Fire Research Centre Seminar

Tuesday 1st December 2009
4:00pm

room G.209, Alan Turing Building
University of Manchester

Smouldering Subsurface Fires in the Earth System

Guillermo Rein
BRE Centre for Fire Safety Engineering, University of Edinburgh

Smouldering fires, the slow, low-temperature, flameless form of combustion, are important phenomena in the Earth system. Once ignited, they propagate slowly through organic layers of the forest ground and are particularly difficult to extinguish despite extensive rains or fire-fighting attempts. They can persist for long periods of time (months, years) spreading over very extensive areas of forest and deep into the soil. Indeed, these are the oldest continuously burning fires on Earth. The organic soils that can sustain smouldering fire (humus, duff, peat and coal) sum up a total carbon pool exceeding that of the world's forests or the atmosphere. This has important implications for climate change. Warmer temperatures at high latitudes are resulting in unprecedented permafrost thaw that is leaving large soil carbon pools exposed to fires and subsequently influence carbon-climate feedbacks. This presentation will revise the work conducted in Edinburgh on smouldering fires in the Earth system regarding ignition, spread patterns, emissions and suppression.

Directions

Walk left into the atrium of the Alan Turing Building: room G.209 is on the left.
The Alan Turing Building is easily accessible from the Aquatics Centre Car park.
From Picadilly Station take the 147 bus (every 10 minutes) to central campus.