

ICTS Colloquium

Title : When and how will the “anthropogenic CO₂” be removed by natural processes?

Speaker : Govindasamy Bala, Indian Institute of Science, Bangalore

Date : Monday, April 3, 2017

Time : 3:00 pm

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : In the industrial era, the rapid increase in the consumption has resulted in steep increases in CO₂ emissions from fossil fuel burning and deforestation, and consequently an “unprecedented rate” of increase in atmospheric CO₂. The enhanced greenhouse effect from the “anthropogenic” CO₂ has led to accumulation of heat in the climate system as evidenced from recent records of temperature, glacier and sea ice extents, sea levels, etc. This “anthropogenic climate change” or “global warming” is one of many environmental challenges that humanity faces in this century. How long will the fossil fuel CO₂ stay in the system? What are the natural processes that would remove atmospheric CO₂ and bring the system back to pre-industrial state? A comprehensive look at the global carbon cycle can provide answers to these questions. In this talk, I will discuss the natural carbon cycle processes involving land plants, ocean and weathering of rocks that would eventually flush the “fossil” CO₂ out of the atmosphere-ocean-land system on a 1,000,000-year timescale.