiness Technology Agency (APTA/SAASP)

Professor Zucchi is Graduated in Biological Sciences (State University of Campinas - UNICAMP), Ph.D. in Agronomy (University of São Paulo - ESALQ-USP) and post-doctorate at the University of Illinois - UIUC. She is currently a scientific researcher at the Instituto Agronômico de Campinas and professor in graduation programs at UNICAMP and ESALQ-USP. She has experience in Agronomy, with emphasis on Population Genetics, mainly in the following subjects: population genomics, genetic diversity, next-generation sequencing, computational biology applied to the NGS experience. The studies of her research group focus on restoration genetics, native tree species, crops, and pollinators.



**Marcos Silveira Buckeridge**

The Biosciences Institute (IB/USP)

Marcos Buckeridge is plant biologist who has spent 20 years working at the Botanical Institute of São Paulo with native Neotropical species. During his masters and PhD he worked with cell wall polysaccharides in plants and in 1995 established a line of research focused on the comprehension of the physiological and cellular mechanisms involved in seedling establishment in tropical biomes as well as the development of biotechnological tools to help the sustainable use of biodiversity. More than 80 publications were produced following these lines of research. With the increasing importance of the impact of Global Climatic Changes in the world, Dr. Buckeridge pioneered studies that try to understand how the rain forest, including Atlantic and Amazonian species, are responding to the increasing carbon dioxide concentration in the atmosphere. More recently, his research group added another focus, which is to understand how the sugar cane plant will respond to the climatic changes. This is important because sugarcane is now one of the most important crops in Brazil, being responsible for the production of ethanol as a fuel. Dr. Buckeridge moved to the University of São Paulo in 2006 and from 2009 to 2012 shared this position with the Scientific Directory of the Brazilian Bioethanol Science and Technology Laboratory at Campinas. He is also the actual coordinator of the National Institute of Science and Technology of Bioethanol (INCT do Bioetanol) a virtual organization that congregates 31 laboratories from 6 states of Brazil working on bioenergy. He has been president of the Botanical Society of São Paulo from 2001 to 2005 and is one of the lead authors for the next report of the Intergovernmental Panel of Climatic Changes (IPCC) to be presented in 2014. Presently, Dr. Buckeridge is a communicating editor for *Trees: structure and function* (Springer), *Bioenergy Research* (Springer), *Global Change Biology Bioenergy* and the *Australian Journal of Botany*. Buckeridge has been President of the Academy of Sciences of the State of São Paulo from 2015 to 2019.

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**Alexander Turra**

Oceanographic Institute (IO/USP)

Professor Turra works at the Oceanographic Institute of the University of São Paulo and coordinates the UNESCO Chair on Ocean Sustainability. Turra is a biologist seeking to promote the integration between science and society and the dialogue with the private sector for oceanic technological development and innovation. Turra was awarded the Kirby Laing Fellowship at the School of Ocean Sciences, Bangor University (UK) and the Merit Medal of Tamandaré from the Brazilian Navy.



**Dalva Maria da Silva Matos**

Federal University of São Carlos (CCBS/UFSCAR)

I graduated as bachelor in Biological Sciences at the State University of Campinas (1988), MSc in Plant Biology at the State University of Campinas (1992) and PhD in Ecology at the University of East Anglia / UK (1995). I am a full professor at the Federal University of São Carlos (UFSCar). I teach the disciplines of Communities Ecology for the Biological Sciences course, Environmental Sciences for the course of Production Engineering, Population Ecology and Field Course in Coastal Environments in the post-graduate course in Ecology and Natural Resources of UFSCar (PPGERN). I'm interested in seeking answers to different questions in ecology to assist in the conservation of biodiversity. For this reason, I have dedicated myself to assess the impacts of human activities on populations and communities of terrestrial and freshwater plants.



**Helena Ribeiro**

School of Public Health (FSP/USP)

Helena Ribeiro is:

BSc Geography, Catholic University of São Paulo (Brazil),

MA Geography, University of California Berkeley (USA),

PhD Physical Geography, University of São Paulo (Brazil),

Post-Doc International Academy of Environment, Geneva (Switzerland)

Professional experience, service, and academic distinctions and prizes

Recent Employment History

Oct 1995 – Present Full Professor of Environmental Health

Current Position

Professor of PhD Program Global Environmental Health and Sustainability,  
Department of Environmental Health



**Tianjun ZHOU (co-Chair)**

Institute of Atmospheric Physics, CAS

Prof. & Dr. Tianjun Zhou is a senior research scientist in the Institute of Atmospheric Physics (IAP) at the Chinese Academy of Sciences (CAS), Adjunct Professor in the University of Chinese Academy of Sciences (UCAS). He is the deputy-Director General of IAP/CAS. He served as the Lead Author on the 5th and 6th Assessment Reports by the Working Group I of the Intergovernmental Panel on Climate Change (IPCC). He is also a member of the CLIVAR (Climate and Ocean: Variability, Predictability and Change) Working Group on Coupled Modelling and co-chair of CMIP6 (Coupled Model Intercomparison Project-phase 6) Global Monsoon Model Inter-comparison Project (GMMIP). He is the Advisory Editor of Oxford Research Encyclopedia of Climate Science, a member of Panel of Experts for Special Foundation for State Major Basic Research Program of China entitled "Earth System and Global Change".

Tianjun ZHOU works on climate modeling and climate dynamics, with focus on monsoon and how the climate system responds to anthropogenic and natural forcing agents. He was named to the prestigious Highly Cited Researcher list from Clarivate Analytics for Geosciences (2018-2020), the prestigious Highly Cited Chinese Researcher list from Elsevier (2014-2020).



**Shaoqiang WANG**

Institute of Geographic Sciences and Natural Resources Research, CAS

Prof. Wang's study fields focus on large-scale terrestrial ecosystem carbon cycle based on a model-data integration approach and ground- and satellite-based observations, in order to better understand inter-annual to decadal variability in ecosystem carbon-cycle. His main research interests revolve around the response and feedback of ecosystems carbon and water cycles to climate change. Specific topics include land-atmosphere interactions, the impacts of climate extremes on terrestrial ecosystem carbon and water processes.

He is currently leading the Influence of climate change and food security on cropland ecosystem in India, Myanmar and Bangladesh project, which is part of the UNEP and NSFC cooperation programme. Meanwhile, Prof. Wang is leading others projects on terrestrial ecosystem quality observation and ecosystem carbon cycles based on remote sensing and models.



**Weiqi ZHOU**

Research Center for Eco-Environment Sciences, CAS

Dr. Weiqi Zhou is a professor of urban ecology, and deputy director of the State Key Laboratory of Urban and Regional Ecology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences. He is also the director of the Beijing Urban Ecosystem Research Station. Dr. Zhou is interested in spatial heterogeneity of the landscape. He integrates field observations, remote sensing and modeling to understand the structure of urban socio-ecological systems, and its link to ecological function. He works across many disciplines including landscape ecology, urban ecology, remote sensing, and GIS, and interact with various collaborators from different fields through his involvement with various collaborative projects. The interdisciplinarity of his work has allowed him to develop innovative approaches and tools to better understanding the structure of urban socio-ecological systems, and its link to ecological function, and to interact with practitioners and policy makers to help cities like Beijing and Shenzhen accomplish sustainable urban transformations. Dr. Zhou serves as the associate editor for *Landscape and Urban Planning*, and editorial members for the journals such as *Landscape Ecology* and *Journal of Urban Ecology*. He is a co-leader of the Urban Ecosystem Group of the IUCN Commission on Ecosystem Management. He has published more than 100 peer-reviewed papers and three books.



**Shushi PENG**

Peking University

Shushi Peng is tenured associated professor in Sino-French Institute for Earth System Science, and College of Urban and Environmental Sciences in Peking University. He is interested in how terrestrial ecosystems respond to and feedback on the earth's climate system. By using ground observations and inventories, remote sensing, and atmospheric observations, and atmospheric inversion, terrestrial biosphere models and earth system models, his work focuses on biogeochemical cycles of terrestrial ecosystems under climate change. Recently, his work is focused on unraveling interactions of carbon, nitrogen and phosphorus in terrestrial ecosystems, and methane budget and its linkage with climate change. His published papers have been cited >12000 times (Web of Science), and h-index is 50. He has received the Highly Cited Researcher Award in Cross-Field from Clarivate Web of Science during 2018-2020, and was selected as top scientist in the Reuters list of the world's top climate scientist, ranked as 161th. More academic information can be found on <https://publons.com/researcher/1378955/shushi-peng/>.



### Lin WANG

Institute of Atmospheric Physics, CAS

Lin Wang is a professor of meteorology at the Institute of Atmospheric Sciences, Chinese Academy of Sciences. His research interest is primarily on extra-tropical climate variability and climate change, including monsoon, atmospheric and climate dynamics, and climate extremes. His areas of expertise are the variability, mechanism, and predictability of the Asian monsoon ranging from the intraseasonal to interdecadal timescales. He heavily applies process-based diagnostics on observational, reanalysis, and model data to identify the critical processes that dominate the monsoon and climate variability. He also seeks the potential influences of the stratospheric processes on monsoon variability and predictability. Currently, he is working on the scale interactions, the role of internal climate variability in climate change, and climate extremes. He has published more than 100 articles in refereed scientific journals. He currently serves as an Associate Editor for the Journal of Climate, a member of the WCRP Lighthouse Activity Science Plan Development Team, a member of the CLIVAR/GEWEX Asian-Australian Monsoon Working Group, and the academic secretary of the Institute of Atmospheric Sciences, Chinese Academy of Sciences. See <https://sforest81.github.io/en/> for more details.



### Xianyu HUANG

China University of Geo-sciences (Wuhan)

I'm an organic geochemist interested in lipids preserved in peat deposits, a kind of carbon-rich and redox sensitive sediments. In our group, we use lipid biomarkers and their compound-specific carbon and hydrogen isotopes to study past climate changes and carbon cycling, with the goal of learning lessons for our future. The aims include: 1) to reconstruct paleoclimate changes since the late deglaciation in the monsoon region of China using molecular proxies; (2) to investigate how carbon dynamics in the middle latitude sub-alpine peatlands respond to the changes of hydrology and human activities. We run a molecular geobiology lab equipped with gas chromatograph, gas chromatograph-mass spectrometer, liquid chromatograph, liquid chromatograph-mass spectrometer, and gas chromatograph-combustion/thermal conversion-isotope ratio mass spectrometer to analyze the molecular composition and compound-specific isotope ratios of lipid biomarkers. Further details and an overview of my research may be found on our group website (<http://www.geobiology.cn/>) and the ResearchGate website (<https://www.researchgate.net/profile/Xianyu-Huang>).



**Guihua WANG**

Fudan University

Professor at Fudan University. Research Fields: Ocean circulation, tropical cyclone, multi-scale air-sea interaction.

My research centers on multi-scale ocean-atmosphere interactions and their role in ocean. I carry out both observing and modeling studies. My major work covers all three major oceans, especially the Pacific and the South China Sea. Our research has led to the first base information of mesoscale ocean eddies, large scale wind driven circulation, deep ocean circulation in the South China Sea and their interactions with tropical cyclones. Our research also has provided ideas about the multiscale variability of strong currents such as the Kuroshio, the Gulf Stream and the Antarctic Current, and their responses to tropical cyclones or climate change.

Honors: Ten Thousand Talent Program, 2016; 2012 Outstanding reviewer, American Geophysical Union, 2013; Distinguished Young Scholars, National Science Foundation of China (NSFC), 2011.

Adjunct Research Positions: Associate Editor of Frontiers in Earth Science  
Member of the Chinese Scientific Committee on Oceanic Research.



**Yongshuo FU**

Beijing Normal University

Full professor; Director of the Institute of water security College of water sciences, Beijing Normal University.

Interest and Publications: Focusing on vegetation phenology and its feedback on terrestrial carbon and water cycles, using manipulative experiments, satellite/UVA imagery, long-term monitoring plots, as well as process-based models and DGVM (LPJ-model) to explore how environmental changes affect vegetation phenology across different spatial and temporal scales, and explore how these differences can ultimately determine community and ecosystem responses to environmental change.

The publication list including 1 nature, 7 nature family journals (NCC, NEE, NC), 3 PNAS, 16 Global change biology and in total 73 peer review papers, and more than 3433 citations over the past 5yrs.

Projects involved:

1. National Science Foundation for Distinguished Young Scholars, NSFC, 2021-2025, 4,000,000 yuan, PI

2. Introducing Talents of Discipline to Universities, 2018-2022, 9,000,000 yuan, PI
3. Thousand Talent Program for Young Outstanding Scientists, Vegetation phenology and climate change, NSFC, 2017-2022, 3,000,000 yuan, PI
4. Response and modelling of forest phenology to climate change in temperate China, NSFC, 2018-2021, 610,000 Yuan, PI
5. National Key Research and Development Program of China, Carryover effect of vegetation phenology on land surface processes, 2017-2022, 1,050,000 Yuan, co-PI.

Award:

1. Distinguished Young Scholars (NSFC), 2020
2. The Talents Plan- Young Professionals, 2016
3. Pegasus Marie Curie Fellowship, 2015-2016
4. Excellent postdoc Peking University, 2015



**Fangli QIAO**

First Institute of Oceanography, MNR

Dr. Qiao, Academician of International Eurasian Academy of Sciences, is a senior scientist of physical oceanography and the Deputy Director General of the First Institute of Oceanography, Ministry of Natural Resources of China. His research interests cover ocean and climate model development, ocean dynamics, turbulence and air-sea interaction etc. He established the non-breaking surface wave-induced mixing (Bv) theory and discovered the Bv generation mechanism through wave-turbulence interaction. The Bv has been used by tens research centers from different countries, and their ocean and climate models are all dramatically improved. He developed the first in the world new generation surface wave-tide-circulation fully coupled ocean model (FIO-COM) which overcomes the ground challenge for half century of too shallow simulated mixed layer depth especially in summer, the atmosphere-ocean-wave coupled Typhoon model (FIO-AOW) which greatly enhances the Typhoon intensity forecasting ability, and the earth system model including surface waves (FIO-ESM v1.0 and 2.0) which kills more than half the long-standing tropical biases for all climate models. The simulation and prediction ability of ENSO based on FIO-ESM v2.0 at the top of all CMIP6 climate models. Dr. Qiao is the member of the Executive Planning Group of the UN Decade of Ocean Science for Sustainable Development, Co-chair of IOC/WESTPAC, Editor-in-chief of Ocean Modelling etc. He received numerous academic awards including Wooster Award of PICES, National Innovation Awards of China etc. He has published more than 380 papers on peer-review scientific journals.

**Bangqin HUANG**

Xiamen University

Dr Bangqin Huang is Chair Professor, Director of National Observation and Research Station for the Taiwan Strait Marine Ecosystem (T-SMART), Chief Scientist at State Key Laboratory of Marine Environmental Science and College of the Environment and Ecology, and Director of Fujian Provincial Key Laboratory of Coastal Ecology and Environmental Studies, Xiamen University. His major interest includes marine ecosystems and global changes, plankton ecology, biological oceanography. He focuses on the plankton (phytoplankton and microzooplankton) biodiversity, community ecology, biological and physical interaction, and biological carbon pump. He is leading PI of the MARCO project "Marine Carbon Sequestration: Multiscale Regulation and Response to the Global Change", which was funded by the National Key R & D Program of China, and several NSFC Key projects on marine plankton community and biological carbon pump in China Seas. He and his team have collected more 150 cruise since 2000 in China Seas and West Pacific Ocean. He has published over 70 peer reviewed research articles in international journals, such as Water Research, Progress in Oceanography, Environmental Microbiology, Limnology and Oceanography, Journal of Geophysical Research (Oceans, Biogeosciences), Ecosystems. He received the NSFC Distinguished Young Scientist Award in 2009. Pls visit MEL(in English) <https://mel2.xmu.edu.cn/melwebold/en/index.asp>, and my group (in Chinese) <https://ceg.xmu.edu.cn/> for more information.

**Botao ZHOU**

Nanjing University of Information Science and Technology

Professor/Deputy Dean, School of Atmospheric Sciences  
Nanjing University of Information Science and Technology (NUIST)  
Research Interests: Climate Change, Climate Extremes, East Asian Climate Variability and Mechanism.

Research Projects in Progress

- National Natural Science Foundation of China (42025502) –"Understanding and Projection on Climate Change in Middle and High Latitudes"
- National Natural Science Foundation of China (41991285)–"Impact of Climate Extremes on the Ecosystem in the Mid- and High-latitudes of Asia"
- National Key Research and Development Program of China (2018YFA0606301)–"Projected Changes of Climate and Climate Extremes in the Beijing–Tianjin–Hebei Region of China"

## Education

- 09/2003-06/2006: Ph.D. (Meteorology), Institute of Atmospheric Physics, Chinese Academy of Sciences, China
- 09/2000-06/2003: M.S. (Meteorology), Nanjing Institute of Meteorology, China
- 09/1996-06/2000: B.S. (Meteorology), Nanjing Institute of Meteorology, China

## Professional Experience

- 03/2018-present, School of Atmospheric Sciences, NUIST, China. Professor
- 06/2006-03/2018: National Climate Center, China Meteorological Administration, China. Assistant Professor/Associate Professor/Professor

## Academic Service

- Lead Author (LA) of the Sixth Assessment Report (AR6) of the IPCC Working Group I
- Advisor of the United Nations Secretary-General's High-level Panel on Global Sustainability (GSP)
- Deputy Secretary-General of the National Technological Committee on Climate and Climate Change Standardization, China
- Deputy Chairman of the Climate Change and Low Carbon Development Committee, Chinese Meteorological Society (CMS), China

## Honor and Awards

- National Top-Notch Young Professionals of China
- Tu Changwang Meteorological Science and Technology Prize for the Youth, CMS, China
- Zou Jinmeng Meteorological Science and Technology Prize, CMS, China
- National Outstanding Youth of Meteorological Science and Technology, CMS, China