

Field Report

Development of tools and interfaces for the implementation, pre-processing, and sensitivity analysis of the SWAT model in an R programming environment.

Research stay at the Texas A&M Blackland Research and Extension Center, Temple, TX Christoph Schürz

General Impression

Overall, my research stay at the Texas A&M Blackland Research and Extension Center was a very good experience for me and my scientific career. For me it was very important to get impressions of other scientific working environments, to get in contact with other strong and renown working groups in their field of specialization and possibly pave the path for future collaborations to continue work that excites me as a scientist.

Culturally, although the american and the european cultures only slightly differ, such a stay abroad broadens one's mind and the minor differences become visible. Compared to the rather hectic day-to-day working routine in Europe, I highly appreciated the more relaxed but very effective working attitude in the United States (although I am heavily generalizing here). These, positive impressions were important for me to integrate in my daily routine back home.

Quality of the host institution

Scientifically, the Blackland Research and Extension Center in Temple, TX has a very good reputation in the field of eco-hydrological and agricultural modelling. Two of the mostly applied environmental models, APEX and SWAT are developed there. The developers team is a strong working group with a long continuous experience in eco-hydrological modelling. Working together with the SWAT developers group created a very fruitful working environment for me. The group provided me great insight in their current projects and developments and also greatly supported me in my proposed work. Further, they initiated new ideas of potential other projects and future applications of my developed tools.

The working facility itself is a good working environment. The staff at the Blackland Research and Extension Center provided all the infrastructure I required for my work, such as an office working place and computation infrastructure. The general working environment and the contact with colleagues and other researchers is very good at that institution.

Contacts within the host institution, inclusion in the organization

I was very well integrated in the SWAT developers group at the Blackland Research and Extension Center. That group has however not a clear defined structure in this institution, but is rather scattered in different project working groups. Overall, I was closely working together with **Dr. Katrin Bieger** (who is strongly involved in the Conservation Effects Assessment Project (CEAP), where the SWAT model is applied on a large scale in the United States. **Katrin Bieger** is also involved in the SWAT development and testing of new versions of the model. Further, I closely worked together with **Dr. Jeff Arnold** the main developer of the SWAT model and his two technicians **Nancy Sammons** and **Georgie Mitchell** who supported me with software and support with the SWAT model. **Dr. Mike White** supported me with the computation infrastructure to test the developed software. My contact for all immigration issues and formalities at the Texas A&M University was Virginie Blum.

Recommendations for future Marshall Plan students and fellows

- Plan your stay ahead and reserve some time for the Visa application process. Issuing essential documents such as the DS2019 that is required for the Visa Application require some time. That required time for that process strongly differs between the institutions (between 1 - 8 weeks!).
- Public transportation is very limited outside of large cities in the United States. In my case having an own car was inevitable. The costs of owning a car must be considered in the budget of the stay (e.g. difference price buying/selling, insurance! (>100\$/Month as a foreigner), registration (~250\$), etc.).
- As an Austrian staying in Texas (and this is the case for most other US States) you have to take a driving test and apply for a Texas driver's licence after a grace period of 90 days. Plan this on time as many documents are required for that.
- Temple, TX hosts a large training hospital for University students. Thus, many houses in Temple are shared by students. Looking for accommodation I recommend to look for rooms in shared houses, as this might be the cheapest accomodation to find there.