
# IMS September Meeting 2007 Seminar

**Title:** Calculating the Weather: the Mathematics of Atmospheric Modelling

**Speaker:** P. Lynch

**Date:** Mon 3rd September 2007 at 2:00PM

**Location:** ENG226

**Abstract:** recent decades, weather forecasting has evolved from a mainly qualitative activity to a rigourous quantitative science. The accuracy of weather predictions has increased steadily, and continues to improve.

changing climate will have major implications for humanity. It is essential that we determine probable future changes with as much precision as possible. The computer models for modelling climate change rest on the same mathematical and physical foundation as the models used for weather prediction.

the range of prediction increases, the errors grow larger. For predictions beyond a few days, probabilistic prediction is more apposite than deterministic forecasting. This is achieved through the ensemble approach.

this presentation we will review the mathematical foundations of modern numerical weather prediction and climate modelling. We will describe the techniques used

for assimilation of observational data and for integration of the partial differential equations governing the evolution of the atmospheric flow.

http://maths.ucd.ie/ims07