RESCHEDULED

DATE: Thursday, 19 September, 2013
TIME: 3:30 p.m.
LOCATION: Mesa Lab, Main Seminar Room
NCAR, 1850 Table Mesa Drive
SPEAKER: Dan Lunt, University of Bristol
TITLE: Warm climates of the past - a lesson for the future?

ABSTRACT:
The relevance of past climate research for future climate change is often cited as a motivation for palaeoclimate research. However, what is the reality?
There is very strong evidence throughout Earth history, over timescales from thousands to millions of years, that climate varies markedly, and can do so rapidly across key thresholds or when subjected to particularly strong forcing. Quantifying the climate forcings and responses is more challenging. However, providing full account is taken of uncertainties in the forcing and response, past CO2 and temperature records can be combined to produce constraints on climate sensitivity. Furthermore, synthesis of past environmental change can be used to evaluate numerical models, with inconsistencies between models and data being the stimulus to reassess both the data (through better quantification of uncertainties), and the models (through exploration of model sensitivities and experimental design), a process which has led to improved agreement. Finally, this model-data comparison can be used to provide quantitative constraints on future climate predictions.
This talk will provide examples of recent work in which past climates have informed future projections of temperature and sea level, both qualitatively and quantitatively, and will highlight challenges for future work in this field.

Seminars are live webcast: http://www.fin.ucar.edu/it/mms/ml-live.htm

* Refreshments are served before seminar. *

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