



# WG: Quantification of uncertainty in complex models

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# Topics to be addressed

**Uncertainty can only be determined if ensembles of model simulations are done!**

Main goal of the WG: Explore and develop common methods to estimate uncertainty in climate models used in palaeo climate studies.

# Types of uncertainty

- a. Forcing (incl. CO<sub>2</sub>, orbital, continental boundary conditions)
  - partly address using emulators
- b. Initial conditions
  - long simulations (ergodicity assumption)
  - tipping points?
- c. Parameters
  - Make use of emulators
- d. Different models: Model averaging is problematic!

# Benefits

- Interaction statisticians – modellers
- Help with design of experiments in the initial phase
- Efficient tools to assess (parts of) uncertainty in palaeo climate model studies.
- Feasibility: explore methods on existing simulations

# Organisation

- Sign up for the group on the PEN website
- email-list
- Establish regular virtual meetings/seminars

