



NASA-Rio Disaster Preparedness Cooperative Effort



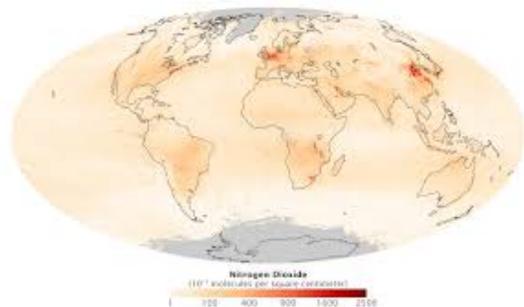
NASA-Rio Education Collaboration Webinar Series

October 19th: Air Quality and Fires: 6:30 PM Rio

Please join us for a free informational presentation from the comfort of your computer by clicking on this link: <https://gsfc610.adobeconnect.com/riowebinar2/>. This webinar will also be delivered at the [Rio Planetarium](#). Be sure to log in at 6:15 to be sure your connection and technology work, as we will begin promptly at 6:30 pm. This webinar will focus on air quality, the impact of forest fires on the environment in Brazil, the Urban Heat Island effect, and we will learn how the city of Rio is responding to the challenge of monitoring air quality. We will also hear about some of the sustainable practices that are in place at the Rio Planetarium.

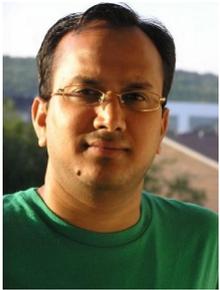
1. Welcome and Introduction to the Rio-NASA Effort: Luiz Arueira
2. Air Quality: Dr. Gupta Pawan (NASA/GSFC)
3. Fires in Brazil and seasonal/climate signals: Dr. Doug Morton (NASA/GSFC)
4. Urban Heat Island effect in Rio: Dr. Sergio Almeida
5. Air Quality Monitoring in Rio: Bruno Fresca
6. Information about a few informational resources related to these topics: Maria Cunha
7. Information about the sustainable practices at the Rio Planetarium: Alex Cherman

To join this webinar, please go to <https://gsfc610.adobeconnect.com/riowebinar2/>



Speaker Biographies:

Luiz Roberto Arueira is civil engineer (Universidade Federal Fluminense, Rio de Janeiro - Brazil) with experience in GIS and public policies. He has over 20 years of experience in the public sector, working in the Municipality of Rio de Janeiro. He is currently Director of City Information from Pereira Passos Institute, department responsible for municipal data and knowledge management and its geoprocessing system.



Dr. Pawan Gupta is a Research Scientist at the Goddard Earth Sciences Technology and Research (GESTAR), Universities Space Research Association (USRA), NASA Goddard Space Flight Center, Greenbelt, MD, USA. He has completed his Ph.D. in Atmospheric Sciences from the University of Alabama in Huntsville. His main research expertise is in the application of satellite remote sensing for air quality monitoring and assessment around the world. He has also published several research studies focusing on air quality in growing mega cities, spatial and temporal trends in aerosols over urban regions, radiative effects of aerosols, development of statistical models to estimate surface level PM air quality, aerosols and clouds data validation, aerosol retrievals and satellite aerosol data fusion for air quality and climate change research. Dr. Gupta is currently a member of MODIS science team and is working on development of new aerosol retrievals over global urban regions to address air quality needs. He is also involved in developing and conducting remote sensing technical workshops and capacity building activities for the NASA's Applied Remote Sensing Training Program (ARSET). He leads the ARSET air quality training team, which focuses on the application of satellite imagery/data to environmental decision-making activities.

Dr. Douglas Morton is a Physical Scientist at NASA's Goddard Space Flight Center and an Adjunct Assistant Professor at the University of Maryland, College Park. Dr. Morton studies land use change in tropical forests, including deforestation, forest degradation, and agricultural land uses that replace tropical forest. He is also part of the research team for the Global Fire Emissions Database (GFED, globalfiredata.org), an effort to combine multiple sources of satellite data to better understand fire activity, greenhouse gas emissions from fires, and changes in savanna and tropical forest ecosystems following fire events. Dr. Morton is actively engaged in international negotiations to Reduce Emissions from Deforestation and forest Degradation in developing countries (REDD+), and serves as a technical adviser to SilvaCarbon, a US-Government initiative to build capacity in tropical forest countries to monitor and manage their forest resources. Dr. Morton has been working in the Brazilian Amazon since 2000, in collaboration with scientists at the Instituto Nacional de Pesquisas Espaciais (INPE) and the Instituto do Homem e Meio Ambiente (Imazon).



Dr. Sergio Almeida is a Biologist (1984), holds a Master's degree in Geoscience from the Fluminense Federal University (1991) and a Ph.D. in Science from the São Paulo State University (1995); Dr. Almeida has participated in the mapping project of forest regeneration in the Amazon at the National Institute for Space Research - INPE; Participated as a teacher of the international course on remote sensing, organized by INPE, the United Nations University and the National Council for Scientific and Technological Development (CNPq); Instructed courses on the Basics of Geoprocessing at the Advanced Training Program on Geo-technology organized by the Society of Latin American Specialists in Remote Sensing (SELPER); Participated as a consultant at the United Nations Development Program (UNDP) providing services to the Ministry of Cities; Dr. Almeida is Advisor at the Mayor's Office of the Rio de Janeiro City Hall and his duties include: to contribute to the development of the Urban Information System (SIURB) coordinated by Instituto Pereira Passos - IPP; to subsidize public policies for the municipal administration; to coordinate studies on heat islands and its consequences for public health and mitigation actions.





Bruno Bôscaro França is a chemical engineer at the City Hall of Rio de Janeiro. He has completed his Doctor of Science degree by the Chemical Engineering Program at Alberto Luiz Coimbra Institute of Graduate Studies and Research in Engineering from Federal University of Rio de Janeiro - COPPE/UFRJ (2013). Participated of the City Hall servers improvement program, Cariocas Leaders Program. Bruno is currently the Air Quality Monitoring Manager at the Municipal Department of the Environment, responsible for the air monitoring network.



Maria Cristina Zamith Cunha is Brazilian, from Rio de Janeiro. She has lived for almost 8 years in the USA due to her parents' professional activities. She is a biologist, holding her Master's degree in Ecology (UFRJ – Universidade Federal do Rio de Janeiro, 1986), and has a specialist degree in Environmental Analysis and Evaluation PUC – Pontifícia Universidade Católica – RJ, 2003). Maria has been a science teacher since 2000, with the Rio de Janeiro City Hall, and has almost 30 years experience teaching middle and high school students, working as an Environmental Education Specialist as well. In her current school, Ginásio Carioca Orsina da Fonseca, located nearby Tijuca Forest National Park, she works with students – age 11 to 15 years old – developing projects that focus on sustainability from the perspective of science, technology and society. The school is a member of UNESCO's ASPnet schools project, since 2012 and has worked with New York City Hall Global Partners Junior Program, where the students participate by talking online with another students from all over the world, to learn and share information about environmental issues. Maria was selected to be a NASA "GPM Master Teacher" in Oct. 2015, and learned how to integrate NASA's huge range of educational resources into her daily teaching practice.

Dr. Alexandre Cherman, Rio de Janeiro Planetarium is an Astronomer and Physicist. Alexandre Cherman works at the Rio de Janeiro Planetarium since 1997. Currently, he is the Head of Astromomy, responsible for producing original content for its three domes (two of which are digital). He graduated in Astronomy, has a Masters in Mathematical Physics and a Ph.D. in Field Theory. He has written five books on subjects that include the night sky, the history of physics, cosmology and the calendar. He served three consecutive two-year terms as Scientific Director of ABP, the Association of Brazilian Planetariums, and one term as its President. He was the first Brazilian representative at the International Planetarium Society Council, and was voted an IPS fellow in 2012. He is an Associate Editor of "Planetaria" (the official journal of ABP) and of "Planetarian" (the official journal of IPS), where he publishes a quarterly comic strip called PARTYcles. He is married and lives with his wife and daughter in Rio de Janeiro, Brazil.



For more information on this effort, please go to:

http://science.gsfc.nasa.gov/610/applied-sciences/nasa_rio_partnership.html