

Can we improve forecasting of Antarctic sea level rises? 20th Annual Gregory Lecture with Professor Chris Clark

Satellite measurements of the Antarctic and Greenland ice sheets highlight that reductions in mass are occurring at rates higher than expected, contributing to global sea level rise and with suggestions that this may soon occur at an accelerating rate.

Additional alarm is raised by theory and evidence suggesting that ice sheets can undergo wholesale dynamical collapse of large sectors, rather than just steady and predictable retreat by melting. This makes forecasts of sea level rise over the coming decades and centuries uncertain and yet for human wellbeing we require robust predictions.

After reviewing the current state of knowledge regarding changes in our extant polar ice sheets, this lecture will argue that knowledge on the demise of ice sheets that have already disappeared will be vital in improving ice sheet forecasts.

The talk will focus on how an improved appreciation (via remote sensing / GIS) of glacial landforms has permitted a reconstruction of the retreat of the last British-Irish ice sheet, and will conclude on how this should be used for improving numerical ice sheet modelling.



Chris became a lecturer at Sheffield University in 1990 and was awarded a personal chair in 2004. He has held the Sorby Chair of Geoscience since 2009. He currently lectures on Glacial Geomorphology and Glaciology, and on GIS.

His primary research interest is in glacial geomorphology, in particular the understanding of processes that lead to the formation of subglacial bedforms (drumlins, flutes etc), and the inverse solution that uses the pattern and distribution of such landforms to reconstruct the behaviour of ice sheets that existed during the last glaciation. He chooses to use satellite imagery for these purposes because they frequently permit new evidence to be detected and because they allow mapping at a scale compatible with the former ice sheet.

The ultimate aim of this work is to build up a detailed picture of the evolution of former ice sheets through the last glacial cycle and to use this information to improve both ice sheet and climate models. Part of this research effort has necessarily involved EO and GIS methodology development.

Geography and Environment, University of Southampton cordially invites you to the 20th Annual Gregory Lecture

*'Can we improve forecasting of
Antarctic sea level rises?'*

On Monday 28th May 2012 at 5pm

in Lecture Theatre A (room 1041),
Shackleton Building 44.

Refreshments from 4.15pm onwards,
lecture starts at 5pm followed by post
lecture drinks reception.

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For more information please contact:

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