

DR. SANGRAM GANGULY

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Title:

Big Data Computation and Open Cloud Solutions for Earth Scientists

Abstract:

Big Data computation, storage and analytics are becoming an integral part of scientists and researchers who strive to solve complex problems and in situations where high volume storage, rapid data queries and computing on demand are a barrier to entry. NASA Earth Exchange (NEX) is designed to engage the global community of Earth scientists in cross-disciplinary research by combining global Earth observation datasets, shared scientific tools and workflows, and the power of cloud computing to enhance scientific collaboration and accelerate progress towards understanding emerging changes in the Earth system. NEX is developing resources for scientists seeking to enhance their skills on a variety of research topics – this includes learning resources like online lectures from the world's leading scientific experts and hands-on data analysis and modeling exercises enabled through virtual machines and shared workflows. More importantly, scientists and resource managers around the world will benefit from NASA-provided, ready-to-use data, computing and knowledge encapsulated in virtual machines.

Profile:

Dr. Sangram Ganguly is a research scientist at NASA Ames Research Center, California, USA and with the Bay Area Environmental Research Institute. He obtained his bachelors and masters from the Indian Institute of Technology, Kharagpur in Exploration Geophysics and PhD from Boston University. Dr. Ganguly has made significant contributions in advanced remote sensing techniques, climate-vegetation interactions, carbon cycle, climate dynamics and climate change and high performance computing in Earth sciences. Dr. Ganguly's activities at the NASA's Advanced Supercomputing Division and Earth Science Division are majorly focused around high end computing technologies for big data computation, physical algorithms in remote sensing, carbon modeling and scalable solutions for Earth science research. Apart from doing research, Dr. Ganguly is deeply involved in web application development, web designing, interactive web infographics and in composing new age music.

To name a few achievements, Dr. Ganguly has won the NASA achievement award for the last 3 years and have been involved as Principal Investigator and co-investigator in several NASA funded projects. He is an active panel member for both NSF and NASA Geoscience/Earth Science Programs. He has more than 26+ peer reviewed journal publications with three book chapters and is an active reviewer of 20+ peer reviewed journals. Dr. Ganguly's research work has been highlighted in several national and international news media.