



Artefacts or reality? Sometimes interesting modelling results should be discarded

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Nowadays, forward numerical modelling is widely used in the geoscience community to investigate tectonic or surface processes in two and three dimensions. These codes implement non-linear physical laws to solve for temperature, velocity, pressure, or landscape dynamics. Of course, all of these physical laws require a complete set of input parameters, and modelling work generally starts with a phase of parameters exploration.

Seemingly interesting results can emerge from this preliminary work, but it is critical to separate modelling artefacts from geological features relevant for the Earth or other natural systems. Here, we present a series of 2D and 3D experimental results forecasting interesting behaviours which are actually irrelevant for understanding geological processes, will you be able to guess what is wrong with those?