COLLOQUIUM DFA

IN PRESENCE AULA ROSTAGNI
YOUTUBE STREAMING

JUNE 6TH 2024 - 3 PM

Climate crisis: What physics predicted 50 years ago is now reality

THOMAS STOCKER

UNIVERSITY OF BERN

Abstract: "Climate change is physics", as the 2021 Nobel Prize in Physics has highlighted to the broader public. Physically based models of the atmosphere and ocean have been developed since the mid 1960s. They predicted fingerprints of climate change that are now observed: warming in the troposphere and cooling in the stratosphere, warming of the ocean, acceleration of glaciers and polar ice sheet melt and sea level rise. We recall some of the seminal research of Syukuro Manabe and Klaus Hasselmann, two of the three laureates of the Nobel Prize in Physics 2021. These models, along with in situ and remote sensing observations are the physical science basis for the UN Framework Convention on Climate Change and for the Paris Agreement.

Thomas Stocker obtained a PhD in Natural Sciences of ETH Zürich in 1987. He did research in London, Montreal, New York and Honolulu. Since 1993 he is Professor of Climate and Environmental Physics at the University of Bern. He has authored or co-authored more than 270 peer-reviewed papers in the area of climate dynamics and paleoclimate modeling and reconstruction. From 2008 to 2015 he served as Co-Chair of Working Group I of the UN Intergovernmental Panel on Climate Change (IPCC) that provided the scientific foundation of the Paris Agreement.

Thomas Stocker holds two honorary doctorates of the University of Versailles and ETH Zürich. He is a Foreign Honorary Member of the American Academy of Arts and Sciences, the German Academy Leopoldina, the Italian Accademia dei Lincei and the Istituto Veneto delle Scienze, Lettere, ed Arti of Venice. In 2017 he was awarded the Swiss Science Prize Marcel Benoist, and in 2024 he was co-recipient of the BBVA Frontiers of Knowledge Award.

WEBSITE https://indico.dfa.unipd.it/event/948/
LINK YOUTUBE https://www.youtube.com/@UniPadovaAulaRostagni