

cGENIE WORKSHOP: A Hitchhikers Guide to the Black Arts of Earth system modelling

(‘or why you should not want know what is in a sausage’)
29th + 30th May 2012; UCSC

Day 1 (Thursday 29th Nov.) – Earth system modelling for ‘newbies’*

START (ca. 2 pm)

- **Presentation – Introduction to (Earth system) modelling and cGENIE**
Introduction to numerical and Earth system modelling.
Presentation on the cGENIE model structure, science components, nomenclature, accessibility to source code, etc.
- **Session I – Getting started**
Accessing the computing cluster; installing and compiling cGENIE; cGENIE directory structure (‘where everything is’).
Command-line operation; how to submit jobs to a cluster queue.
Concept of a ‘restart’; experiment started from ‘cold’ vs. from end of previous run.
Time-series, time-slice (2D and 3D) output; integration intervals and specification of frequency of data saving. Panoply and MATLAB visualization resources.
Setting up experiments: configuration files and setting parameter values.
Exploring the behaviour of the Earth system: Snowball Earth.

END (ca. 5 pm)

Day 2 (Friday 30th Nov.) – Getting your hands dirty

START (ca. 10 am)

- **Session III – ‘Poking the climate beast’**
Geochemical ‘forcings’ of cGENIE and tracing ocean circulation.
Exploring the stability of the Atlantic meridional overturning circulation (AMOC).
- **Session IV – Poking the carbon cycle**
CO₂ emissions and future ocean acidification.
Role of deep-sea sediments.
- **Session V – Paleo biogeochemical cycling and climate**
Mucking about with the Cretaceous climate and carbon cycle.

END (ca. 4 pm)

DRAFT

* [Google it]