

Field Report

I, Elias Höglinger, had the pleasure to stay in California, Berkeley from 10th of September to 8th of February for research purposes. I was researching on a device for primary, secondary and tertiary prevention of musculoskeletal disorders (MSD). Whilst being a part of an international team of professionals in the UC Ergonomics Program of UC Berkeley at the Richmond Field Station, an off-campus laboratory, I had many chances to grow personally and professionally. The first month of my stay was an induction to the project and additionally involved a lot of registrations or arrival meetings on campus. With the help of our many meetings I was able to stay on track with the project, while still working independently. My first task was to create a study protocol for data collection with the measurement device. This device held eight inertial measurement units (IMUs) in a vest strapped onto the subject. These IMUs record position, velocity and acceleration therefore transmitting a lot of data. Logging the data to a laptop posed bandwidth problems, which is why we used two WiFi-Transmitters. After optimizing the protocol, I carried it out on 15 subjects, recording IMU, video and biometric data. Using that data, we trained a neural network (NN), predicting activities like walking, standing, carrying, crawling, various lifting tasks, etc. I was also able to see several other projects, like a step counting device with activity recognition, an exoskeleton for forward bending applications, a pinch grip measurement tool and several others.

The University of California, Berkeley is not only one of the best University in global rankings, but also in my personal ranking. I had the chance to work with trained professionals with years of experience in practice, research and teaching at this facility. I was even able to attend a lecture held by Dr. Harris, allowing me to gain even more of the stay. All my colleagues were not only kind, but also ready to help me with any question. Enriching my experience further, I audited different lectures on campus, if only briefly, and was able to attend a highly interesting Symposium held by ergonomic experts. All the people I met were incredibly nice and being part of the Ergo Lab felt like being part of a family.

Recommending a research stay abroad at the University of California, Berkeley is an easy task for me. I was expecting to grow a lot, but I even outgrew my own wildest anticipations. It was a lot of blood and sweat involved, but my colleagues helped me right through everything. It was indeed expensive, but worth every penny. I would gladly come back, and I am already planning to visit my newfound family someday in the back of my head.