

THE GRADUATE SCHOOL OF GEOGRAPHY INVITES YOU TO ATTEND



THE WALLACE W. ATWOOD LECTURE

Matthew Hansen

MONITORING GLOBAL LAND CHANGE USING EARTH OBSERVATION DATA



From deforestation to urban expansion, human activities drive substantial land use change and intensification of current land use. Land use change results in loss of biodiversity, increased greenhouse gas emissions, alteration of hydrological systems, among other impacts. Rates of land use change can be quantified using time-series earth observation data from satellites. A subset of satellite systems feature global acquisition strategies with no or low cost data access, and a consequent ability to monitor global land cover and land use extent and change. In terms of earth observation infrastructure, we are in a golden age of such satellite systems, including NASA/USGS Landsat satellites, the Sentinel series of the European Space Agency, and also commercial providers such as Planet. The integrated use of multi-source data dramatically improves monitoring capabilities, reducing the uncertainties around many important land dynamics, such as deforestation rates and crop area estimation. In this talk, a number of themes will be presented with a focus on our improving capabilities to accurately quantify global land change.

7 PM | THURSDAY | OCT. 24 | TILTON HALL

Prof. Matthew Hansen is a remote sensing scientist with a research specialization in large area land cover and land use change mapping. His research is focused on developing improved algorithms, data inputs and thematic outputs which enable the mapping of land cover change at regional, continental and global scales. Such maps enable better informed approaches to natural resource management, including deforestation and biodiversity monitoring and can also be used by other scientists as inputs to carbon, climate and hydrological modeling studies. Prof. Hansen's work as an Associate Team Member of NASA's MODIS Land Science Team included the algorithmic development and product delivery of the MODIS Vegetation Continuous Field land cover layers.

This event is free and open to the public and sponsored by the Graduate School of Geography
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