

ESF Urbino Report (Tilman Hesse)

My participation in the Urbino Summer School on Palaeoclimatology (USSP) had the purpose of (1) broadening my palaeoclimate knowledge, specifically in the field of palaeoclimate modelling, (2) meeting some of the leading scientist in this field of research and discussing my own project with them, and (3) getting to know other PhD students that also work in palaeoclimatology.

During my stay I mostly attended lectures on climate modelling as I only participated in the last 5 days of the USSP. The lectures covered climate modelling on many different timescales and time intervals in the geological past. Most relevant for my own work on the Last Glacial Maximum were talks about Quaternary global circulation models, non-linearities in the Quaternary, and glacial/interglacial changes. In addition to the lectures I took part in a science party group in which we had a closer look at the Pleistocene time interval and prepared a presentation for the last day of the summer school.

The main results/outcomes of the USSP for me are that the proposed model-data comparison of glacial delta-C-13 values is going in the right direction and could be published soon. Model-data comparisons are the most promising tool to combine/validate both, models and observations. This has been difficult in the past as observations are relatively sparse. This makes proper statistical testing within a model-data comparison difficult. My work includes a lot of observations (more than 240), which allow for more rigorous testing of models against observational data. All lecturers I talked to during the USSP expressed their support for this idea and think that this is publishable.

Other interesting outcomes include a broader perspective on the whole palaeoclimate community, which allows me to understand different schools-of-thought better, and an improved idea of what other PhD students across the world do in palaeoclimate research.

Importantly, there may be an opportunity of staying at the institute of one of the lecturers for a period of 3-6 months and start a collaboration.

In summary, the USSP reaffirmed my research approach and what I've been doing so far, but also opened new and interesting options for future work.