E&B Seminar Series

SCHOOL OF BIOLOGICAL SCIENCES THE UNIVERSITY OF HONG KONG 香港大學生物科學學院

SHKU Science

DIVISION OF ECOLOGY & BIODIVERSITY

Climate Amplifiers: Biogeophysical and biogeochemical interactions between land and atmosphere in the past, present, and future

Date	**17th Sept (Fri.)**
Time	**16:00 (UTC+8)**
Venue	**3N01 & Zoom**

You can also email us to require the Zoom link (check SBS website→NEWS & EVENTS)

Abstract: Does the earth's land surface amplify, or attenuate, externally forced climate change? What do changes in land cover over time tell us about climate dynamics, and the quality of climate model simulations? What influence will land use decisions have on future climate and human health? Over the past decade, advances in earth system modeling and the synthesis of new datasets have revolutionized our ability to address these questions. Here, I present a series of examples of how I have used coupled earth system models to understand climate dynamics and land-atmosphere interactions from the beginning of the Holocene to the end of the current century. My modeling shows how a combination of biogeophysical feedbacks, including changes in vegetation cover and surface albedo, and biogeochemical feedbacks, such as emissions of greenhouse gases and dust and other aerosols, affect ongoing climate change by modifying the radiative budget of the atmosphere and have implications for air quality and human health in the coming century.

About speaker: Dr Jed Kaplan studied Geography and Earth Sciences at Dartmouth College, USA and received his Ph.D. in Plant Ecology from Lund University, Sweden. He postdoc'ed in Germany and Canada and was a Marie Curie Fellow in Italy. He was a senior scientist at the University of Bern and the Swiss Federal Institute for Forest, Snow, and Landscape Research WSL. For 10 years he held professorships in Switzerland, first at EPFL and then at the Universities of Geneva and Lausanne, supported by the Swiss National Science Foundation and the European Research Council. Jed was a senior research fellow in geography at the University of Oxford, and at Augsburg University, Germany. He is currently Associate Professor in the Department of Earth Sciences, HKU, and editor-in-chief of *Global and Planetary Change*.

All are welcome!

Organized by The Biology Graduate Student Association (BGSA)