

Hello, my name is Harrison Rohrer, and I am an early-entry Master's student from the University of North Carolina at Charlotte and took part in the Transatlantic Energy Research Experiment (TE-REx) in cooperation with the Karlsruhe Institute of Technology. I worked with Ph.D. candidate Carina Ludwig within Dr. Prof. Manfred Kohl's research team for research in bistable elastocaloric cooling devices in special regards to elastomers as the working material.

The experience I had in Germany over the past three months is nothing short of invaluable and cannot be replicated. From learning about the topic of elastocaloric cooling and how it is exhibited by elastomers to adjusting to life in a different country while making friends along the way, just cannot be done by staying at my home university. It was a wonderful experience that I would recommend to anyone who thinks they might be interested. I worked with a fun team of researchers that were incredibly friendly and knowledgeable on various topics that allowed for useful and fun information transfer.

The research itself was a fascinating topic as it was an attempt to further develop a new energy transfer medium for more environmentally friendly refrigeration cycles to occur. Elastocaloric cooling was an exciting topic to both read and work on. I always strive to live a life that is environmentally conscious, and to work on a project of an upcoming technology that will aid in that effort, was immediately gratifying. Although I did not have enough time to finish the project in its entirety, the experience and knowledge that I gained through this internship is something I will hold on to as my studies continue back home.

After three months of living, breathing, and eating German I grew quite used to the culture and customs of the area. I already know it will be difficult acclimating back to the USA once I fly back. From biking to the massive train station and taking a smooth and quiet ride to cities that I am still incapable of pronouncing correctly, to walking to the closest market for food the same day, or chilling out and reading a book under the canopy of massive trees at the Karlsruhe Castle, I had a spectacular time by all accounts with this experience. I will have memories that will last a lifetime and many stories to tell my friends and family back home.

Being able to see so many places in Europe as a resident of the continent instead of a tourist made every place feel more real and understandable. It was charming to go and see so many historical and famous cities because they are located so close to Karlsruhe. Taking the bus and the train to these locations for day trips on the weekend were some awesome experiences.

Even just saying, “I’m going to Stuttgart for the day,” is a ridiculous sentence that I never thought I’d say in my life. The sense of true independence out here, to go anywhere you want, see any place you desire, all without having to drive there, was quite liberating. I took full advantage of this freedom whenever I had the time to spare for it, and it has helped me grow much more as a person than the almost isolationism of staying in Charlotte.

The first few weeks or month was of course going to be rocky. You immediately realize that you’re the foreigner as everyone around you speaks German, the signs, packaging, and advertisements are all in German, too, and even the keyboards have the “Z” and “Y” buttons swapped. My initial shock was feeling like I was in an alternate reality where everything almost sounded like English, and I was the only one who could not read much of anything. But I grew used to this, and what used to feel like hurdles became endearing qualities of where I was living. There was an increase in the amount of confidence I had to walk around with, attempting to communicate with cashiers at Cafés that didn’t speak English, and getting over the embarrassment of coming to a country where you cannot speak at a conversation level in the native language. It’s an experience that I’m sure many people have had all over the world, and especially in the USA, so to feel it for myself gave me a wonderful new perspective on life and communication.

I could not recommend applying for this opportunity more. From all that I learned academically, socially, and societally; it truly is an all-encompassing learning experience that I could not imagine receiving any other way. It was one of the most enjoyable three months of my life and one that I will take with me forever moving forward. I have met numerous people from all throughout Europe during this time, and the countries that I hear on the news no longer remain as headlines, they became real people and livelihoods. It has allowed me to grow as an individual and has humbled me.

