

Ruhr-Fellowship 2013



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Vorwort

Im Sommer 2013 waren wieder talentierte und engagierte Studierende als Ruhr Fellows in unserer Region. Ende Mai reisten die 14 diesjährigen Stipendiaten des von der Initiativkreis Ruhr GmbH und der Universitätsallianz Metropole Ruhr (UAMR) getragenen Ruhr-Fellowship-Programms an. Sie starteten damit in die zweite Auflage dieses im Vorjahr sehr erfolgreich initiierten Programms.

Ziel des Programms

Ziel des Programms ist es, das Image der Metropole Ruhr zu verbessern und Anreize zu schaffen, junge begabte Menschen von außerhalb für das Leben und Wirken in der Region zu interessieren. Unsere Vorstellung ist es, dass die Kontakte, die sich aus dem Studierendenaustausch entwickelt haben, für langfristige Forschungs- und Wirtschaftskooperationen zwischen dem Ruhrgebiet und den beteiligten amerikanischen Eliteuniversitäten genutzt werden. Auch eine spätere Beschäftigung in einem der Unternehmen dieser Region wäre aus unserer Sicht sehr willkommen. Genau wie die zehn Ruhr Fellows aus dem Jahr 2012 werden wir die vierzehn Ruhr Fellows des Jahres 2013 nach ihrer Rückkehr in die Vereinigten Staaten eng in das Alumni-Programm des UAMR-Liaison Office in New York einbinden. Sie sollen somit als Botschafter den Forschungs- und Wirtschaftsstandort Ruhrgebiet an ihren Universitäten in Nordamerika bekannt machen und zukünftige Generationen von Ruhr Fellows für dieses einzigartige Programm gewinnen.

Ruhrgebiet: Look and see

Auch in diesem Jahr erwartete die Ruhr Fellows wieder ein in zwei Phasen aufgeteiltes Programm: In den ersten vier Wochen besuchten die Stipendiaten eine Summer School. Das akademische Programm organisierte in diesem Jahr die Ruhr-Universität Bochum. Die Ruhr Fellows erhielten hierbei intensive Einblicke in die Lehre und Forschung der drei UAMR-Universitäten Ruhr-Universität Bochum, Universität Duisburg-Essen und Technische Universität Dortmund. In den zweiten vier Wochen konnten die acht Studentinnen und sechs Studenten ein Praktikum bei Unternehmen des Initiativkreises Ruhr absolvieren. Die diesjährigen Praktikumsplätze mit einer intensive Betreuung der Stipendiaten wurden von Evonik Industries, Vaillant Group, Siemens, BP Europa, HOCHTIEF, SMS group, Deutsche Bank, ista, TRIMET ALUMINIUM und der RAG zur Verfügung gestellt.

Das Austauschprogramm beinhaltete wieder Exkursionen zu Einrichtungen und Orten, die den Ruhr Fellows Einblicke in die Attraktivität und Vielfalt der Region Ruhr ermöglichten. Der Sprachkurs diente hierbei als hilfreiche und willkommene Vorbereitung.

Die Fortführung ist bereits für das Jahr 2014 geplant, dann mit der Summer School beim UAMR-Partner, der Universität Duisburg-Essen. Auch dann sollen wieder 10-15 Studierende aus den USA die Unternehmens- und Wissenschaftslandschaft des Ruhrgebiets kennen- und schätzen lernen.

Mit einem herzlichen Glückauf!

Jan-Peter Nissen

– Geschäftsführer der Initiativkreis Ruhr GmbH / Managing Director
of the Initiativkreis Ruhr GmbH –



Foreword

In summer 2013, talented and dedicated students once again came to our region as Ruhr Fellows. The 14 students who took part in this year's Ruhr-Fellowship Program, funded by the Initiativkreis Ruhr GmbH and the University Alliance Metropolis Ruhr, arrived at the end of May. With their arrival they started off the second round of this program which was successfully launched in the previous year.

Aim of the program

The aim of the program is to improve the image of the Ruhr Area and make it attractive to talented young people from outside Germany in order to raise their interest in living and working in the region. It is our vision to use the contacts that have been developed during the student exchange for long-term research and economic collaborations between the Ruhr Area and the participating American Ivy League universities. We would also be glad to see some of the students taking up employment in one of the companies in this region at a later date. We are going to involve the fourteen Ruhr Fellows from 2013 in the Alumni Program of the UAMR Liaison Office in New York after their return to the United States, just like we did with the ten Ruhr Fellows from 2012. They should act as ambassadors for the Ruhr Area to raise its profile in their universities in North America as a location of science and business and encourage future generations to take part in the Ruhr Fellowship Program.

Ruhr Area: look and see

This year the Ruhr Fellowship Program was also split into two phases: In the first four weeks the fellows visited a summer school. This year the academic program was organised by Ruhr-Universität Bochum. The Ruhr Fellows gained an insight into teaching and research at the three UAMR universities Ruhr-Universität Bochum, the University of Duisburg-Essen and TU Dortmund University. In the remaining four weeks the eight female and six male students completed internships with companies of the Initiativkreis Ruhr. This year's internships and supervision of the fellows were provided by Evonik Industries, Vaillant Group, Siemens, BP Europa, HOCHTIEF, SMS group, Deutsche Bank, ista, TRIMET ALUMINIUM and RAG. The exchange program again included excursions to institutions and places which enable the Ruhr Fellows to see how attractive and diverse the Ruhr Area is. The language course proved useful for their stay.

The program is especially aimed at students of Engineering and Natural Sciences. The program for 2014 is already planned, and the summer school is being hosted by the UAMR partner university Duisburg-Essen. Another 10-15 students from the USA will get to know and come to value the Ruhr Area as a location of business and science.

With best regards and Glückauf!

Prof. Dr. Elmar W. Weiler

– Rektor der Ruhr-Universität Bochum / Rector of Ruhr-Universität Bochum –



Phase 1 Summer School



The Ruhr Fellows spent the month of June in a summer school organised by Ruhr-Universität Bochum. During those four weeks the students got to know the Ruhr Area, the three UAMR (University Alliance Metropolis Ruhr) universities, some of the supporting companies of the Initiativkreis Ruhr and cultural sites in the region. An intensive German language course introduced them to the German language. While visiting the engineering departments of Ruhr-Universität Bochum, the University of Duisburg-Essen and TU Dortmund University, the Ruhr Fellows got a feeling for what it must be like to study and research in the Ruhr Area.

During visits to companies, the students learned more about some of the most important companies located in the region. At ThyssenKrupp Steel Europe AG they experienced first hand how steel is being produced, heated up and later formed. Evonik introduced itself with a tour through the ChemSite in Marl, the chemical and plastics cluster in the Ruhr Area and the central point of contact for all issues and topics concerning chemistry and its value chains. Three employees, who are currently completing a special trainee program for young professionals at Siemens Mülheim, led the group of students through the production halls of the company and presented some of the huge turbines that are manufactured there. The highlight of the program was the visit to the RAG mines Auguste Victoria and Prosper Haniel. More than 1,000 meters below the earth the students could experience what it feels like to work “unter Tage” (underground). As coal mines in Germany are set to close by 2018, the Ruhr Fellows learned about RAG’s plans for renewable energy and sustainable uses for former mining areas.

The summer school also included a cultural program. The students visited Germany’s biggest soccer stadium, the Signal Iduna Park in Dortmund, home of Borussia Dortmund, one of Germany’s most successful soccer clubs. They entered the changing rooms where the players gather before and after a match and were even allowed to sit down on the coach’s bench on the sideline of the field. In a series of three cultural seminars given by experts of Ruhr-Universität Bochum, the Ruhr Fellows were introduced to the history and societal foundations of the Ruhr Area and German international relations. The history of the Ruhr Area was also presented to the students when visiting Zeche Zollverein at the “Meeting of the Minds”. Together with 40 other students from abroad completing research internships at the UAMR, they toured this former coal mine and

UNESCO World Heritage. After a dinner of Currywurst, the group was treated to a performance of the Ruhr Piano Festival at the Philharmonic Hall in Essen.

The summer, however, was not only beneficial in terms of getting to know the Ruhr Area and gaining practical professional skills. It also enabled an intercultural exchange with German students. For this purpose, the Ruhr Fellows were matched with German students, so-called “Buddies”, who assisted them in their everyday lives and helped plan free-time activities.

Week 1 · June 1, 2013 – June 2, 2013

SATURDAY	Arrival - Pick-Up Service from DUS International to dorms in Bochum	
SUNDAY	Lunch at Altes Brauhaus Rietkötter	Bochum Tour

Week 2 · June 3, 2013 – June 9, 2013

MONDAY	German Course	RUB campus	Welcome at Initiativkreis Ruhr
TUESDAY	Thyssen Krupp Steel Europe AG in Duisburg		
WEDNESDAY	German Course	Signal Iduna Park (visit to Germany's biggest soccer stadium)	
THURSDAY	ChemSite Marl (Evonik) + Lunch	Culture Seminar "History and Society of the Ruhr – 19th and 20th Century" Dr. Budraß	
FRIDAY	Plant Tour Turbine Production Siemens (Mülheim an der Ruhr) + Lunch		
SATURDAY			
SUNDAY			

Week 3 · June 10, 2013 – June 16, 2013

MONDAY	German Course	Mine Visit to Bergwerk Prosper Haniel in Bottrop (Group 1)
TUESDAY	German Course	
WEDNESDAY	German Course	Faculty of Electrical Engineering and Information Technology at RUB
THURSDAY	German Course	Engineering Seminar "IT Security"
FRIDAY	Day Off	
SATURDAY		
SUNDAY		

Week 4 · June 17, 2013 – June 23, 2013

MONDAY	German Course	Faculty of Mechanical Engineering at RUB
TUESDAY	German Course	Visit to BILD's printing house in Essen + BILD Zeitung (Germany's biggest tabloid)
WEDNESDAY	German Course	Culture Seminar on "Societal Foundations of German International Relations" Prof. Dr. Schirm
THURSDAY	Day at the University of Duisburg-Essen	
FRIDAY	Day Off	
SATURDAY		
SUNDAY		

Week 5 · June 24, 2013 – June 30, 2013

MONDAY	German Course	Engineering Seminar "Global Resources and Their Utilization"	
TUESDAY	German Course	Faculty of Civil and Environmental Engineering at RUB	
WEDNESDAY	German Course	Engineering Seminar "Challenges for Civil Engineering Infrastructure"	Culture Seminar "Adapting Literature in Comics and Graphic Novels" Prof. Dr. Monika Schmitz-Emans
THURSDAY	German Course	Mine Visit to Bergwerk Auguste Victoria Marl (Group 2)	
FRIDAY	Day at TU Dortmund University		
SATURDAY			
SUNDAY			

Anisa Li berichtet

Ruhr-Fellowship



Anisa Li is one of 14 students from the Ivy League universities Harvard, Princeton and the University of Pennsylvania who spent the summer of 2013 as a Ruhr Fellow in the Ruhr Area. During their stay, the Ruhr Fellows participated in an academic-cultural program at the three universities of the UAMR – Ruhr-Universität Bochum, the University of Duisburg-Essen, and TU Dortmund University. Additionally, the students carried out work experience with the following supporting companies of the Initiativkreis Ruhr: BP Europa SE, Deutsche Bank, Evonik, Hochtief, ista, RAG, Siemens, SMS, Trimet Aluminium and Vaillant.

While working in a bioengineering lab as a mechanical engineering intern during the summer of 2012, Anisa met two visiting students from Munich. She fell in love with what they told her about Germany and decided to get to know that country as soon as possible. During the fall semester of that same year she learned more about the Ruhr Fellowship Program and was immediately convinced that this would be the best opportunity for her to immerse into the German culture, gain study and work experience abroad and learn the German language, which she often listened to when working with the two visiting students from Munich.

Anisa is now starting her fourth year of study at Harvard University. Working on real world projects has shown her her passion for and satisfaction in working in an engineering environment. She loves to get hands-on experience and found out that she learns the most when there is a



Anisa Li reports



mix of study and hands-on work. Besides school, Anisa works as a design editor and illustrator for The Harvard Crimson, the daily newspaper of the Harvard College. There, she designs and illustrates the newspaper's weekly Arts section.

Anisa loves to travel and experience foreign cultures at first hand. She spent the winter break before the Ruhr Fellowship Program at Poli-USP, the engineering school at the University of Sao Paulo. There she realised that she can easily adapt to new cultures and countries. Even though the course was only two weeks long, she was already at ease being in a new country. While being in Europe as a Ruhr Fellow she also took every chance she could to travel around and explore new places. In her blog she takes you on a journey through the Ruhr Area, Germany and Europe. Enjoy!

Week 1: First Tastes, Deutschkurs, Münster and Cologne



Hallo! My name is Anisa Li and I am spending my summer in Germany as a Ruhr Fellow along with 13 other students from three different universities in the US. The Ruhr Fellowship is a program which brings engineering and related students from the States to the Ruhr area, taking German lessons and going on company visits for one month, and then interning at a company for another month. I'm going into my fourth and final year studying Mechanical Engineering at Harvard University, and I've never been to Germany or learned German before, so I'm excited for an amazing summer! This blog will follow our adventures, along with my own random thoughts and ramblings.

First Tastes

After a confusing “24” hours (my flight left San Francisco at 7:45 am and landed in Düsseldorf at 7:45 am the next morning, with a layover, two airport trains, and 9 time zones in between), I found myself in Düsseldorf Airport, coming through a thoroughly underwhelming customs checkpoint (the man told me to enjoy my vacation rather than unpleasantly grill me on all details about my trip and why I would ever leave my country). I passed through quickly, not realizing I had gotten through all of customs until I found myself in the arrivals lobby, greeted warmly by the program director, who led me to my train to Bochum, where I would be living with the other Fellows at off campus dorms for the duration of my stay as a visiting student of the Ruhr-Universität Bochum (RUB).

Getting off at the Bochum Hauptbahnhof (Hbf), or main train station, I immediately identified my Buddy as the small girl excitedly waving her arms and running towards me. Glad to have a guide to help me find my way, I examined my surroundings. I'm not sure exactly what I was expecting to find in Germany, but I definitely didn't expect it to be so green. I'd heard so much about the industrial center that is the Ruhr area, so I guess I expected lots of factories and industrial-looking architecture, stark greys and blacks, but the city is actually filled with lush green-

ery, richer than I'm used to, lining the roads and highways. I think I also didn't expect it to be so cold in June – the day I arrived, it was unseasonably cool, 12° at most (yes, I've transitioned to Celsius), with a thick layer of clouds looming in the sky, threatening downpour at any moment (thankfully, none arrived).

My Buddy lost no time in showing me around the city – after a quick stop to the dorms to drop off my bags, we hopped right back on the bus towards the city center once more. As a quick side note, and I'll probably rave more about this later, but public transportation in Germany (and the rest of Europe) is excellent. Almost anything we did started with the train. On the way back into town, my Buddy stopped at the university to give me my first glimpse of campus. Among the buildings (which are designed to look like ships docking around the “harbor” of the auditorium, or the Audimax) and behind the cafeteria (the Mensa), there was a breathtaking view of the valley below the school, rolling green hills, and old farm houses in the distance. After the quick detour, we hopped right back onto the train and headed into the city center, where we ran into another Fellow and Buddy, also exploring the city.

After a while of wandering in the street and a quick brunch of croissants and coffee at a café (our first experience with ordering from a German menu), we met up with some of the other Fellows and Buddies, as well as one of our program leaders, to buy phones and other random necessities. The city center was a mix of old and new, which we later realized was indicative of the rest of the region, with walks made of uneven cobblestones, outdated and out-of-use stoplights, and old stone façades alongside modern glass-front stores, sleek subway stations, and a bustling commercial center. At this point in the afternoon, most of us started feeling the effects of jet lag and the toll of extended travel, but I was determined to kick off my stay with a full day. Most Fellows returned to the dorms, but a few others and I decided to venture back into the city center for dinner and exploration. After walking the entirety of the area from the main train station to where the shops ended, we finally decided on a random restaurant bar that was showing the Stuttgart – Bayern Munich soccer match (Fußball – a very important word in this country).

| *By the way, in case you're confused about the ß (or as I had affectionately called it before learning its name, “that beta-looking thing”), it's actually called an Eszett and is pronounced as an “ss” sound.* |

I had attempt number two at ordering off a German menu (this time without my Buddy for help!), experienced the intensity of Germans and their Fußball (not a capitalization error, because in German, all nouns are capitalized), and tasted the local brew, Fiege, for the first time. Mmm, refreshing. Let the adventures begin!

Bochum, Lake Kemnade, and surprisingly good weather

After the unfortunately cold arrival, we were pleasantly surprised to wake up to a brightly shining sun and blue skies. We ventured back into the city center, this time with the entire group headed for an official welcome lunch. Walking along the same cobblestone streets as I had the day before, I felt like I was already becoming well acquainted with Bochum. It's a pretty small, quiet city.

Walking in the streets it's not uncommon to see few others, though if you venture into the Bermudadreieck (the Bermuda Triangle, a collection of bars and clubs within the city center) on a Friday night, you can see that the city has a vibrant young population.

Now to the important part: the food. Treated to lunch by the program as a welcoming gesture, we learned that the area is famous for its asparagus (who knew?), beer and/or wine is perfectly acceptable (or even expected) at any meal, German portions are huge (the US gets a bad reputation for unreasonably large portions, but Germany's are pretty up there), and though most people in Germany speak English, not very many restaurants actually carry English language menus.

I ordered a schnitzel (breaded and fried pork filet) and asparagus dish and it is a testament to how delicious it was that I didn't manage to snap a photo before devouring it. The asparagus was a surprise; rather than the small green asparagus I was accustomed to, Germany is famous for its white asparagus, and it's easily three times the size of asparagus in the US. Cooked in what I could only assume was a lot of butter and oil, it was melt-in-your-mouth delicious, and perfectly paired with the schnitzel (my first – I'm definitely a fan) and, of course, a nice cold glass of Fiege. Stuffed full and content, we moved on to our next destination: a boat tour of Lake Kemnade (actually a manmade lake which is just a dammed and widened part of the river).

Even though we had just eaten to our limits, the first order of business on the boat was a fluffy waffle paired with cherries and a heap of whipped cream, and coffee – the perfect afternoon pick-me-up. After food, we journeyed up to the roof of the boat to watch the view and enjoy the sun. It was an amazing ride and I think all of us were sad to see the boat coming back to dock all too soon. Many of our Buddies also joined us for this ride, as well as the following bus tour of Bochum, and we took the opportunity to learn more about their lives and about German culture. The bus tour took us through a beautiful park area around the lake, abundant with beer gardens and restaurants housed in beautiful old farm buildings as well as an old coal mining factory-turned museum and a planetarium, and at least 10 other sites I mentally noted to try to get back to.

We ended the day much as I had ended the day previous – at a restaurant bar in the Bermuda Triangle, watching a soccer game projected on the wall. This time the whole group was there, Buddies and friends included, and the game was much less intense (just a friendly USA - Germany game – if you're interested, the US won).

Deutschkurs and company visits

Our official program as Ruhr Fellows began the next day, packed with our first Deutschkurs (German course), complete with a trip to the Mensa for lunch. The Mensa is essentially a huge cafeteria, with an overwhelming array of affordable meals and desserts. The weather was stayed sunny all week, so when we did eat at the Mensa, we took our trays to the rooftop balcony to eat while looking out over the beautiful view.

During the afternoons, we also had company visits to the Initiativkreis Ruhr in Essen, ThyssenKrupp steel manufacturing in Duisburg, Evonik chemical plant in Marl, and Siemens turbine factory in Mülheim, as well as a fun trip to Signal Iduna Park, the home of Borussia Dortmund, the local soccer team. The visit to Thyssen-Krupp was definitely a memorable one, as we got to see molten iron being poured in the process to becoming steel. I marveled at the intricateness and breadth of



the pipelines at the chemical plant of Evonik and watched pieces of turbines be precision milled at Siemens. At Signal Iduna Park, we were treated to views of the stadium, as people normally would never see it; in addition to the stadium being completely empty, we were also able to tour everything from the VIP boxes at the top to the admirably simple team locker rooms at the bottom.

Nighttime Culture

Though our first week (and the rest of our program) was pretty packed with organized courses and outings, our evenings are our own, and we took advantage of this. Our Buddies have been incredibly welcoming, inviting us whenever they were headed somewhere and introducing us to their friends. Monday night, a few of us followed a Buddy and his friends over to one of the many student bars for a Cocktail Night. Unlike home, there are a lot of uni bars at RUB, many located near or inside of dorm buildings and run by students. The first we went to was located in the basement of a dorm, and absolutely packed on a Monday night – it took us almost a half hour to even get in. It turned out that this bar happened to be in a cluster of buildings where international students usually live, so we had fun talking to fellow internationals, from all over.



Even though it's towards the end of their school semester, the German students seemed very laid back, willing to hang out, and there was always something going on. Wednesday, my Buddy invited us to a barbecue he and his friends had to celebrate the finally warm weather, which transitioned into a Polish themed party their dorm was having. It was easy to talk to the other students; they seemed interested in what we were doing there, and were always friendly and welcoming. Days seem to last longer here. Some of that has to do with the geography, and the fact that in the summer, the sun rises about 5 or 6 in the morning and doesn't set until after 10 at night, which has really thrown me off, but some of it also has to do with the culture and attitude. Uni parties will often last until sunrise or later, with them asking us why we were leaving so early if we want to go at 2 or 3 am.

"Family"

Of the 14 Ruhr Fellows this year, most of us had never met each other before the trip, but we're quickly becoming a family. Thursday we had the first of what we've decided will be a weekly tradition: Family Dinner. Cooking for 14 is certainly not easy, but it's fun and a great way to spend time together. One of the Fellows loves to cook and spearheaded the idea, making a heaping pot of Sauerkraut Beer Soup with Frankfurters (we tried to find a traditional German recipe), with apfelstrudel (apple strudel). We barely all crammed into the tiny kitchen together, but it was great!

| *Another side note about German grammar: some of their words are extremely long because often words are just made up of smaller words which describe the object. Perfect example above: "apple strudel" in English, but "Apfelstrudel" in German. Numbers also do this: for example, one hundred and thirty three would all be one word – they can get quite long! |*

Weekend 1: Münster and Köln

Many of us agreed before even arriving that we would try to squeeze as much travel into the weekends as possible – we're already in Europe, so why not? The first weekend, however, we devoted to day trips to more local cities: Münster (which, FYI, does NOT produce Munster cheese) and Cologne, which is actually spelled Köln in German (how did we ever derive Cologne from that? Same thing happened to Munich; it's München in German). We hopped on the train in the morning and came back in the evening, and let our curiosities wander through the cities. We naturally split up based on interest, with some people renting bikes for the day (Münster is famous for being a big biking city), while a smaller group of us preferred to take the city a little slower, walking. First was Münster on Saturday. The weather was absolutely gorgeous. Without any grand plans, we just wandered and allowed ourselves to be pulled in whichever direction we felt like it, stumbling across at least 5 or 6 churches and cathedrals, a big, colorful farmers market, and multiple delectable pastries. We had loosely talked about going to a restaurant one of the Buddies had suggested which he said looked like Hogwarts inside, called Cavete, but the pull of pastry shops and stands at the market dissuaded us from having a sit down lunch, preferring to buy food as we pleased and take it with us wandering. We saw far too much to do justice to here, so I'll just pull some highlights. One of the major things we saw was St. Paulus Dom, a huge cathedral with beautiful... everything. It has an amazing amount of natural light for a cathedral, though I believe that's because many of the old stained glass windows had been bombed out during the war and replaced with clear glass. We then stopped for iced coffees at a random little café. After struggling with ordering our drinks for about 5 minutes, the waiter laughed and informed us he was an international student from Baltimore, and we made friends with him while he made our drinks, finding out that he had been in Germany for a year, and was studying to become a teacher here.



In the late afternoon, we made our way to Aasee Lake, a beautiful lake and park on the southeastern corner of Münster, where we ate the strawberries and cheese we'd bought at the market, and laid down for some sunbathing and relaxation. After some further wandering, involving two of the other students to test drive an electric Smart Car, we finally ended the day with the whole group at Cavete. The next day, we went to Köln. Unfortunately, the weather was not quite as nice but still good enough to enjoy another full day of walking around a new city. As soon as we got off the train, we were greeted by the Kölner Dom, a huge cathedral. It was great to be able to compare this one with St. Paulus Dom from the day before; this was smaller, darker, but similarly gorgeous. A smaller group of us managed to, at the suggestion of one of the Buddies, who was with us, climb to the top of the Dom. This involved a somewhat claustrophobic trek up spiral stone steps that seemed like they were never going to end (a sign at the ticket office revealed there were 533 steps ascending a total of 332 feet, up a tower that stands at 475 feet). The top of the Dom was beautiful, and though clouds shortened our view, it was still breathtaking. The tower was covered in graffiti from visitors past, and I pulled out a pencil and added our own, "Ruhr Fellows 2013" (picture evidence included). We then went to the Schokoladenmuseum (Chocolate Museum), though a few of us decided to forgo the 6 euro entrance fee in favor of buying chocolate from the souvenir shop, and continue to wander. Loaded up with fancy truffles, we made our way back through the city, vaguely headed for the train. While most went back to Bochum at this point, one of the other Fellows and I decided to stop at a gourmet burger restaurant that someone had seen in a magazine, called Hans im Glück (Hans in Luck) for burgers and Kölsch, a local type of light beer. Halfway through devouring our burgers by hand, we realized that every single person around us was eating their burger and fries with a fork and knife, daintily cutting small pieces of the burgers, and even cutting the fries into smaller spears. Finally, a tip learned from our train ride back: German efficiency means trains do not stop longer than necessary at any given stop. This means that when the stop is announced and in sight, you should already be up and by the door. If you are not, you will do what I did, which is to have the door close in front of your face between you and your friend, who made it safely to the platform, and frantically press the "door open" button to no avail, while the train pulls slowly away, with you still on it. I wound up riding the train to Dortmund, and then finding another back to Bochum, and then finally back to my dorm. Quite the way to end the weekend! Bis nächste Woche! (Until next week!)

Week 2: Coal Mines, Maschinenbau Barbecue, EE/IT Faculty and Berlin

Monday, we took a truly unique trip: down into the still operational Bergwerk Prosper-Haniel coal mine in Bottrop. The Ruhr area is famous for its past as a coal-mining giant, but the era of coal mining in Germany is almost at its end. Many plants have closed in the past decade, with the end of government subsidies for the coal industry coming in 2018. There are only a few remaining coal mines in Germany, all owned by RAG Aktiengesellschaft, and all of them are planned to be closed by the time the government subsidies stop, ending the coal mining industry in Germany after centuries of use. This is due to a combination of environmental concerns (which I had known about), as well as economic concerns (which I had never thought about). Because it had been such a center for coal mining from before the Industrial Revolution and on, current coal mines in Germany have to go much farther below the surface – on the order of 1.000 meters below surface. This also means higher-quality coal, making Germany's more expensive coal uncompetitive next to cheaper options elsewhere.

Anyway, back to the visit itself. Each of us were given a complete set of clothes for the tour – pants, t-shirt, buttoned shirt, jacket, scarf/rag, gloves, socks, and even underwear! Of course, they were all sized for big, strong miners, and hung off most of us like elephant skin. After layering up, we followed our guides (who, by the way, spoke only German; our program leader had to translate for us) to find boots and shin guards, and then down to a huge metal contraption of an elevator. We dropped over 900 meters in just a few minutes, wind rushing past our faces through the bars of the elevator walls (it was more of a cage than an elevator) and ears popping like crazy. Finally, we slowed to a stop and stepped out – into the tunnels of a coal mine, almost 1.000 meters into the earth! We set off, walking for what seemed like hours in the surprising large and airy tunnels (there's a large ventilation system throughout the mines). We were told we were going to be going almost 100 more meters further down. We were working up a sweat already, especially under all of the layers, but it only got hotter as we reached the actual operation site. As soon as I stepped into the cavern, my vision was completely shrouded by the thick fog that had formed in my safety goggles.



Though they had ceased regular operations for us to come in and take a look, large shards of the wall were still getting knocked to the ground by a huge mining machine turning against the wall, obliterating everything in its path and raising clouds of black dust into the air. I felt like I was stepping about 50 years into the past, sweating alongside coal miners, in garb I'd only seen in textbook pictures. To our surprise, we were each given chunks of coal as keepsakes, before heading back out.

With the amount we'd been walking downhill to get here, I'd had a worry in the back of my mind about the walk back up. However, I soon realized that was entirely unnecessary – we wouldn't be walking back up the entire way. There is a large conveyer belt system that the plant uses to bring the mined coal from the site to the surface. This large conveyer belt system is not limited to carrying coal. Yes, that's right, we rode a conveyer belt meant for the transportation of coal. It was a little like getting pulled up a rollercoaster, but we were lying on our stomachs instead of sitting in seats, and there would be no huge drop involved at the end (or at least we hoped!). After a few minutes of getting a strange kind of belly massage moving along the conveyer belt, we were back near the elevator once again. One more nerve-wrenching ride in the metal cage elevator, and we were relieved to be back on the surface!

We could think of nothing but hopping right into the individual showers of our changing room, but they diverted us instead to have a real coal miners' dinner – soot and all. We rounded off the experience of a lifetime with hearty bowls of chicken soup and bread, amazingly ravenous after the trek.

Maschinenbau Barbecue

On Tuesday, we were supposed to have a full day of German class (from 8:30 am to 6 pm!) but due to some miscommunications at the school, we wound up getting the afternoon off. Never one to miss a chance to enjoy the sunshine, a few others and I went on an impromptu picnic at Lake Kemnade, the lake we had gone to during our first tour of Bochum. That evening, one of the Buddies invited us to a barbecue at the school, hosted by the Mechanical Engineering department. We arrived at the lawn in front of the Mechanical Engineering buildings to the smell of sausages cooking, a free beer tent already well underway, surrounded by students. There was a band playing rock music (much of it American), which wound up being made up of, to our surprise, faculty members. The other German students again proved themselves to be friendly and welcoming, as we met some more students, chatting and hanging out as we soaked in the relaxed atmosphere, late sun, and good music.

EE/IT Faculty

We spent the next two days with the faculties for Electrical Engineering and Information Technology, learning about the departments, their research work, and touring the facilities. The first day, we focused on the EE department, learning about their work with embedded systems in "smart" cars that sense other vehicles on the road and flash warnings on the dashboard, their work on improving electric vehicles and especially charging stations, and their work with improving medical technology. Germany's car culture is not a stereotype for nothing; two of the three projects we visited were directly linked to cars, and had some kind of car models on site. For the embedded system smart car research, there was an elaborate driving simulation setup that we all got to try out, where researchers tested different ideas and reaction times they'd implemented in their virtual car.

Driving the simulation was definitely strange, with no feedback or reaction from the “car” in accelerating, braking, or shifting gears, but it was a fun experience nonetheless. As for the electric cars, they seem much more common here in Germany. Just in the streets, I’ve spotted quite a number of electric cars, as well as public charging stations, while back in the States, you would only ever see fully electric cars at technology showcases.

During the IT Security talk, we all got a healthy dose of introspection on how we handle our digital identity, giving over all of our information to websites like Facebook and Twitter, and especially to companies like Google.

Off to Berlin!

This weekend a bunch of us took our first extended weekend trip (of many to come). Where were we going on our first big German trip? Berlin, of course! I put my Deutsche Bahn German Rail Pass* to good use immediately, and boarded an ICE train to Berlin early Friday morning.

**A DB German Rail Pass is kind of like buying train tickets in bulk – it allows you to travel on a certain number (for example, I bought a 6-day pass) of “travel days” (a 24-hour window in which you could use any DB trains in Germany) within a one-month period for a discounted amount. We also bought extension passes, which widened the range from within Germany to include Brussels, Prague, and a few cities in Austria and Italy.*

Because of the flooding all over the area from heavy rains, our train was rerouted and what was supposed to be a 3.5 hour train ride became closer to 5 hours. I managed to snap a few photos of the flooding on my phone (excuse the quality) between train naps – the water level made the trees look like shrubs! Despite the delay we finally made it to Berlin around 3 in the afternoon, arriving in the middle of a peaceful demonstration for deaf peoples’ rights, displaying signs declaring “Gebärdensprache macht stark” (“Sign language is strength”), though from the music and the revelry, it sounded much more like a street party than a protest. Since we were a large group, we managed to get a public dorm in our hostel to ourselves, which, along with the bunk beds, made it feel like one giant slumber party. We couldn’t have asked for a better location; directly across from our room was the Postfuhramt, or the old Post Office, a beautiful orange brick building, and a few paces down was the Neue Synagoge, a beautiful synagogue that somehow wasn’t completely destroyed in WWII, and was later fully restored. I can’t get over how much history there is in the cities of Germany (and in Europe at large) compared to their American counterparts. Somehow 200 years of history just doesn’t quite make as large of an impact as several thousand. We spent the evening wandering and sightseeing, ending the night swing dancing (or in our case, just dancing silly) at a local outdoor bar and making friends with a few Germans who had heard us talking about our travels.

The next morning, we woke bright and early to take a SANDEMAN’s free tour of Berlin. Our guide was a history PhD student at Humboldt, originally from England, and a great storyteller.

I won’t try to take you through the 3.5-hour tour on this blog, but we saw all the big sights, like Brandenburger Tor (tor = gate), the Berlin Wall (die Berliner Mauer), the Holocaust Memorial (and many other war memorials), and Checkpoint Charlie (the checkpoint separating the Soviet occupation from the American occupation), among other things. We stood in a parking lot directly above the bunker where Hitler and his wife committed suicide and walked around the courtyard where students collected and burned Jewish books prior to the Holocaust. Berlin has such a rich and interesting (and dark) history! Much of it we knew already from high school, but it was one thing to read about it in a book, and quite another to hear about it while actually standing where everything happened. I could



go on about everything we learned and saw on the tour for pages and pages, so I’ll move on.

After the tour, we found our way to a farmer’s market near our hostel, at the Hackescher Markt, where we got some lunch and relaxed on the grass near the river, the perfect break after the morning’s adventures. That night, we took a tourist’s pass at the nightclubs of Berlin, trying (and failing) to get into the famous Berghain (Berlin’s hottest nightclub) and a few others before finally ending up in Tresor, an old power plant-turned-nightclub. New York City has the reputation for being the “city that never sleeps,” but here in Berlin, some clubs literally go from Friday night clear through Sunday evening. Mixed with the fact that the sky doesn’t get fully dark until about 11 pm and starts to get light again around 3:30 am, it feels like a part of the city really doesn’t sleep at all!

Sunday, some of us attempted to squeeze in a visit to Potsdam, a neighboring town that is home to a collection of elaborate castles and gardens reminiscent of Versailles, before returning to tour the Bundestag, the German government building, at 2 pm. Unfortunately, we underestimated how long it would take to get there (and how slow the S-Bahn actually runs), leaving barely enough time to snap photos while running past landmarks. We definitely didn’t do justice to Potsdam; it’s the kind of place you can be content spending an entire day getting lost in! We hopped back on a train to only just make it in time to make our reservations, sprinting from the train stop to the Bundestag.

**Pro tip: if given the choice between an S-Bahn train and an RE train and you’re travelling a decent distance, go for the RE! The S-Bahn (from schnellbahn, or “rapid train”) is more local, meant for rapid transit within a city, and therefore makes a lot of stops, while the RE (Regional Express) is more ideal for moving between cities.*

At the Bundestag, we were each given headsets to complete an audio tour in our own time. The audio was synced to sensors in the ground, so that the audio matched up with what we were seeing (I was astounded by this). Our tour took us through the giant glass globe that sits at the top of the government building – an amazing view! I can’t do justice to the building so I’ll just include a picture. One last note about Berlin: upon arriving in Bochum last week, we were informed that we must try both the local and Berliner Currywurst – apparently, there’s a longstanding rivalry between the two to claim the origin of currywurst. Currywurst, if you’re wondering, is just bratwurst cut up and doused in curry ketchup (and, at the good places, curry powder as well). Personally, I prefer the local rendition of the delicacy – they use a smaller sausage than in Berlin. Either way, it’s still a delicious snack, best when gotten from a stand off the side of the road.

Week 3: Ruhr-Universität Bochum, BILD, Uni Duisburg-Essen and Weekend in Prague

This is our third week here at the Uni, and we're finally settling into a routine. Deutschkurs in the morning, lunch at the Mensa or home, and a company visit, department tour, or culture seminar in the afternoon, with the evenings free to nap, do laundry, run errands, have dinner, and hang out with our Buddies and other people we've met on our adventures. Though I still can by no means speak or even really understand German, we've learned a lot and I'm definitely much more comfortable with the language now. I went to Prague this weekend, and at the end of a weekend filled with Czech, I found myself thinking fondly of German as a familiar, comfortable language that I was excited to be returning to.

This week we visited the Mechanical Engineering department, and saw levitating water drops (sadly I didn't manage to snap a photo of this). Of course, we had the obligatory presentation about the department, and I found myself a little jealous of how large the engineering department, even just the mechanical branch, is here. Coming from a school where the hard sciences are far from the focus, it's a little strange to realize how much more is out there in the world of academic engineering – RUB has many times more subcategories to Mechanical Engineering alone than Harvard has for all of Engineering combined. It was a big deal even to finally get a specified major called "Mechanical Engineering" this year, let alone having even more specializations within it.

We also finally met some of the other students living in our dorm complex, joining in their barbecue on Tuesday evening and meeting students from France, Canada, Turkey, India, and of course, Germany. Some of them are summer students, like us, but some are full time. I had fun trying to follow their conversations in German (not much success), but everyone spoke English to us as well. Wednesday was a particularly hot day, and one of the Buddies took us out with his friends to swim at a spot on the river. It was a fun afternoon of lounging, hanging out with new friends, and yes, swimming in the questionable Ruhr water. Clean or not, it was amazingly refreshing to jump into the cool water, after the hot weather this week!

Hot off the Presses!

On Tuesday afternoon, we visited the printing presses of Germany's largest tabloid BILD, as well as the office of one of their local branches. I actually have a bit of a background in journalism (a lot in high school and some in college), so it was a particularly interesting trip for me. We weren't allowed to take any photos inside, so I hope my words suffice. We were greeted by an old-fashioned lithograph machine in the lobby (I'm a huge nerd and I love old machinery and especially printmaking) before being led to the much more modern printing room.

In case you aren't well versed on the finer points of printmaking, the process is actually pretty mechanical and still based on lithography, except for the modern technology that goes into making it automated (and at BILD, almost the entire process is automated, save for a few manual roles, like replacing the rolls of newsprint). If you don't really care about the technical inner workings, feel free to skip this paragraph – I've done some printmaking (letterpress, metal etching, block printing, monographs, and lithography) in the past so I'm interested in how it all works. The pages get sent from the publication office to the printing presses



some time in the evening the day before the issue is to come out. Each page gets more or less "printed" on metal plates, with each color (cyan, magenta, yellow, and black, or CMYK as you may be more accustomed to seeing on your computer) getting its own plate. The plates are printed with a material that is resistant to water but attracts the oil-based printing ink (and in turn, water on the rest of the plate, the negative space, repels the ink). Each color gets its own machine, each with a system of rollers for the water, ink, and paper (it's more complicated than this but I'll spare you). As the roll of newsprint comes through, each color gets printed, one on top of the other, to create a full color image. Ta-da! And all of this happens in just minutes, the press capable of outputting millions of papers each night. The printing room at BILD is certainly impressive. It's the largest in Germany, and by far the largest I've ever seen (I've visited one that is responsible for the newspapers in my home area, as well as the one in the basement of the school paper). The room goes on for miles (that's an exaggeration, but it's pretty big), with double-decker printing presses filling the room. After the pages are printed, they head to another room for cutting, folding, and packaging for delivery. This room, I can only describe as a large assembly line. Have you ever watched the show Unwrapped on the Food Network, where they lead you behind the scenes in the making of mass-produced processed foods? It's kind of like that. Papers suspend from a conveyor belt moving along throughout the room. Some conveyor belts drop inserts into the middle of papers; others cut special editions of papers into a different size; still others seemingly just go into the abyss of the huge room. At some point, they are folded up and deposited in stacks, ready for delivery. After that, we visited the office of BILD Essen, the local branch of the larger company. The office overlooked a great view of Essen, was outfitted with huge Mac monitors, and fulfilled the newsroom stereotype with lots of books, scraps, and notes scattered everywhere. We got to take a sneak peak at the next day's paper, with Obama's visit to Berlin on the cover, and see the evolution of front-page layout throughout the day. It was a pretty small office, but the former reporter in me still loved being in a real news office (even if it was actually a tabloid).



Running

Before you get any false impressions from the title of this section, I just want to say that I am by no means a serious runner. I run only to keep fit, and to justify what I eat (especially here, what with all those sausages and potatoes!), and this summer, I'm running to train (for lack of a better word) for a 5k in July. Here in Germany, and pretty much anywhere you're travelling, running is actually a great way to sightsee at a local scale – even if you don't normally run, I highly recommend it. The first few times I went running, I stumbled upon great views of the greenery, running across highway overpasses and through meadows and patches of wooded areas and mentally kicking myself for not having brought anything photo-capable. Inevitably, I got lost one day. In my defense, roads and paths here are fairly confusing; unlike most American cities, streets are not straight and they almost never wind up going where you think they would. Alternatively, I might just have an awful sense of direction. In any case, I turned my intended half-hour jog into an hour-long adventure, winding through wooded path after wooded path, always mistakenly thinking they would take me back to the main roads. Not actually an awful way to spend an afternoon!

Day at University of Duisburg-Essen

On Thursday, we had a first visit to the other universities of the University Alliance Metropolis Ruhr (UAMR), which is composed of the three universities in Bochum, Dortmund, and Duisburg-Essen. Greeted by our tour guides at the Duisburg train station, we embarked on our journey through the University of Duisburg-Essen. The first stop was GENIDE, the Center for Nano Integration at Duisburg-Essen, where we learned about the various uses of nanotechnology, especially in finding new energy sources. I don't know much about nano, but I do know I would love to study something like this. When natural resources start to run out, what do people do? Engineer new ones with tiny particles, obviously! I make light of it, but it really was pretty interesting. Afterwards, we toured some of the labs, which were very large, very new, and very impressive. One of the labs, focusing on electricity and energy generation, had structures in it that made it look like some kind of weird futuristic landscape out of a sci-fi book.

Over lunch at the Mensa, I got to practice a little bit of German with one of our tour guides, slowly stumbling over the words and taking about a full minute to think of each sentence. It really makes me appreciate how well the Germans speak English, and wish that we had more focus on learning foreign languages in US schools.

Weekend in Prague

This weekend, we all split up into small groups and went our separate ways. Some people went to Barcelona, others to Venice, one to Paris, another to London, and some stayed nearby. A couple of the others and I spent the weekend in one of the oldest surviving cities around: Prague. Waking up at 2 am (or in my case, not sleeping at all) to catch a 4 am train from the Hauptbahnhof, Friday morning was a jumble of transportation. With our German Rail Passes, we were able to take a train to Nuremberg, and then connect with a bus to Prague, finally arriving in the afternoon.

My first impression of Prague was simple amazement. Everywhere I looked there were colorful buildings, amazing architecture, and so much history. The former capitol of the Holy Roman Empire and the Austro-Hungarian Empire is one of the most authentic, oldest preserved cities of Europe, and it is breathtaking in all directions. I had no idea where to point my camera, because everything was beautiful. The three of us set out vaguely in the direction of Old Town Square (Starom stské nám stí) via the Vltava River, wandering, taking too many photos, and enjoying the beauty. Prague (or Praha, as it is known in Czech), is built around its oldest district, Praha 1, which contains Old Town Square. The city expands outwards, ranging from Praha 1, the center of tourism, all the way out to Praha 22. (No, this is not The Hunger Games, and yes, the districts did remind me of that.) We got to Old Town Square, which is a huge open courtyard bounded by the famous Astronomical Clock and a smorgasbord of shops and restaurants, and were greeted by jazz music filling the square with lively sounds. Apparently, in the summer, it is common for small stages to spring up here at random, usually accompanying live music. We stumbled upon a street market, filled tons of touristy knickknacks, handmade jewelry, flowers, and fresh produce. There were dozens of witch dolls hanging from one of the stalls, and whenever somebody clapped, all the witches would light up and bounce up and down with cackling laughs. We crossed the river and found ourselves in a picturesque garden below Prague Castle, where we encountered several peacocks and promptly ran around like children trying to capture them on camera. We passed a restaurant sign with the words “dinner special” followed by a long list of meats, and immediately went inside for a Bohemian platter (literally just a huge plate with about 5 different kinds of meat and potatoes), some appetizers, and two carafes of homemade wine. Two hours later and very content, we continued our adventure in the streets of Prague, wandering through more street stands. We sampled local currant wine and chili spiced brandy, and followed handwritten signs for a “summer garden” to find a



tiny sandy beach and stone wall on the shores of the Vltava. We sat with our bottle of sweet currant wine to watch the sun set over the river, with the famous Charles Bridge in view. After sunset, we continued to wander for the remainder of the night, walking along the Charles Bridge, through the Castle area again, and at one point climbing seemingly endless stone stairs to come upon an absolutely gorgeous view of Prague at night.

We took another SANDEMAN's free tour and listened to stories about the unique history of Prague, and why it is able to still look the way it did centuries ago, today. Since it was invaded early in WWII and without much struggle, and since it wasn't much of a strategic war location, it, unlike much of Europe, survived the war almost completely unscathed, not to mention many other huge wars in world history. As the tour guide told it, the Czech people, with a mind to preserve their beloved city for generations to come, shouldered the Nazi invasion, and later, the Communist rule, without violent resistance. Rather, they were more passive-aggressive in their attempts to keep invaders out, hiding road signs and collaborating to misdirect troops, forcing the Nazis to waste an entire day simply looking for Prague.

That afternoon, we stopped at a brewery to finally try what the Czech Republic is famous for: its beer. Taking a break after the morning's trek, we enjoyed more local food and drink at Klášterní Pivovar Strahov, or the Strahov Monastery Brewery. The Pilsner, so popular in Germany and around the world, was invented here in the Czech Republic, and statistically, Czechs drink more beer than even Germans do! Beer really is cheaper than water here (actually, that's true of Germany as well; at the grocery store you won't be able to find a water bottle for less than a euro, but you'll be able to find beer for as low as 50 euro cents).

The rest of the day was a rush of yet more wandering (I keep repeating this word but there's no better way to describe it). We climbed Petrín Tower, a 63 meter tall steel tower at the top of Petrín Hill that looks a lot like the Eiffel Tower, and took in beautiful birds-eye views of the city's red tile roofs. We tasted a version of fried dough (a popular street food) and listened to an open-air free concert. We explored Prague Castle, which is really a cluster of buildings that surround St. Vitus Cathedral, and saw yet more beautiful views of the city from a terrace overlooking the rest of Prague. Prague is a lot hillier than I had expected, forcing us to work our legs to get around. The city used to be several meters lower in elevation, but threats of flooding compelled its citizens to artificially build up the ground level, creating the strange landscape.



After a fun night exploring Prague's nightlife (Prague is home to Karlovy Lázně, the self-promoted "largest club in central Europe"), we embarked on our last day in Prague, crossing off as many things on our list as possible. We went to the top of the Astronomical Clock for an even more stunning view of Prague, this time a close up of Old Town Square. If there's one thing anyone should do in Prague, it's go to the top of the Astronomical Clock – the sights are spectacular. Just don't do it right after the hour strikes, because the hordes of tourists who came to watch the apostle statues dance as the clock chimed will be filling up the clock tower, creating a much longer line than usual.

Finally, a word of caution about travelling on Sundays in Europe: either don't do it or make reservations in advance. After a busy two days, we were relieved to be headed back to Bochum, only to be told at the train station that every bus from Prague to Nuremberg was booked for the rest of the day. After some wrangling, we managed to put together a collection of trains that would get us back to Bochum around 2 am. Not ideal, but manageable. However, because of a delay in the first train, we wound up missing every train back to the NRW area for the day, and had to resort to a sleeper train that got us back around 7 am... just in time to get ready for German class. Sundays seem to be a particularly popular day for travel, with people returning from weekend trips for work the next day – you've been warned!



Week 4: Last Week at RUB, Company Visit, TU Dortmund and Hamburg

This week marks our fourth and final week at the university, and the last week before we start our internships. I can't believe it's been a month already - where did the time go? We rounded off our university department tours with Civil and Environmental Engineering, taking part in stimulating discussions about world resources, development, and the future of building. On Monday, we played parts in scenarios that mirrored real world debates: whether to build wind farms, what kinds of alternative fuel sources are worth pursuing, and the balance between environmentalism and progress in developing nations. Tuesday, we toured the Civil and Environmental Engineering faculty, and saw a giant wind tunnel blowing wind over models of city buildings (a lot cooler than it sounds!). Wednesday, we discussed with the faculty the perception of what we call Civil Engineering (Bauingenieurwesen), what it entails, where it came from, and where it and the rest of engineering is headed.

This week also meant the culmination of our German language studies. So just what have we learned in one month of German? Lots of random things, like that the "5 W's" that you learn in grade school translate to German (who, what, where, when, why becomes wer, was, wo, wann, warum); "ei" makes a long "i" sound, "ie" makes a long "e" sound, s's are z's, w's are v's, and v's are f's; there are two ways of pronouncing a "ch" and both of them are incredibly difficult; and the grammar is strict and complicated. Lost yet? I usually am. Mostly, I just try to remember important phrases, like "Wieviel kostet das?" which is "How much does this cost?" "Ich habe mich verlaufen," which is "I'm lost;" and "Du hast wunderschöne Augen," which is "You have beautiful eyes." (Hey, knowing how to flirt is important! Right...?) Jokes aside, I do feel like I've learned a lot for such a short amount of time. I can put together rudimentary sentences, even if it does take me an inordinate amount of time to do so, and if people speak slowly enough, sometimes I can even understand some things (which leads to another important sentence - "Sprechen Sie langsamer, bitte," or, "Speak more slowly, please").

Company Visit & Hattingen

On Thursday, we had our first meetings with our respective internships. Clara and I are both working at Vaillant, which happens to be about two hours away by train, so we were glad when my Buddy offered to drive. Since the company is so far, both of us are also moving in with host families this weekend - but you'll hear about that next week! Racing along the Autobahn (literally just their word for "highway," by the way; nothing special by their standards), we made it there with an hour to spare. We had been mildly nervous for the meeting (it felt like an interview, even though we knew we were already working there), but it was very laid back - we just introduced ourselves, signed our contracts, and took short tours of where we were going to be working. I'm working in the electrical engineering department, with computer simulations of the heating systems that the company makes - I've never done anything like it before, so it should be interesting! My advisor assured me everyone is comfortable speaking English, but I'm hoping I'll pick up some more German now that I won't be surrounded by Americans all the time. At the end of the tours, our advisors surprised us with stuffed Vaillant bunnies, which have been the company's mascot since 1899. Apparently, its founder, Johann

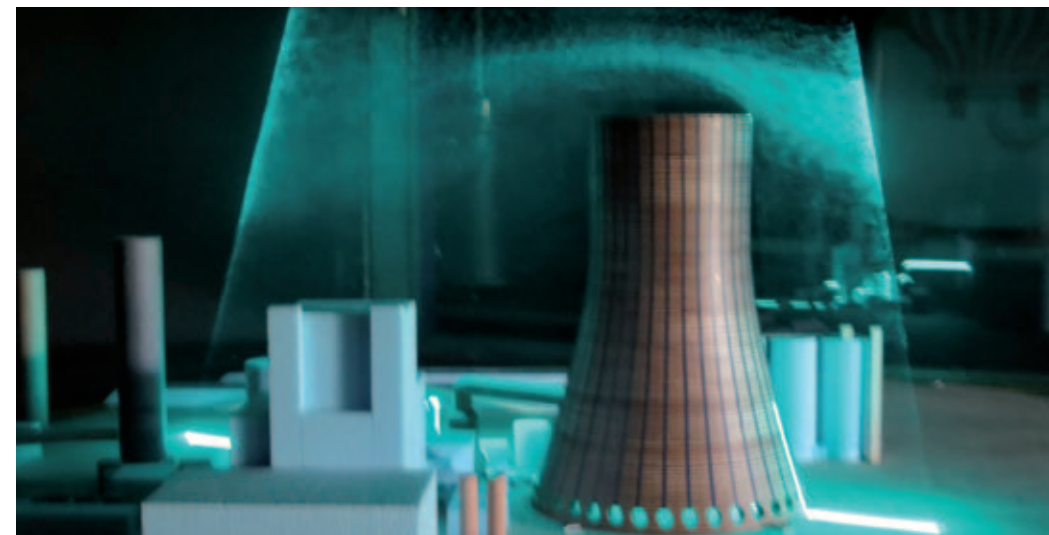
	M	N	F	Plural
Nom	der	das	die	die
AKK.	den	das	die	die
Dativ	dem	dem	der	denen
Genitiv	dessen	dessen	deren	deren



Vaillant, chose an Easter bunny as the symbol in the company's early days, and the trademark stuck. On the way home, we stopped in a tiny, picturesque town called Hattingen for some food. It was adorable, with old wooden buildings and cobblestone roads. Gems like these seem to be everywhere here!

TU Dortmund

On Friday, we had our last day of the university half of the program, with a full day trip to Technische Universität Dortmund, the last of the three universities in the UAMR. In the morning, we toured faculties, in the afternoon, we attended a seminar with students from the school, and in the evening, we all had a barbecue together. In the Chemical Engineering department, we got to see different processes used to extract and purify materials, as well as petri dishes and flasks that were growing fungi, which they are hoping to use in waste management. After that, we toured the Mechanical Engineering department, where I proceeded to get



embarrassingly excited over machines and metal working techniques. They had so many ways of forming metal that I had to write them down as notes on my phone. In addition to conventional molding, they also work with: water molding (shooting water at high pressure at metal to push into the grooves of a mold); extrusion through a shaped die (literally just pushing metal through a sort of cookie-cutter that shapes it); electromagnetic molding (using electromagnetic force induced by a coil to push the metal and change the diameter); a lathe, but with pressure rather than a blade (pushing the metal to form it, much like a pottery wheel); and a lot more! They also work with sheet metal, and apparently make tools for children to learn spatial reasoning in grade school – sheets of metal with lines cut halfway through so that it can be easily bent into shapes (kind of like the “what shape does this make?” exercises on aptitude tests). The tour guide could tell how excited I was about the department, and gave me a fold-up model of a car (which of course I immediately proceeded to make).

Hamburg

A few of us wound up having somewhat of a late night at TU Dortmund, hanging out with the other students there (most of them were also international, but from other countries), so, for the first time since coming to Germany, I slept in on Saturday. It was glorious, but it meant Annie and I only had half a day for our planned Hamburg trip! Finally mobilizing after lunch, we wound up getting to Hamburg around 5:30 pm – good thing it doesn’t get dark here until about 11 pm. Though most tourist attractions had already closed, we happened to come on a good weekend – everywhere we went, there was something in the streets: a festival, food stands, a wine festival, and live music! Every now and then we would see groups of people wearing bright 70s clothes and crazy colored wigs, and sometimes, we would hear distantly booming music but we weren’t able to tell where it was coming from. We got food at one of the festivals (an absolutely delicious tapas sampler plate) and stumbled upon a little red wooden man with directions on him. It is called the Hummel-Bummel, and is a self-guided tour of historic sites of Hamburg. And so, we followed a red painted line on the ground for about an hour, coming across old homes of famous composers. Unfortunately, we didn’t find many plaques before we wound up at the path’s end, but by then we had seen so many people dressed up that we had another goal in mind. Loosely following these people, we wandered through Planten un Blomen, a large, gorgeous botanical garden



around the lake. We kept wandering, and eventually stumbled upon the shared destination of all the people who were dressed up: a huge, colorful festival held on the fairgrounds. We unknowingly went to Hamburg right in the middle of Schlagermove: Ein Festival der Liebe (A Festival of Love), one of the biggest outdoor parties in the region. It filled up the entire fairgrounds, as well as the Reeperbahn, Hamburg’s clubbing area. Bright colors, loud music, and drunken revelers filled the streets (as well as an incredible amount of trash). Coincidentally, San Francisco’s Gay Pride Parade was taking place at about the same time, 5,500 miles away, with much the same style (focus on love, partying in the streets, and outrageous costumes). Unfortunately we only had an hour before we needed to head back to the train station and head home – our only options for trains back were 10:40 pm, and 5:40 the next morning! We walked through the festival (by the way, I’m explaining it all now, but at the time, we had no idea what was going on!), getting our bearings, and making friends with a couple of Germans. Summer in Germany has proven to be pretty great – there are so many fun things going on that it’s easy to wander into something great by accident! Almost every city we’ve visited has had some kind of street fair or open-air festival going on, just casually. I can’t believe the summer is half over already!



Week 5: Host Family, First Week of Work and the 4th of July Abroad

This Sunday is special – after a month of living with all of the Ruhr Fellows in RUB dorms, Clara and I are both moving in with our host families, where we'll be for the rest of the program. We're both working at Vaillant, in Remscheid, which, as it turns out, is nearly three hours away by public transit, so the company found us homes with its employees. Clara's moving in with a family with two kids in Lüdenscheid, and I'm moving in with a couple in Wuppertal, which means we'll be pretty far apart from each other as well as the others. We're the only two of the program to move to homestays – everyone else is staying in the dorms throughout the internship month. People have been asking me if I'm sad to be leaving the group, and while I am, I'm also really excited to move in with my host parents, and to have a whole new experience of Germany. I've only talked to them a bit online so far but they seem really cool. And hopefully I'll be able to pick up more German when I'm no longer surrounded by English!

My host parents live in northern Wuppertal, which is a city between Remscheid and Bochum (with some other cities in between, as well), in an adorable yellow building at the top of a hill, surrounded by woods and beautiful greenery. Wuppertal, by the way, is a city in the Bergisches Land and not the Ruhrgebiet, as my hosts were quick to let me know! It's a lot calmer than Bochum but beautiful and relaxing. My first night there, after dinner, my host dad pulled out a skateboard attachment for PlayStation that he had very excitedly purchased at a flea market that morning, and we played Tony Hawk for an hour, and made loose plans for the coming weeks – ideas for trips hiking, climbing, to the Netherlands, to wine regions... I can already tell it'll be a fun and full month!

On Monday, they took me rock climbing for the first time, at an indoor place near their house. I've always been afraid of heights, but I had a ton of fun – I'll

definitely be trying that again. Unfortunately I didn't bring my camera, so I don't have proof yet, but I swear I climbed to the top of the wall! Rock climbing is a lot more strategy and technique than raw muscle strength as I had assumed (though of course that's important too) – I watched the more experienced climbers and it's almost like dancing on a wall! Tuesday was less exotic, just casually running through the forest (that's sarcasm, in case you can't tell without tone). The areas near their house are pretty wooded; even exercise gets great scenery.

First week of work

In case you don't know what Vaillant is (I didn't when I first heard where I'd be working), it's one of the leading providers of HVAC (heating, ventilation, and air conditioning) systems in Europe, and many other countries, although not the US. They do everything from manufacturing and production, to research and development, to development of smarter control systems, and more modernly, to research and improvement in sustainability and environmentalism. I'm working in the Electrical Engineering department, which I was a little wary about since my background is in Mechanical, but it's been really cool and more related to mechanical subjects than I had expected (yay thermodynamics?). Briefly speaking, I'm working with Matlab Simulink software to model the heating systems that the company makes, with the goal of improving upon the current system for increased efficiency and comfort. The first week was mostly getting acquainted with the software and appliances (for some reason, I've never taken a central heating unit apart and analyzed exactly what goes on; what's wrong with me?). Though in the past I've tended to retreat at the thought of coding and computer modeling, the graphic interface of Simulink makes it feel like a puzzle, and I'm having a lot of fun with it! And when I get stuck, the guys in my office are always willing to help. There's a pretty big group of students around me completing various stages of their Praktikum, or the required work experience all engineering students in Germany must have while at university. Clara is working in the research and development area, in a lab doing real, rather than simulated, tests on appliances. She gets steel-toed lab shoes and everything! The only time I see her at work, though, is if we happen to go to lunch at the same time, which brings me to... The "Vaillanteria"! The Vaillanteria is Vaillant's on-campus cafeteria. Of course, it's me, so it wouldn't be a full post without some kind of mention of food. There's a small kitchen in my office, with a mini fridge and a coffee machine (super important), but most people go to the Vaillanteria for lunch. It's a basic food tray cafeteria set up, with a few





different options for lunch, quite similar to the Mensa at the universities. There's always one meal where, for just 2 euros, you get a soup, entrée, and dessert, which I and the other students usually opt for. Sometimes it's a toss-up, but most of the time it's pretty good!

4th of July abroad

This Thursday was the 4th of July, so of course we had to celebrate! For family dinner this week, we all chipped in to buy various grill-worthy things for a small barbecue in the courtyard outside the Bochum dorms and invited all the Buddies. After almost 3 hours via 3 trains and 1 bus, Clara and I were finally in Bochum. We were running late and worried that all the food would be gone, but we didn't have to worry at all – they hadn't been able to get the fire started! No worries, we still had our chips and beer, and after another hour or so of fire-making fail, and many jokes about not being “real Americans,” we were finally up and running. The delay also gave our Buddies and friends time to show up, and we all settled in for a fun night of American pride, good food and drink, and better company. We taught the Germans how to make s'mores, and they tried to teach us how to open one beer bottle with another. Clara and I both slept over in Bochum since the distance meant we wouldn't have much time there if we tried to return to our homestays that night, and during the morning commute, we were grateful once again to be normally much closer to work! After leaving my Buddy's apartment almost an hour earlier than my host dad and I would normally leave the house, I didn't get to the office until an hour and a half later than usual.

ExtraSchicht – Die Nacht der Industriekultur

The Ruhrgebiet is very proud of its industry, and showcased it this weekend during its annual ExtraSchicht event on Saturday, a night where participating companies open up for tours. There's an extensive plan of offerings, with shuttle service to and from every destination from 6 pm until 2 am, and one wristband gives

you access to all of it. Among the options, there were: coal mines-turned-mining museums, local breweries, the Gasometer in Oberhausen, which is a former gas tank-turned-exhibition center (there are a lot of these sorts of repurposed spaces in Germany), as well as free music and shows in open spaces, lots of street food, and laser and firework shows, all spread over Duisburg, Essen, Oberhausen, Bochum, and Dortmund. There are about 450 events, in total – they could have a week for this and it wouldn't be enough!

Schwebebahnlauf

A week after I arrived in Wuppertal, it was time for the Schwebebahnlauf – the company 5K run that I had signed up for back in the school year, thinking it would help motivate me to run more regularly (it didn't). Lauf is the German word for run, and the Schwebebahn is the name of a famous train in Wuppertal – the oldest electric suspension railway in the world, opening in 1901, and still in use as a means of daily transportation. Funnily enough, my host dad and I took the Schwebebahn in order to get to the race site. It runs along the path of the Wupper River, suspended about 12 meters above it, which gives great views of the river, and of all the old mills and factories along it. The Vaillant team was about 30 or so participants spread out over the departments, so I was able to meet some new people, too. By the time we got to the main roads of the race, the streets were already packed – the race this year had over 4,000 participants. It's been kind of cold or even rainy all week, but of course the day of the race, it was nearly 30°, no clouds or wind! Our start time was in the afternoon, at the height of the heat, so it was a welcome sight when we reached the halfway point and saw that the firemen had opened several fire hydrants to spray cold water into the race path. I haven't run as much as I would have hoped in the past few months, so I had no idea how I would do; combined with the heat, it took all my concentration just to keep running. Thankfully, we were greeted at the finish line with water cups and cold beer (alcohol free, but still, somewhat surprisingly, good!).



Week 6: 2nd Week at Work, Bochum Total and Adventures with my Host Family

It's amazing how quickly you can settle into a routine, whatever new places you're going or new things you're doing. It's our second week of work, and my second week of living with my host family, and I am already starting to feel comfortable. I know I'll wake up around 6:30, have some breakfast, get ready for the day, and leave with my host dad around 7:15 for the drive to work. We might listen to the radio, or talk, or just be quiet and enjoy the ride. We'll go our separate ways to our offices, and perhaps see each other in passing in the cafeteria. Around 4 in the afternoon, he'll come by my office, and we'll go home, perhaps making a trip to the supermarket or to his parents' house on the way. The afternoon will be free to do as I please; either joining my hosts in the many activities they do (rock climbing, mountain biking, running, trips to nearby cities) or taking a relaxing afternoon doing nothing at all. I feel really lucky with my host family – they are always doing things, and always including me in their everyday lives.

This week at work, I settled more into my project, finally having gotten acquainted with the software and appliances. I have a central project that I'll be working towards for my time here, and they're always asking and making sure that I'm staying interested in what I have to do. Some of the other Fellows have situations similar to mine, with a main project and a final deliverable, and others are getting more of a survey of their companies, and learning from all of the different departments. I'm not sure what I'd like better; I really like that I'm getting my hands into a project and will have something tangible I've done at the end, but getting to know the inner workings of lots of different departments sounds like it would be interesting, too.

Mini-Reunion and Bochum Total

Though I love living with my host family, being so far away in Wuppertal does make it harder to see the rest of the Fellows and Buddies, and other friends we've made in Germany so far. However, though the train ride might be annoying, it's not impossible – Clara and I have been making it back at least once or twice a week. As soon as he realized I was moving away, my Buddy gave me a standing invitation to stay on his couch whenever I needed, no notice necessary, which I've been taking advantage of. I've gotten really good at surreptitious overnight packing, which has proved useful – trains aren't quite as convenient at night as they are during the rush hours.

On Thursday, we had our first group gathering with our coordinators since we all began working, meeting up for dinner in Bochum. We were nearly the only people in the restaurant (it was early) and certainly the loudest! We hadn't all hung out together in a while, and after a month of almost 24/7 contact, it was strange to not see each other every day, and it was great to be back together. It also happened to be the first night of one of the area's largest open free music festivals, Bochum Total, which takes place in the streets of the Bermudadreieck (Bermuda Triangle). Already a bustling place on weekend nights normally, the streets of the city's bar and club district were absolutely packed. There were three main stages, stationed strategically on the corners of the Triangle, with food stands, accessory and clothes vendors, and of course, beer and liquor carts, lining the streets between. A group of us headed over to the festival after dinner, meeting up with my Buddy



and his roommate as well as some of the students from other programs that we've met, to enjoy the free music and festival atmosphere.

Friday evening, I was able to hitch a ride with my host parents to Bochum, who were going there to visit a friend. Again finding some of the other Fellows and Buddies, we returned to Bochum Total, this time enjoying the food as well as the music. We got near the grocery store and immediately dubbed it "Club REWE;" there were so many people queuing outside, with security guards monitoring, that it looked like the most exclusive club on the street! In reality, it was filled with festivalgoers all wanting the same thing: cheap drinks and snacks to combat the somewhat pricey (though delicious) offerings in the streets. There's something of a noise curfew in the city, so all the public music had to stop by about 10 or 11 pm, and much of the party either left or moved inside to the bars. There was, however, a silent disco in the streets – people get special headphones from a stand and all listen to the same music at the same time, dancing like any other party. From within the headphones, it feels completely normal – everyone's just dancing to the beat! But from the outside, it looks like a street full of crazy people, dancing in a silent street. What a great solution to letting the neighbors get some sleep!

Adventures with my host family

Last week, I mentioned that I had tried rock climbing for the first time with my host family. Well, this week, I tried it again, but on the real thing! Apparently there's a public space for rock climbing nearby, between Wuppertal and Bochum, on cliffs that are the remnants of the rock mining that happened in the area in the past. I will first proudly declare that I did indeed climb to the top, clinging on to a rock face. And now I will temper that by saying that rock climbing on real rocks

is entirely different from climbing indoors, in an amazing, and also really, really difficult, way. I will be eternally grateful to my host mom and her friends for being endlessly patient with me as I struggled and strategized my way up the rocks, taking probably about half an hour for paths that they climbed in minutes. I've been doing all sorts of things I never expected myself to do on this trip, and I'm loving it! After about four hours out (most of that time I'll admit I spent watching others and being amazed, and just enjoying the open air and good weather), we finally returned, and I was exhausted – I almost fell asleep at the dinner table.

On Saturday, my host parents invited me along on a trip to the oldest town in the Netherlands, called Nijmegen. I had to ask for the name of that town probably 20 times (still can't pronounce it), but I'm glad they took me – I would have never known about it otherwise! It's an amazing little town that dates back to Roman times – there are little electronic installments in the streets that digitally transform the street you're standing on to what it would have looked like in 100 A.D. One of their main shopping and market streets is one of the oldest shopping streets in Europe; they have records of it being a main street in Roman times. However, my host dad never made it to the Netherlands. My host parents are getting married in September, and my host mom arranged with his friends to have him kidnapped for his bachelor's party, where he and his friends would spend the day paddle boarding on a lake, and then head into the Bermuda Triangle in Bochum to go out! About two hours later, though, my host mom, her friend, and I were in Nijmegen on a beautiful day, meandering our way over cobblestones and through street markets. One of the first stops of the visit was at a food stand in the street to get a stroopwafel for each of us. Stroopwafels, or "syrup waffles," are a traditional Dutch street food, dating back to the 1700s. It's basically a very thin waffle with sweet syrup inside, kind of like a cross between caramel and honey, and it is amazing. This weekend also happened to be the weekend of festivals in Nijmegen (seriously, festivals everywhere guys). On Tuesday begins the Four Days March, a 50 km walk through the Netherlands, based in Nijmegen, which began as a military march in the beginning of the 20th century and has now become the largest civilian march in the world, and the weekends surrounding the week of the march are filled with public events. We packed a simple picnic and headed out in search of music, settling on a nice lawn overlooking the river and one of the stages. We spent the



day wandering the streets, raiding a local supermarket for Dutch sweets, exploring the festival areas and parks, and listening to music, ranging from rock to folk to reggae to – the perfect laid back day in the Netherlands! Nijmegen is an absolutely adorable town, by the way. I've always been attracted to Dutch architecture, and this town was picture perfect.

“Meeting of the Minds”

Sunday, the program got back together for one of our last group events – something called “Meeting of the Minds.” None of us actually knew what it was going in (it was just a marked event in our calendars). It turned out to be another tour, this time with students from other nearby programs and universities as well. We visited Zeche Zollverein in Essen, another former coal mine-turned-museum, for a tour of the museum and rooftop patio. One of the really amazing things about that museum are not that it exists within the space that it's documenting – which is also really cool – but that they use projected animations to illustrate the things they are trying to describe. Most people probably can't picture the inner workings of a coal mine, and the people who put together the exhibits accounted for this by creating animations of the processes, projected right onto the old machines themselves; it is by far my favorite method of presentation. That evening, after a stereotypical dinner of Currywurst, we headed to an elegant night at the philharmonic for a jazz concert (fast food and the philharmonic go hand in hand, right?). I can't say I know too much about jazz, but it was a nice evening overall.



Week 7: Hot Weather, Exploring Düsseldorf, Jungesellen- abschiedsfeier and Charlemagne's favorite city

Nothing says "summer in Europe" more than sweating profusely on a train. Get it? Sweating cause of heat, trains cause of Europe? Okay, probably a lot of things say summer more than that, but hey, I was trying to be funny. Or something. Whatever, it's been a long week – don't judge me. In any case, the point is, it's finally warmed up again, albeit somewhat overzealously. Being the only one from California, I've been getting a lot of remarks about being used to heat. Aside from the fact that I live in the Bay, where it is basically the same (mild) temperature year-round, it is distinctly different to experience 30°+ (90° range in Fahrenheit) temperatures when it is the exception rather than the expectation. Trying to work through the day in a building without air conditioning (as is the case with almost all buildings here, since it is rarely this warm) is impossible! I keep trying to explain that the heat really doesn't impact so much in Boston, where, though it is this temperature more often than not in the summer, you only really feel it while in transit. Relatedly (not actually that related), I've now upgraded in German to the ability to make small talk in the streets about the weather ("Heute ist zu heiß!" – "Today is too hot!"). I may or may not also be publicly embarrassing myself with horribly incorrect German, published online. I've decided that even if it's wrong, points for trying?

Work is much of the same, which is good since I've been enjoying it. I've gotten deeper into my project; after completing my model of the system, I am now analyzing existing experimental data from the field, and trying to match it up to my model for verification. So far, it's pretty difficult because part of my project is actually to figure out why some of the results have come out the way they have; the behavior was not expected to begin with. On Tuesday, I went with my advisors to the course that they co-teach at the university in Wuppertal. The campus was fairly standard, but one thing that struck me was that it was built on what used to be military grounds. In the past, armies had practiced marching here, and now, it is a place where students study. It's somehow poetic to me, that a place dedicated to the military, and connotatively, to war and destruction, has since transformed to become dedicated to education. It was an interesting visit, though somehow it had slipped my mind when accepting this invitation, that the class would of course be held in German. Unsurprisingly, a lot of technical terms are quite similar to English, and combined with the PowerPoint visual cues, I wasn't totally lost (just mostly).

On Wednesday, my host dad decided to leave work a bit early, and to enjoy the nice weather, he, my host mom, and I went to the lake for a relaxing afternoon. The lake we went to is actually something like a reservoir, though not one used for drinking water. It's a part of the Wupper river that has been dammed, so its water level changes by the changing levels in the sluice gates at the entrance and exit. It's an incredibly clear and refreshing body of water, mostly cool but with little eddies of warmth. There's an island in the middle that, on low water level days, you could walk most of the way to, but the day we went, the water level was so high we swam probably more than 200 meters to get there. It was an amazing way to cool off and relax mid-week!



Exploring Düsseldorf

This week, I finally managed to explore a bit of Düsseldorf. Even though it's so close (about one hour by train from Bochum and only half an hour from Wuppertal) I haven't actually been there since the first day when I flew into the airport. It's the capital of Nordrhein-Westfalen (or North Rhine-Westphalia, as we know it), the state that we are in, and is home to one of the largest population of Japanese people in Europe. So, fittingly, the first time I really explored it, it was on a mission for sushi. We had been recommended some places to try by our guide at TU Dortmund, the woman who had run the program last year, and we chose an all-you-can-eat sushi restaurant in the city's Japan town-like district, where you make your orders on an iPad that is located at each table. You can only make a certain number of orders in a certain period of time, but everything is made to order and brought directly to the table, so it's really more like an endless parade of food. Guten Appetit!

This week was also the week of the Größte Kirmes am Rhein (literally: Largest Fair on the Rhine), a big city fair in a field on the bank of the Rhine, across the river from the Altstadt (old city) neighborhood of Düsseldorf. Though we had planned to wander around the fair on Tuesday after dinner, we wound up spending so much time at the restaurant (and getting so full from the meal - yum) that we never made it. On Friday, however, there was a big fireworks show, so we decided to head back to Düsseldorf. The fair was, as one of the others put it, "like an American fair on steroids." The name was not exaggerating – it was a huge fair, and completely packed with people. We could only move with the flow, it must have taken half an hour just to get from one side to the other, shuffling along. However, because it took so long to get to the ride we were aiming for, we happened to be swinging through the air, high up into the sky, when the fireworks started, getting an amazing and unique view.

Jungesellenabschiedsfeier

No, that is not a sneeze. That is the German term for what we would call, a bachelorette party. Or at least I hope it is, everyone kept saying it really fast so I resorted to Google; don't judge me. Anyhow, this week, I went to my host mom's bachelorette party. In our month and a half in Germany so far, we've seen a disproportional number of bachelorette parties. Summer is apparently a very popular time for weddings (who knew, right?), and big cities or picturesque small towns

on weekends (i.e., almost every weekend trip we've taken) are the most popular destinations for bachelor/bachelorette parties. I've seen as many as 3 bachelorette parties all in one park in the span of about 5 minutes! In seeing all of these, I've noticed the following differences. First of all, bachelor/bachelorette celebrations begin much earlier, span the whole day into the evening, and tend to involve more activities than just going wild at the clubs at night. Activities include: dressing up in either matching or somehow ridiculous outfits (or both); approaching strangers to sell random party favor style items (like alcoholic shooters and candies) to make money to spend that night; and any sport or activity that the husband/bride-to-be enjoy.

As I've mentioned, my host family is pretty active and loves the outdoors, so my host mom's bachelorette party began with a canoe trip down the river in Essen (my host dad's bachelor party the week prior began with a paddle boarding lesson at a lake). First though, we tricked her into going into town in the morning, to give her friends time to sneak into the apartment to surprise her. After celebratory wine to kick off the day, we were headed into Essen (complete with a cooler full of wine/champagne/etc. and plastic champagne flutes). Though the day began overcast and chilly, it cleared out and got downright hot by the time we were on the river. It was a lot of fun; lots of yelling and laughing; one woman had even brought a

squeegee water gun that we were using to shoot water onto the riverbanks at random passersby. Though I still can't really understand too much in German (everyone speaks so fast!), I've at least become a lot more comfortable being surrounded by it, and can usually catch the gist of a conversation. I have fun trying to pick out familiar words and guess at the meanings, and it's good practice anyway.

After the canoe trip, we got changed into clothes for the night – everyone had black shirts, and most of the girls had matching t-shirts they'd made with my host parents' names and an inside joke. My host mom, however, got a different outfit – a white dress, lace tights, and bunny ears (her fiancé's nickname is German for a hare or bunny), and a basket full of "Lose" to sell (German term; the only way I can think to describe it is a kind of lottery scratcher – there are rolls of paper with prizes written inside, and when you buy one, you choose at random and get whatever it says, anything from a tiny bottle of schnapps to a gummy candy to a stuffed bunny). I'd seen lots of other brides-to-be doing this before, so it was great to experience it from the other side. I even got to sell a few whenever we encountered English-speaking travellers. After a few hours of this, we used the earnings for a night out on the town – and I got to go clubbing with my host mom and her friends! By the time we got back home, we watched the sunrise while we snacked and rehydrated in the kitchen. All in all, an excellent day!

Charlemagne's favorite city

Sunday was another beautiful day (actually kind of sweltering), so I met a couple of friends in Aachen, a city nestled up right at the border of the Netherlands, Belgium, and Germany. My cell phone actually texted me informing me of rate changes, thinking I had crossed the border, and after a mini freak-out on the train, thinking I'd gotten on the wrong one and was not going to be lost in the Netherlands, I figured it out. It's another one of those cities that date back to Roman times, having been Charlemagne's favorite city while he was reigning, and the location of his preferred residence. Since it was Sunday, there was a flea market out in front of the Aachen Cathedral, a Roman Catholic Church with its beginnings as Charlemagne's St. Mary's Church. The Cathedral is also Charlemagne's burial site. We visited the Cathedral, and then spent some time wandering around the flea market and surrounding streets to enjoy the sun and have some lunch. I got something that was called something like "special fries," which turned out to be fries with mayonnaise, curry ketchup, and grilled onions heaped on top, which was delicious, though heavy. We also got the traditional cookies, called Printen, which are something like ginger cookies, but crisper. Experience culture through food, right? I think I managed to make it through most of the day fooling people into thinking I was German, and even managed to bargain down a price at the flea market in German!

Aachen's history is rich, mostly within its relationship to Charlemagne, but it manages to maintain close ties between its illustrious past and its modern present. We toured the Rathaus as well, and though the building is open as something of a museum during certain hours, and many rooms are preserved (or restored post-war) very well from early centuries, the updated desks in the main conference room, equipped with microphones, are obviously still used to this day. It's been in regular use as a town hall and mayoral office since 1349, with "just a few interruptions between 1943 and 1951," because, you know, that whole thing with the world being at war and all. Aachen University is particularly well known for its engineering and science studies, and we caught sight of many students studying for exams in the fields out front when we walked in search of Charlemagne's Treasury (not kidding, almost everything historical in this town revolves around that guy). After being awed by the amazing craftsmanship we found on display in the Treasury, we finally could not take the heat any longer, and simply sat with our feet in the water in Elisengarten, a big park in central Aachen. I'm going to miss discovering these little historical gems every weekend when this program is over!





Week 8: Last Week, obligatory selection about food and One Last Weekend Trip

I think a lot of us were thinking something along these lines when we realized that somehow, it had become the last week of July, and the last week of the Ruhr Fellowship. At least, I know I was. Could it really be the last week of our program already? Had we really been in Germany for two months? While the time feels like it's sped by, it also feels like we've been here for a long time. We've done so much in the past eight weeks, from our German crash course to our whirlwind weekend travels to the endless adventures, and finally to our internships, not to mention the relationships we've formed with each other and with others we've met along the way. It's hard to write this post because it's the last. It's hard to encapsulate this trip, with some measure of finality, simply in writing. All I can say is, I am incredibly grateful to have had this opportunity and to have been a 2013 Ruhr Fellow.

The night before the official end of the program, we had one final Farewell Dinner at a fancy restaurant in Essen, complete with our sponsor from the Initiativkreis Ruhr, one of our program coordinators, most of our work advisors, and a few press people. The day was cool and rainy, like our very first day in Bochum. A few people gave short speeches, reflecting on our time, and bringing a flood of memories I hadn't even realized had had the time to become memories yet: arriving, disoriented, at the airport in Düsseldorf and being met by a grinning Uta (our coordinator), boarding my first RE train ever, the slight awkwardness of everyone in the beginning at being suddenly thrown together, late-night hang out sessions in the dorm kitchen, the many casual BBQs in our own courtyard and at Buddies' and

friends' dorms, and so much more. Being put in a new place with all new people has a way of forming strong relationships fast, and I know I'll stay in touch with a lot of these people for years to come. Okay, this is getting too nostalgic and sappy – back to other things that happened this week.

Take your host daughter to work day(s)

Okay, so that's not actually a thing, but on Monday and Tuesday this week, I worked in the Materials Lab with my host dad rather than my usual spot in the Simulations department. As a mechanical engineer, I definitely welcomed the chance to move around a bit and work with my hands and with real samples. My host dad had saved up some samples that would be relatively easy to analyze so that I could come and work on them with him. I mostly just worked at grinding and polishing samples to make smooth, clean surfaces to analyze, and then looked at the results with my host dad. We analyzed two samples: the quality of welding on a part and the quality of connections on a tiny circuit. I'll spare you the details, but one thing I thought was really cool was the way we analyzed the welding – by etching the metal in acid. I've only ever etched metal for printmaking, so it was really interesting to learn that, because different metals will etch at different speeds, etching acid can be used to reveal how well two metals have been bonded. If the patterns fade slowly into each other, then the connection was strong, but if you can still see a stark edge, then it was a poor welding job!

During these days, I also toured the electronics production site and the lifetime testing, development, and acoustic labs. I saw how each circuit board was made, zipping through the assembly line of machines and workers, resistors and capacitors being added endlessly in sequence. It was pretty impressive. And in the testing facilities, it seems like there are an infinite number of different tests to be run, diagnosing defective products, evaluating the lifetime of each product, ensuring appropriate acoustic levels during operation, researching new methods of doing things, etc. It also happened to be quite hot these days, and with all of the heaters running continuously in the labs, it was sweltering in the labs! It's also a little ironic, because many of the tests are run to improve efficiency for the environment and resource management, but in running the tests, so much energy gets wasted!

The obligatory section about food

Because I feel that, if you're reading this, you have come to expect this by now. On Tuesday, Clara and I had something of a slumber party, with us cooking dinner and dessert for my host family. I don't have a kitchen at school so I'm pretty out of practice when it comes to cooking, something my host parents didn't miss a beat in making fun of me about and snapping tons of photos. I chose to make a tomato basil risotto (I've never made risotto before) for dinner, and of course, classic chocolate chip cookies (otherwise known as American Cookies in Germany) for dessert. It was quite a production, converting our recipes from cups and tablespoons to liters and kilograms, but in the end, we finally had something to show



for it! The risotto (a recipe meant for 6) disappeared quickly, as did about half our plate of about 3 dozen cookies.

In addition to the official Farewell Dinner that the program had, we Fellows also had our own farewell dinner, a BBQ in the courtyard of our dorms for our Buddies, neighbors, and friends. It still didn't quite feel like the end, it just felt like any other casual hang out we've had in that courtyard: free-for-all grilling, crates of beer out, and everyone talking together. The weather mercifully turned nice (it had been raining) and it was the perfect summer evening with the best company. Sausages and beer – how else would we commemorate the summer in Germany?

One last weekend trip

After work on Friday, a group of us all hopped onto trains, bound for a weekend in Amsterdam. The old city, with all of its tall, narrow buildings and canals, is absolutely beautiful. We spent our first night wandering around the Red Light District, taking in the new sights. Yes, this is a euphemism for the strange sight of prostitutes working in their red-lit windows every few paces on each street. I will say, though, that these prostitutes definitely looked a lot safer and even happier than ones we have spotted in other big cities of countries where it is illegal. Some of the funnier things we saw in Amsterdam are probably the vending machine-like restaurants that serve warm food like fries and burgers. There is a wall of glass-covered shelves, each enclosing one portion of food. When you put money in the coin slot of each shelf, it opens and you can take out the food. What an ingenious business model for a city famous for its, ah, relaxed attitude towards certain soft



drugs. Coincidentally, the machines also only take exact change – if you put in too much, you're not getting any back.

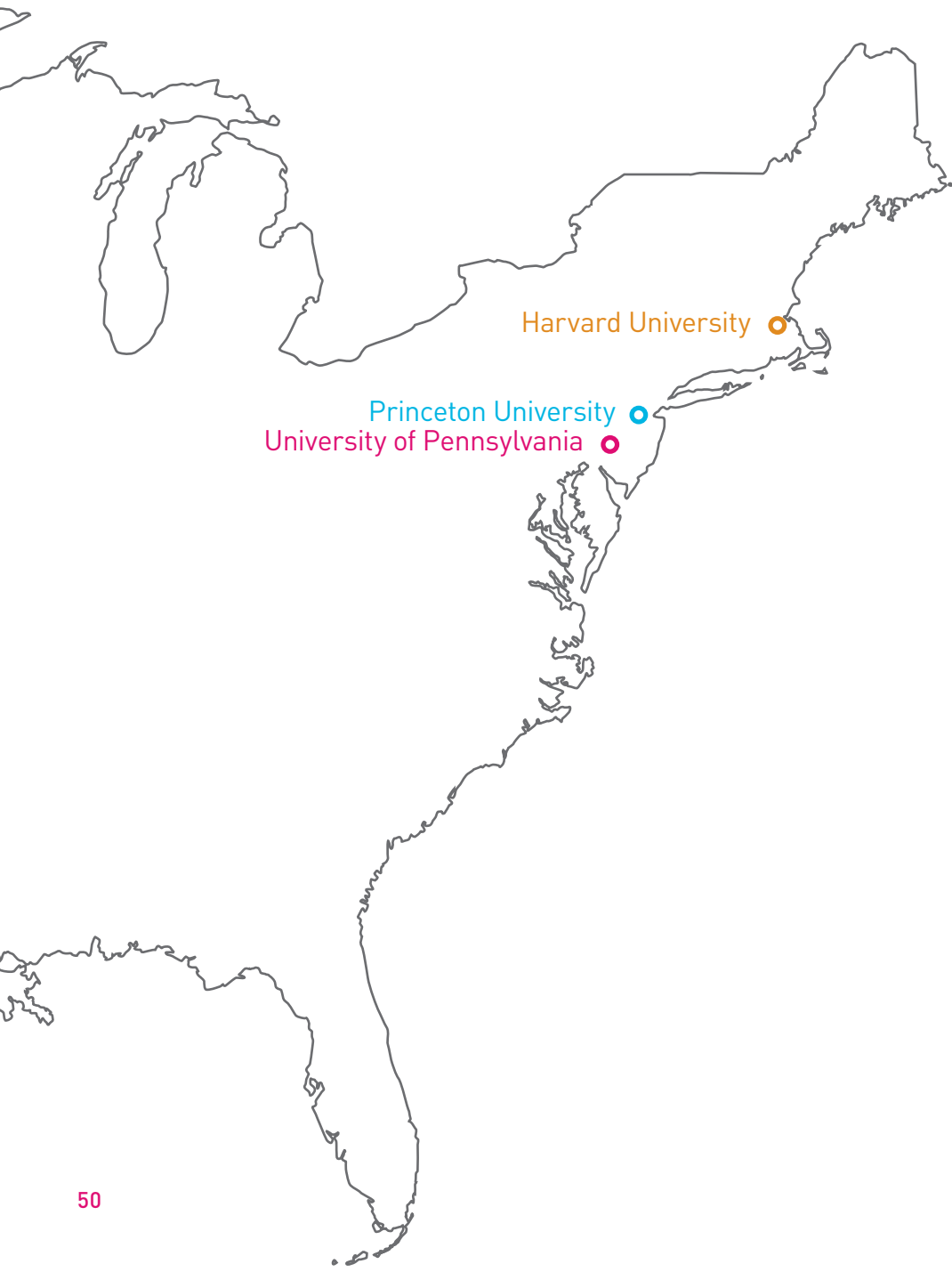
After a summer of good weather for almost all of our excursions, we finally ran out of luck when it started pouring in the middle of a free walking tour on Saturday morning. In search of a sanctuary from the rain, we headed to the museum district, apparently along with the rest of the city. The wait for the Van Gogh museum was so long that we managed to only get in by the time the rain had stopped. I still loved it, though – I've never seen that many Van Gogh pieces in one place! It was an exhibit tracking the development of the artist, so there were a lot of lesser known pieces from his early days. Most of the day, most of the trip actually, was characterized by kind of laid back wandering of the town. Everything was beautiful, so there was no going wrong! We took pictures on the "I Amsterdam" sign, walked through markets, took a detour to play on a children's playground, bought wine and cheese and sat by the canal, etc. Somehow, though it had been pouring that morning, by the late afternoon, the sun was out and the sky was beautiful, so we took a canal cruise as the sun set over the water.

And so, that's it! After a few more days of work and the Farewell Dinner, we were done. I'm getting nostalgic thinking about the last two months, but everything that I think back to just makes me smile. It's been one crazy summer, but one thing's for sure: this won't be my last time in Germany. Es ist nicht "auf Wiedersehen", sondern nur "bis später!" I don't know if that's really a legitimate sentence (still haven't got a handle on that grammar and I really hope Uta corrects this before she posts it), but what I'm trying to say is, "It is not 'goodbye,' but only 'see you later'" for Germany!

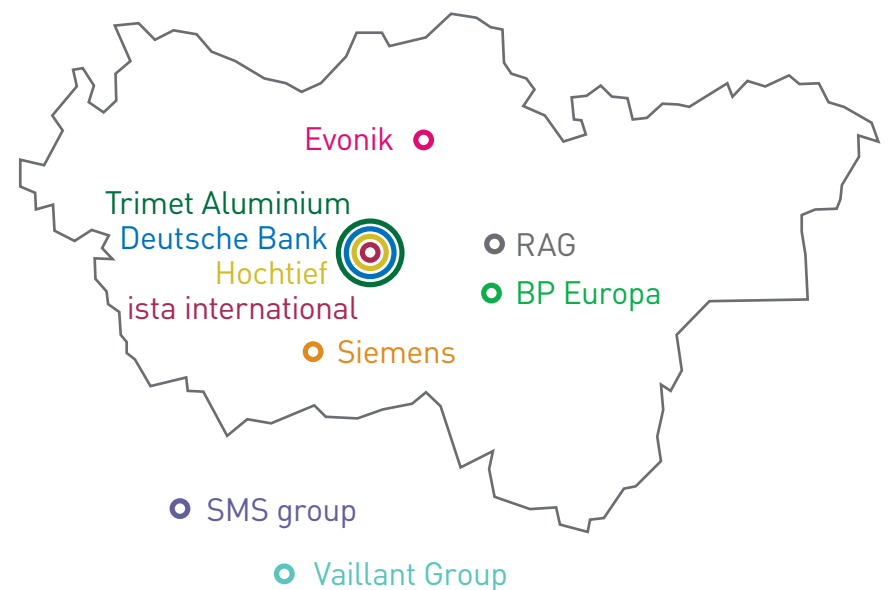


Übersicht der Teilnehmer

Overview of Participants



Bewerber	Universität	Unternehmen	Stadt
Cathryn Herbst	UPenn	BP Europa	Bochum
Serena D. Machi	UPenn	BP Europa	Bochum
Michael C. Sha	UPenn	Deutsche Bank	Essen
Kathryn Wendorf	Harvard	Evonik	Marl
Zhiyi Zhang	UPenn	Evonik	Marl
Melody Tan	Princeton	Hochtief	Essen
Kasun Waidyaratne	UPenn	ista international	Essen
Annie Mroz	UPenn	RAG	Herne
Carolyn Kim	Harvard	Siemens	Mülheim
Pranav Gokhale	Princeton	Siemens	Mülheim
Kyle Rawding	Harvard	SMS group	Düsseldorf
Nathan Tyrell	Princeton	Trimet Aluminium	Essen
Anisa Li	Harvard	Vaillant Group	Remscheid
Clara Midgley	UPenn	Vaillant Group	Remscheid



Resümees aus Übersee

Notizen zum 2013 Ruhr-Fellowship Programm

by Pranav Gokhale

I will forever cherish my memories from the summer in the Ruhrgebiet. The Ruhr Fellowship was my gateway to two incredible months of cultural immersion, language instruction, applied engineering, industrial tours, travel, and so much more.

My interest in Germany stems both from studying prominent German scientists, philosophers, and businessmen and a fascination for the modern German economic miracle. I applied to the Ruhr Fellowship because it provided an opportunity to understand Germany's past and present, while continuing my education as an engineer. Indeed, I believe I have grasped important lessons about education, open-mindedness, and diligence that I can learn from.

As soon as I arrived at Düsseldorf airport, I was picked up by my amazing German buddies John and Anton, who welcomed me with my first German beer – and so began my immersion into German culture. When we crossed the street from my bus stop to my awesome dorm for the summer, I noticed that everyone waited while the pedestrian crossing signal was red despite the fact that the street was completely deserted. This was the first of many examples of strict obedience of the law in Germany – something new since jaywalking across an empty street is very common here in the US. That evening, determined to beat the jet lag from day one, I joined John and Anton for an excursion to a fair in Oberhausen. John had informed me that the fair was huge (until recently the largest in Europe), but I only understood how massive it was when an hour of walking later, we had only seen a small fraction of the fair! This was quite humbling, especially since I had grown up attending one of the largest fairs in America every year.

On day two, Sunday, we (the Ruhr Fellows) met each other and our fabulous program coordinators Uta Baier and Ann Kathrin Weber. They took us on a tour of Bochum, starting with a traditional German lunch at Alten Brauhaus Rietkötter, a restaurant and brewery dating to the 18th century! The food was delicious and the first of many exquisite meals in Europe. In German restaurants, menus often change with what is in season. Early June was prime time for asparagus and we all ordered dishes with very well prepared and fresh asparagus. Now that I am back in the US, I am making a special effort to check what vegetables are in season whenever I go to a restaurant. After lunch, Uta and Ann Kathrin treated us to a fun bus and boat tour of Bochum. I was shocked by the diversity of scenery in Bochum. Within maybe 3 miles of driving, we passed forest, rolling Alp-like hills, farmland, an abandoned coal mine, riverbed, a sophisticated city center, and the funky architecture of Ruhr University. Incredible! We finally ended the day at an American-themed sports bar called 360 where we watched the USA soccer team defeat Germany on live TV. Our buddies gave us the excuse that Germany was fielding its "B Team" :)



Résumés from Overseas

Notes on the 2013 Ruhr-Fellowship Program

Monday through Friday, the academic part of the Ruhr Fellowship began in earnest. Throughout the week, we took tours of industrial sites, starting with a visit to a ThyssenKrupp steel factory. I am still in awe by what we saw that day. From across a gigantic building, we saw a bucket that could easily swallow my college dorm, pouring red hot molten steel. Even from hundreds of feet away, we felt the immense heat being transferred. Later in the week, we also toured Germany's largest soccer stadium (home to Borussia Dortmund), an Evonik chemical plant, and Siemens turbine manufacturing plant (where I also interned in July). Apart from our excursions, we also became acquainted with Ruhr University, where we learned about the culture and history of the Ruhrgebiet and had our first German language course. On the weekend, the fellows took a joint trip to Köln and Münster. In Köln we saw and climbed up the famed Köln cathedral and visited the Lindt chocolate museum on the Rhine river. In Münster, Germany's biking capital, we rented bikes and visited the city's beautiful palaces, churches, lakes, and tree-lined pathways. Münster actually became my favorite city in Germany and I went there again when my sister visited me.

Throughout June, we attended German language courses for 3 hours a day at Ruhr University. Our wonderful teachers, Beata and Angelica, prepared a general syllabus for us but were very open to input. Often times, we were able to set the agenda based on what vocabulary we felt we needed to know. For example, when a few of us needed to get haircuts, we spent time in class learning how to ask for a cut "in deutschem Stil". By the end of June, we all felt comfortable with basic German: asking for directions, describing our academic backgrounds, ordering food, etc. I think we were all surprised by how difficult German is. There are several grammatical forms and they all have different uses and different endings which can make it difficult to hit the ground running. But on the other hand, the German language follows rules very precisely almost like axioms in math. Moreover, German is a very phonetic language, meaning a word sounds exactly how it is spelled.

My travels throughout Europe began the following weekend and we were given two long weekends for bigger trips. The first long weekend, I travelled to Munich to visit a friend in the Princeton-in-Munich program. I was floored by how beautiful Munich was and didn't expect that anything could top its grandeur. But then the next weekend (another long weekend), I travelled to Barcelona which is now officially my favorite city in Europe. Barcelona's stunning Gaudi architecture, winding old town streets, tasty tapas, and talented street musicians make it a truly unique place. The following weekend, I went to London to watch Wimbledon. As a tennis fanatic, that was really something special. The first weekend of July, my sister visited from the US and we did a tour of Belgium and the Netherlands through Brussels, Amsterdam, Utrecht, and Antwerp. The next weekend, we stayed in Bochum for the Bochum Total music festival and Meeting of the Minds event for American students in the area. And in my final two weekends, I saw Hamburg and Berlin. In Hamburg, I watched Roger Federer play tennis at the German Championships and in Berlin, I learned about the city's fascinating history through many tours and visits of historical sites. My weekend travel was a big part of my time in Europe and I am fortunate to have visited all of these majestic cities.

The rest of June, apart from our German language course, we continued to visit industrial sites and factories. The one that left the biggest impression on me was

our tour of a coal mine almost a mile underground! After descending through the earth through a high speed elevator for what seemed like ages, we reached a huge underground network (I'm tempted to call it a city) of railroads extending miles in all directions. We took a monorail to a coal excavation site and crouched literally centimeters from a machine that loosened tons of coal from deposits. Given the heat, humidity, and tight crawl spaces, it was difficult to visit the coal mine even as a tourist, but it helped me understand the work conditions that miners face. In some sense, the mine was a microcosm for the Ruhr area in general. The coal mine is closing in just a few years (most mines have already closed) and is part of the larger efforts to transition from manual labor-intensive industries to service industries.

In July, we all began our monthlong projects with German multinational companies. I was fortunate to receive an exciting placement with Siemens that fit my academic interests well. At the Siemens factory and office in Mülheim, I undertook a project in the gas turbine engineering division. Specifically, I was involved in modeling turbine emissions and analyzing data to optimize turbine operation and reduce emissions. The experience drew heavily from my computer science (programming) and physics (thermodynamics) background, and I also learned first-

hand about high-tech manufacturing – the factory in Mülheim is a true industrial marvel. While English was usually spoken in official meetings at my workplace, German was used in casual conversation so I continued to improve my German language skills during my internship. In fact, I learned many idioms and slang expressions that I missed out through the formal instruction in June! My internship at Siemens was a great experience, and I am very grateful for the mentorship of my advisor and coworkers who provided me with guidance throughout.

I will miss my time in Germany and Europe but I know that I will apply everything I learned even now that I am back in the US. As I enter my junior year, I feel like I have broadened my perspectives and am ready to think about global issues and challenges. And as an engineer at a university best known for its theoretical emphasis, applying my curriculum in Germany has helped me get a better grasp on how my field of study is used in the real world.

To any prospective Ruhr Fellows, I highly recommend this enriching program to you. And to the wonderful friends I made in Germany, I look forward to visiting you in the near future! Tschüss!

by Cathryn Herbst

Sometime during high school someone asked me if I knew what my last name meant. I had no idea. I knew we had German potato salad at family gatherings and my mom's maiden name, Lager, was a type of beer. Unbeknownst to me at the time, my last name, Herbst, means 'fall' or 'autumn' in German. All I knew of my heritage was that I might have a little German in me – although I was convinced I was Irish with my freckles and red hair. However, after experiencing the country's culture and tracing back my ancestors to 1752, I can confirm that I'm about as German as they come.



I felt right at home with the obvious drive for efficiency ingrained in the German culture. It truly was a summer filled with experiences that most of us will never have the opportunity to participate in again. The experiences that all 14 of us had the opportunity to be a part of will be something that I will always remember. Yet, these aren't what I will remember the most. Instead, the tours, the culture seminars, the German classes, the travelling all created a platform for the relationships that I will have with me for the rest of my life.

I came into the summer looking and craving to make new relationships. Oftentimes at school we are caught up in the next exam, the next meeting, the next assignment, or the next time we can get a full night's sleep. It is easy to forget about building relationships with your peers when there are a hundred other things calling your name on a daily basis. I think building these relationships is the most important part of our college experience, yet never first on my to-do list. Sometimes the priorities just don't align the way they should.

This summer gave 14 American students the opportunity to align our priorities just a little more and add relationship building to our to-do list. That is, if we even had to-do lists throughout the summer.

I recently found again the email that Uta had sent us before we even arrived in Germany with the profiles of the other fellows. I think I glanced at them when she originally sent it and added it to another folder in my inbox not thinking anything of the people that I would meet this summer. I was off to check off the next thing on my to-do list. Then these random people started friending me on Facebook, and we were added to a Ruhr Fellowship group on Facebook. Ann Kathrin started posting something regularly and responding to all of our questions. At the end of the summer I reread the introductions everyone wrote on Facebook, a long way down on the group by now. They all followed the traditional pattern – hometown, school, major, the occasional random hobby. Yet looking back at them, I could see little hints of everyone's personalities starting to show: Nathan's short but sweet descriptions, Anisa's bubbly personality, and Mike already starting to pose some hypothetical situations.

There was always one thing in common though on everyone's posts – food. Although we all come from different backgrounds, we weren't too far off from the typical American college student who is always looking for the next meal. I've always had a passion for food, a tradition passed to me from my mom. She never wanted us to go hungry (I can assure you I never did), and I brought that tradition to Germany through family dinners starting the first few weeks when we had enough beer, sauerkraut, potato, and sausage soup to feed all of us for an entire week. Although we were lacking in bowls and spoons that first time, it was quite the experience scooping soup with mugs and eating with chopsticks. The family traditions continued each week with Zhiyi's fried rice, Pranav's Curry, Annie's carnitas, bacon wrapped pork loin, and American pancakes provided a small taste of the States and our families back home uniting us into the Glücksburger Straße family. Family dinners became the highlight of my week when we all gathered around in one spot and spent the night eating and planning our adventures.

I loved travelling with everyone on these adventures to experience new cities and compare Currywurst from Dortmund or Berlin (Dortmund always won). The first weekend we travelled to Münster with almost all of the group. When you travel with a large group, you quickly realize that everyone isn't going to stay together the whole time nor does everyone want to see the same thing. Everything naturally falls into different groups, and everyone makes their own mark on the city. These natural groups that formed during our travels let us bond with different people each weekend and always kept the days interesting. As someone who normally has everything planned down to the exact minute on my Google Calendar, arriving in Münster and almost every other town without a plan was a little foreign. Where was my map, where was my schedule, what is next? Instead this summer, we showed up to almost every little town each weekend without a plan. Some of the best days were spent wandering the streets of Maastricht, Netherlands eating a torte by the river, getting lost in the twisty streets of Vienna after a run, or walking through the Münster market eating my first Flammkuchen without a desire to know what was next. Travelling with different people in new situations forced you to see how other people reacted to situations, and then allowed you to adjust your reactions accordingly. It wasn't a matter of pleasing everyone at every food stop, at each museum, or during all of the tours. It was finding a balance for everyone to see what they wanted to see which left me with no other option except to enjoy life during anything we did. From the Mohn pastries, freshly baked bread, specialty sausages, equestrian events, bike rides, naps by the river, photo shoots in the picturesque streets, I did nothing but enjoy life all summer and especially during our travels.

Even though I loved these adventures, I always couldn't wait to get back to Glücksburger Straße and see who was making dinner and hanging out in the kitchen. After coming home from working, running, or travelling, I would always peer into the kitchen to see what was happening there and shortly return to join everyone. These are the nights and the times that I will miss the most from my summer in Germany. Sure, we built our relationships when we went 1500 km underground and all had a slight common fear of the unknown down below in the coal mine. We united over our common struggle with the German language, always trying to figure out where the verbs go and what

preposition to use. When 200 tons of molten steel passes ten feet in front of you, you remember who was next to you. Seeing yourself in BILD or after our photo shoots at some of the events, let's you all have a common bond of thinking you are now local celebrities. After spending countless hours on trains, buses, and subways together, you reach a level of understanding with everyone that silence is a comfortable feeling and so is having conversations about anything. These experiences provided the platform for the relationships and the stories shared in the kitchen. Yet, even among these experiences, I got to know people more through finding funny German YouTube videos, laughing at pictures from the day's travels, finding new music, and talking about Mike's hypothetical situations in the kitchen. We thought, we talked, we learned from each other. This is where my craving to build relationships was fulfilled. It was sitting there laughing at our group messages, talking about the world, or smelling what everyone was cooking for dinner that I couldn't wait to be a part of each night. I've always believed that the kitchen is best place to make memories and nothing could have been truer this summer. I learned something different from each one of us that now is more than a memory, but part of life and a new outlook to take back home with me.

Finding and developing these relationships with the rest of the Fellows also spurred me to think about my relationship with myself and what defines me. The combination of the other Fellows with a new culture presented an opportunity to engage in a summer of thinking and self-reflection. Being thrown into another culture forces you to question your own culture instead of the new culture. You think about and question the values that you inherently have just because of how you grew up. Are they the values that you want to continue to

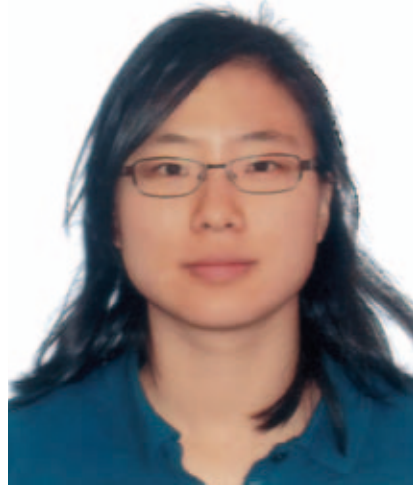
follow? Do you still believe in the same assumptions now that you obviously know that there is a whole different world and as many ways of thinking as people? I've had the fortunate opportunity growing up to travel around the world and experience more in twenty years that some people have the opportunity to experience in a lifetime. Yet, I never reached the level of reflection that I reached this summer. This is why it takes living in another culture, truly immersing yourself in something foreign to learn more about yourself. I think it is vital for every student who has the opportunity to study abroad to take advantage of it. It is something you can't replace with any other experience in life. Out of everything I learned this summer, some of the most important were finding a new level of happiness and questioning the motives behind my actions.

Not only were we able to build our personal relationships, but we have now formed a personal and professional network to take back home with us. This will be an invaluable tool for the future as I realize more and more every day that it is all about the network you form in life and the relationships that you build. My internship at BP expanded my professional network in the Ruhr region, and I was able to see the benefits and challenges of working in a large multinational corporation. This is something that I have learned from and will take with me in my future career.

Although the nights in the kitchen on Glücksburger Straße are now over, the YouTube videos are saved in our favorites, the music is in our playlists, and the pictures are now our backgrounds. There has already been talk of where we should host reunions, what's the best way to stay in touch, and most importantly what should we have on the menu for the next family dinner.

by Carolyn Kim

As a senior headed to graduate school in the fall, I wanted to spend the summer doing something different from theoretical research, which was what I had done before. When I saw that the Ruhr Fellowship provided an opportunity to experience a different culture, learn a new language, and gain industry experience, I knew that I wanted to be a part of the program. Germany in particular was appealing because I could gain a firsthand look at German engineering and because I was drawn to aspects of German culture, such as its emphases on punctuality and on personal privacy.



When I arrived at the airport, I was greeted by my two buddies, who were matched with me by the program because of our shared interests. They helped carry my luggage, guided me to the dorms, and took me shopping for household items. They were both extremely helpful to me throughout my stay, answering any questions I had about the language and taking me to see the areas around Bochum. One of them gave me a script that automatically authenticated me into the university's wireless network, which I used every day because of its convenience. My buddies even invited me to barbecues in their homes, which were great opportunities to experience the culture. The buddy program was a great opportunity for us to get close to the German students, which would have been otherwise difficult.

During the first month of the program, we had German courses almost every day. Two of us had taken considerable German before and were placed in a more advanced class. The rest of us had no German experience, and we started from the beginning. The lessons were quite enjoyable, and I was pleased when I was able to read more signs and communicate better in daily life. The teachers talked to us in German from the first day, even when they knew we would not understand. By the end of the month, I could understand most of what they were saying, an accomplishment that was very exciting for me. Of course, our teachers talked very slowly and used simple words, and I was normally very lucky if I could catch the gist of a German conversation. Nevertheless, the German courses were very beneficial to my stay in Germany.

Actually, learning German was one of my favorite parts of the program. The dictionary that I bought during the first week was the most useful item that I purchased. I had taken language courses in high school, but it was much

more motivating to learn a language when everyone else around me spoke it. Moreover, I found it fascinating that German had so many words in common with English – when I expressed my surprise that my German friend knew the word ‘Anekdote’ he explained that the same word was in German. Interestingly, I could also learn more about English by learning about German and its culture. Not only are some words, such as ‘Gesundheit’ and ‘Kindergarten’ borrowed directly from German, but also some other words have their origins in Germany. The word ‘masterpiece’ or ‘Meisterstück’ in German, was the term for the piece that allowed one to attain the rank of a master, in the European guild system.

We also visited many companies during the first month, mostly in the afternoon after our language courses. These visits were unique opportunities to see how factories manufacture their products, which was unlike anything I had seen before. The enormous container of molten iron at ThyssenKrupp and the machines in the coal mines were impressive sights that I will not soon forget. The only downside to the company visits and university tours was that they made the program very packed, so that the weekends were the only time that we had any free time. Most of us toured other countries and cities during the weekend, which meant that we were tired all the time.

I was excited when I heard I was assigned to intern at Siemens, a company that is well known throughout the world. I was curious to see what assignment they had for me, since I was assigned to the steam turbine engineering department, and I had no knowledge of how steam turbines work. It turned out that my advisor wanted me to write programs for them. I had been afraid that I would not be able to do anything, but it seemed like they actually used the programs in their daily work. Moreover, the internship was beneficial to me as well because it provided programming practice. I even learned some Matlab, which I had never written before. The people at Siemens took every effort to ensure that I was comfortable at work. I found out on the first day of work that German keyboards have a slightly different layout from American keyboards. Some of the keys are switched and other keys are differently shaped. When I was struggling to use their usual keyboard, they found an American one for me so that I could type more easily. Everyone in my group spoke English fluently, and even used English in the first group meeting so that I could follow the conversations. There was another intern who worked in the desk next to me and helped me get used to the work environment. He even let me tag along with him to München and stay with his parents in the area.

Overall, I enjoyed my stay in the Ruhr area as part of the Ruhr Fellowship program. I wish that I could have spent more time in Germany, and in particular I wish that I had more time to learn German. I hope that I will have another opportunity to return to Germany in the future.

by Serena D. Machi

As I reflect on my experience as a Ruhr Fellow, I find myself focusing on the things that I have learned from my time in Germany. Before I left for the fellowship, I decided to start a blog to record my experiences and stay connected with my family and friends back home. From an external point of view, I assumed that I would mostly be writing in an explanatory manner, stating what I had done with the corresponding details. As I began writing my blog posts, however, I found myself writing in a much more descriptive and reflective manner, for the experiences that I had impacted me more significantly and thoughtfully than I expected. And so in my reflection on the Ruhr Fellowship in Bochum, Germany, I will structure my essay around the lessons I have learned and the ways in which this experiences has changed me for the better. These are my most significant takeaways from my time in Germany:

First impressions are important

I've always heard that an essential part to a good interview is to have a firm handshake with the person interviewing you because it leaves a good first impression. A firm handshake is exactly what greeted me upon my arrival, developing into a trend throughout my stay. I was very impressed by the warm welcomes I received everywhere I visited and from everyone I met. When I arrived at Flughafen Düsseldorf, I was expectedly nervous for my upcoming stay. My nerves were soon alleviated by the warm, welcoming smiles from my two buddies, students who attend RUB and served to aid with my living transition. The buddies were excited to see me and made me feel comfortable, an impression that would develop into a trend among the people I met. Throughout the program, all of the buddies were very engaging and invested in making each of the fellows' experience the best it could be. They were extremely essential to making me, and I'm sure the rest of the students, feel engaged and connected in both a social and academic manner.

I felt warmly welcomed everywhere we traveled in the Ruhrgebiet, whether it be from the welcome dinner in Essen to the company visits at Siemens or RAG, just to name a few. At every visit to a company or university, we were greeted with warm smiles and refreshments, only to be further engaged by an intellectual discussion about industry and engineering. I had the privilege to work for BP during my internship, during which time I felt integrated into my team from the first day. Two employees moved to other offices temporarily so that another student and I could work alongside our internship coordinators. The open, uninhibited layout of the office gave me a sense of belonging and genuine importance. Another moment that impressed upon me a sense of comradely occurred when all of the fellows went to a bar in downtown Bochum to watch



the Germany vs. USA men's soccer game. This was the first time that all of the fellows were together, and I remember feeling very engaged in the moment as a group of students from the U.S. watched our respective teams compete in the most widely played sport while drinking our first sips of quality German beer. That sense of belonging developed further among the fellows as our time together progressed, and in retrospect, the connections we fostered gave more value to my stay in Germany.

Efficiency is better

To extend my discussion of first impressions, I was undoubtedly most impressed by the efficiency in the German transportation system. I was amazed at the level of promptness and comprehensiveness in connectivity displayed by the train system. When leaving the airport in Düsseldorf, I had to wait all of five minutes for the next regional DB train to take me to Bochum, where we then transferred to the U35 train close to my dorm. At the time, I was a bit disorientated as to the direction and locations I was going, but I soon became very familiar with the trains. The trains were integral to my travels in Nordrhein-Westfalen and other parts of Germany. They facilitated a means of easy transport, which ultimately translated to a more widespread visitation and greater immersion into the German culture.

Another aspect of efficiency that was impressed upon me was promptness for meetings. I had heard beforehand that the Germans were known for being on time – a good life skill that everyone should have. As American students, I think we put promptness on a lower tier of importance than, say, sleeping an extra hour in the morning. As a group, we sometimes struggled to collectively arrive on time for appointments and meetings. Despite our timely shortcomings, I began to recognize the importance of being on time. In addition to the logistics of arriving on time, promptness shows a deeper level of respect for the person(s) being met. If the person has something of importance to offer, promptness is the most direct way to show respect for their time. In the professional world, timeliness is especially important, something I will always keep in the back of my mind.

Immerse yourself in the culture

Among U.S. students, there is a large popularity to study abroad – to live the European lifestyle so “different” from our culture at home. I also had this desire to see how people in another part of the world live, with the goal to totally immerse myself in the culture. I tried to live by the proverb, “When in Rome, do as the Romans do,” and I think I did just that.

What better way to live like a German than by playing the sport of choice: Fußball. I have played soccer since I was little, but sometimes I struggle to find time during the school year to play regularly. Clara, another student from the University of Pennsylvania, and I decided to join some buddies and their friends in pick-up games throughout the summer. As the only girls, we presented a cultural shock to the boys we were playing with. We learned that girls rarely play soccer in Germany, which we saw in the meters of space we were given every time we touched the ball. Over time the boys became less reticent to passively play with us, and eventually we began to play actively as a team. Our integrati-

on into the team was a microcosm of our integration into Germany – immersing yourself in the culture will help you live by it.

As a group, we immersed ourselves in the culture by traveling to different regions and cities throughout Germany. We compared the Currywurst in Berlin with that in Bochum (after much discussion, Bochum came out on top), we tried the local beer in München and Köln, and we even listened to German music. A group of us went to Bochum Total, a summer festival in Bochum featuring local bands and local food. I truly felt like a German eating my Nackensteak sandwich and listening to music in the city center of Bochum. We also spoke, or at least tried to speak, the German language. After a monthlong German language course at Ruhr-Universität Bochum, we were able to order food and ask where the bathroom was in German. I think the locals appreciated our efforts, and I was proud to say even a small phrase such as, “Ich möchte die Currywurst.” If I hadn’t tried to speak the language and eat the food, then my goal would have just been an empty thought. If you want to get the most out of another culture, then you need to immerse yourself in it, and in this case, do as the Germans do.

Understand cultural differences to better understand yourself

Throughout my stay in Germany, I found myself often being asked about what this or that was like in the U.S. My preconceived notions of Germany were few, but positive – mainly that people were always prompt. My stay in Bochum and my travels throughout Germany have revealed to me a deeper understanding of the cultural differences between my home country and my home for the summer.

One of the first cultural differences I noticed were the rules pertaining to traffic, specifically cross walks and speed limits. When crossing the street, Germans will not walk unless the green walk signal is posted, even in the dead of night when no cars are on the street. Where I go to school in Philadelphia, people cross the street based on whether or not cars are coming, frankly neglecting the crossing signs all together. Another difference is with speed limits – at home, speed limits are posted on every street, but in Germany I rarely saw signs limiting the speed of cars. These two rules seem to contradict one another – the crosswalk signals actively promote safety while the speed limit seems to put more people in danger.

Another difference I noticed was the level on nationalism among the German people. While taking a walking tour of Berlin, our British tour guide recounted a story in which he was in a bar watching a soccer game with some German friends. When the national anthem started to play, he started to sing in an effort to be engaged. He immediately noticed that no one else in the bar was singing, only to learn later that the Germans show little to no nationalism. I realized then that not once had I seen a German flag hanging in a bar or by a house, which you would most definitely see in the U.S. After speaking with many Germans, I learned that they are not proud of their controversial history, manifested in their lack of nationalistic enthusiasm. In the U.S., we sing the national anthem before every major event and are openly proud to be from our country. The importance of understanding history has sunk in since then, for I felt a social sense of just how important it is to understand and learn from the past.

So why do cultural differences matter? In reality, they don’t impact the way I live my life, but they do impact the way I view how other people live their lives. When living in another country, I think it’s essential to understand these differences, for they make you question how you live your own life, and hopefully show you how to change it for the better. The cultural differences I noticed in Germany helped me to understand and respect the values of another culture, an important realization in understanding how people live.

Recognize your own strengths and utilize them

As a student at the University of Pennsylvania studying Chemical and Biomolecular Engineering, I learn a lot of theoretical engineering – how a process works under ideal conditions and how a reaction occurs on a molecular level. The Ruhr Fellowship gave me an opportunity to utilize my skills on a more practical level, from everything to navigating cities to my internship project at BP.

I will focus on my internship at BP because this is where I really got the chance to put my education and thinking ability to good work. My professors often say that we learn to think like an engineer in school, but we really learn to be an engineer in the workplace. With a highly theoretical major such as mine, I often find myself seeking a practical expression of the theory I learn in school. As a member of the Global Fuels Technology sector in Bochum, I worked under the Quality Assurance and Technical Support group to provide a greater insight into the fuel additives used by BP and other competitors. The focus of my project was to develop a fuel additives database in an effort to centralize information essential to refinery production and market strategy. As I began the project, I realized that I had much work ahead of me, extracting and analyzing information from approximately 250 fuel additives’ Material Safety and Product Data Sheets. I approached the project from a problem solving standpoint – I knew I needed to find the necessary information, organize it appropriately, and deduce the rest. In this case, the “answer” I needed was to categorize the active components in the fuel additives. I was happily surprised to be able to utilize my knowledge of organic chemistry and biochemistry to classify components, oftentimes complex and rare, according to their chemical class. In the end, I finished my project early and used my time to further analyze the correlations between fuel additive type and common active components. This internship allowed me to recognize my strengths as an engineer and put them to good work, giving me the practical application of the theoretical knowledge I have acquired in school.

Live spontaneously and laugh freely

I think this section is dedicated to the other fellows and everyone else I met along the way, because the connections and relationships I formed are really what made this experience valuable. I would describe myself as a “Type A” personality – organized, planned, and always thinking about the next step. While at times this is very useful, for instance planning trips, I find that sometimes not having a plan and just enjoying the present can also be really vital. The other Ruhr fellows helped me to see the importance of being carefree, because the good times are the memories that we will cherish most. Our group was lucky enough to make strong connections from the start, which translated into communal dinners and travels.

We started the tradition of family dinners during the first week in June, in which one or two people would cook dinner for the group. As a kind of “Stammtisch” of our own, the family dinners brought us closer together and allowed us to learn more about one another. When we first introduced ourselves via Facebook, it seemed that we all had wishes to travel among Germany and the rest of Europe. And so at the first family dinner, everyone wrote down places they wanted to visit and when. It turned out that (almost) every weekend, a different group of people traveled to different cities together, experiencing a culture unique to the city. Even when traveling together, each person had their own style when exploring a new city. I found some people to be wanderers – walking until they find something interesting and becoming immersed in that. Others, like me, were planners – having a predetermined list of sites to see and things to do. The differences in our traveling styles showed me that sometimes it’s ok, actually better, to have an open plan. Sometimes it’s good to happen upon events because we were just wandering around the city; for example the farmers market in Münster or the street fair along the river in Köln. The ability to have shared experiences in new places is something I value, and I learned to be a little more spontaneous along the way.

Imagination is more important than knowledge

Yes, I am quoting the great Albert Einstein above, for while he explained many unknown theoretical concepts, he also provided good insight into the practical side of academic life. As a group of students from elite universities, I think I speak for the group when I say we are constantly seeking mental stimulation and acquiring as much knowledge as possible. But I think the simple fact is, it is impossible to know everything, and it may be better that we don’t, because

it leaves room for imagination. This became evident to me as we visited the companies belonging to the Initiativkreis Ruhr, toured the universities in the ConRuhr, and talked with the German buddies about their academic studies.

The Ruhrgebiet is a historically industrial region of Germany known for coal mining and is thriving today due to the focus on innovation and technology. When we visited the companies, we saw how vital engineering was to the products and how new technologies could change the world. For instance, one of the tours I enjoyed the most was at Siemens, where we saw firsthand how turbines were manufactured. Even though I am not a mechanical engineer, I saw how innovative products from a company such as Siemens could impact renewable energy, something that I am interested in as a chemical engineer. Innovations in water turbines could make renewable energy via tidal and wave power more feasible, ultimately lessening society’s dependence on non-renewable energy sources. When we toured the labs at RUB, TU Dortmund, and Duisburg-Essen, I was able to see how imagination fuels the desire for new discoveries.

I decided to put this lesson last because I think it encompasses an overarching value that we, as young professionals, need to understand the importance of. As much knowledge as we acquire in school or through our own devices, it is not meaningful if we don’t put it to good use. As engineers we have the means to change society on a global scale through innovation, and my time as Ruhr Fellow in Germany has reminded me of the promising future of the region and the importance of innovation. My summer in Germany has truly been a worthwhile and valuable experience – I immersed myself in a different culture and grew as a person, and these lessons are something that I will carry with me for the rest of my life.

by Clara Midgley

When people ask me what I did in Germany, I list that I: lived at a dorm, took a German language course at a German university, participated in cultural seminars and lab tours at several German universities, toured leading engineering companies and production plants, traveled, befriended German students, lived with a host family, and interned in a lab at an engineering company. With all of these experiences crammed into two months, normally one would feel that they didn't have the opportunity to really experience any of them, but I feel the opposite. The Ruhr Fellowship Program offered a full schedule of unique experiences and made a huge effort to connect you with as many people as possible.



I was looking for a study abroad experience, one that would push me to step outside my comfort zone. I took this challenge by choosing a program in a country that doesn't speak English. I would not call learning foreign languages my forte, but I always have wished it were. I believe that if you want to experience the culture of a new place, you must at least try to speak their language, and this is why I was so glad that the program started with a Deutschkurs. We learned how to order food, ask for directions, and talk about travel. I had never studied German before, and one month of classes by no means made me fluent, but it made a huge difference making me feel less like a tourist. To my surprise, by the end of the program my comprehension of conversations was not bad, at least in understanding the theme. While I enjoyed learning some German, and embarrassing myself by ordering ice cream in a table, I immensely appreciated most German's fluency in English and their eagerness to improve their English. This allowed me to befriend many German students, enjoy living with my host family, and get the most out of my internship.

The buddy component of the program was one of the most effective parts in helping us connect with the university and normal life in Germany. Because each of the fourteen of us in the program had two buddies, we had many different opportunities to befriend students at the university. We went to the University of Bochum Mechanical Engineering BBQ with some mechanical engineering buddies, I played soccer with a buddy and his friends a few times, one of the buddies was an excellent tour guide to Münster for a day trip, I went to one of my buddy's family BBQs, went on a trip to München with my other buddy, and simply hung out for dinner and drinks in Bochum. It was very helpful to have friends from the area for tips about travel and translation help, but also it was interesting to compare cultures and school systems with someone from Germany. I am very happy to have made so many friends that I hope to keep in touch with for a long time.

I learned a lot about the differences in university systems in German and the US – from the bachelors/masters degree, to the exams period during semester breaks, to the final exam's weight in the course grade, to the dorm/home life. I also learned, through the lab tours we took, how industry focused the university labs are. The labs generally have incredible equipment and scale as they are doing researching or testing for a company with industry funding. From my buddy who was finishing his bachelor's thesis and from meeting students at my internship company during my internship, I learned about how students can write their bachelors/masters thesis for a company, and often later work for that company. This program was different than seeing these differences by being a regular student at the University, but the connections we were given to students there allowed us to learn about the structure and if we may want to come back and study for our masters or something!

The company tours that we went on throughout the first month of the program were unique experiences, and as a mechanical engineer I found them really interesting. The tour into the coal mine was by far the most exceptional. Not necessarily because coal mining is a field I want to pursue, but because I never thought it was possible to actually go into a coal mine, never the less tour one that is 1200 meters underground. We learned about the coal industry's history in the Ruhr area, and in school we learn about the methods of coal mining and the unglamorous conditions, but to see a modern coal mine from underground was something that I will never forget. The tours to Siemens machine shop of turbines and ThyssenKrupp's steel manufacturing blast furnaces and facilities were incredibly interesting, impressive, and the scales were unmatched. The tour of Evonik was less interesting to me but the chemical engineers were happy to move to the front of the tour, as much of the lab and company tours had been mechanically heavy.

The last company I visited was for a full month internship at Vaillant. I was working with a pre-development team in the Center of Competence. Vaillant may be a German company, but its international business uses English as their official language. The team spoke very good English, and I even got to accompany one of my coworkers to his English class that is offered by the company (and I even got some questions wrong on the worksheets... I guess that's why I am an engineer not an English major). I was working with the wall hung gas boilers for central heating and domestic hot water, and to my surprise was working in the lab! When I heard this on my company visit before my internship I was so nervous since I have not done any lab work before and my advisor described his job in very technical terms. Despite being intimidated, the team was very friendly and always happy to explain things and answer questions. With some explanation I caught on quickly and learned a ton about heat engines, hydraulics, and the difficulties and procedures of working in a development lab. My colleagues even invited me to play indoor soccer with them where I taught some Germans that women can play soccer too.

Unlike the majority of the program participants, my internship was in Remscheid, and therefore about a three hour commute by train from the dorms in Bochum because it involved three trains that each had about a half hour wait

between the times that the ran. This meant that I was paired with a host family during the internship phase of the program. The family lives in Lüdenscheid, a small city in a hilly farmland region at the very end of a train line. The location was inconvenient to say the least, but the host family was incredibly welcoming, sweet, and it was great to have a home stay experience abroad. They helped me improve my German, and I their English. I took a day trip with my host parents to see the Deutsches Eck and fortress in Koblenz and an old historical German town on the way. They thought it was funny how amazed I was at the castles we passed on the way, just causally chilling along the river. I tried to explain that that is not normal as they were unfazed when passing them. My host sister was in 11th grade and spoke very good English and I spent time with her exploring the town and baking. Home cooked family dinners were amazing, and the time when I got to hang out with the family. The last night I taught them how to play the card game Spades, it was fun and I only wish I taught them earlier. I got to know the dad the best because he also worked at Vaillant, but in the purchasing department. Lüdenscheid is about at 50 min drive from Remscheid, so we had a long commute every morning and evening. Sometimes we would practice my German in the car rides and by the end I could tell him my weekend plans in German.

These weekend plans consisted of a lot of traveling! When you can hop on a train and be in Hamburg in 3 hours, Berlin in 5 hours, München in 5 hours, Amsterdam in 2 hours, and Paris in 3.5 hours, why not go to each one for a

weekend? I mostly traveled with other Americans from the program, but also with some people from the university (both buddies and other students I met). Compared to the US when traveling to another major city is normally a big ordeal of a plane ride, going to these famous cities in Europe with an easy train ride is astounding. The Sandeman's New Europe free walking tour was a great way to see the major sites with a historical explanation. So I would suggest harnessing your inner stereotypical tourist and going on the tours – especially in Berlin. One tip for traveling over the weekend; don't spend more time on the train than in the city. There are so many cool places to see within 5 hours, not to mention simply in the Ruhrgebiet. Make sure to take some weekends to explore the closer less famous cities or just hang out around the university or nearby with some German friends. I took some weekends to do so and ended up meeting my buddy's family, having BBQs, and exploring smaller cities in the area.

My advise for anyone going would be to attempt to learn German no matter how many ridiculous things you say in the process, to make a big effort to get to know students at the university and invite them on trips or BBQs or for group dinners, to speak up at your internship and not be afraid to ask questions, and to take pictures of the little every day things, not just the famous buildings. I had an amazing summer in the Ruhrgebiet, and I would say that the Initiativkreis Ruhr completed their goal of spreading a positive image of the area that expands vastly beyond its coal mining history.

by Annie Mroz

My first day in Bochum, my buddies greeted me with hugs and smiles. One invited me to a party that very night. The other took me for a ride on his motorbike the next day. Both were always willing to lend a hand and even helped another fellow after a traumatic bee sting. In fact, all of the buddies were very kind, helpful and welcoming. It was great to have instant friends in the area to get insider information and translation services. Both of my buddies will be lifelong friends, and I know our paths will cross again.



Everything about the program was spectacularly organized, a true model of German efficiency. Uta and Ann Kathryn had everything planned out to a 'T'. Even before we arrived, Uta armed us with all the information about our trip that we could possibly need. Both Uta and Ann Kathryn were always extremely friendly, accessible, and helpful.

The month of June was a blur of site visits, German courses, new friends, and university seminars. I think the month was crammed with as many activities as humanly possible. While slightly exhausting, it was also fun and interesting. The site visits gave us a fascinating insight into the inner workings of some big industries. Especially cool from an engineering perspective were the visits to ThyssenKrupp where we got to see a giant vat of steel being poured into a blast furnace and Siemens where we saw the construction of massive steam turbines. As a mechanical engineer, it was fun to explain the different parts of the turbines to the other fellows. I also really enjoyed the visit to the BILD offices where we had a discussion about the present state of media in Germany. As a news and pop culture junkie, it was fascinating to see a newsroom firsthand.

The month of June was also when I had the opportunity to do the most travelling. Armed with a German rail pass, I visited Munich, Prague, Berlin, and Hamburg over four weekends. Of those four, Munich was probably my favorite. It was also great to be able to explore North Rhine-Westphalia with the student travel card. I saw all the major cities in the state: Essen, Düsseldorf, Köln, Bonn, and Münster. I really liked the fact that the program afforded us the flexibility and time to travel on weekends.

I had no idea what to expect when I found out I was working at a coal company. I'm interested in renewable energy and energy efficiency so I was a bit confused as to why I was working there. I soon found out that the RAG does more than coal mining, and because the subsidies for coal are ending in 2018, they have much more work to do than just mining coal.

The RAG is a very traditional company, for example, the men always hold the doors open for the women, which is a bit shocking for a young American like

myself. Working there gave me great insight into the importance of mining in the region. During my internship, I got to visit many "Bergwerks," at least eight by my count: Ost, West, August Victoria, Zollverein, Prosper Haniel, Fürst Leopold, E-Wald, and Heinrich. Some, such as Auguste Victoria and Prosper are still active for the time being. Some, such as Bergwerk Ost and West were just recently closed, and others have already been transformed into museums, parks, and other developments such as Zollverein, E-wald, and Fürst Leopold.

Not only did I get the opportunity to go "untertage" (underground) with my fellow interns at Prosper Haniel, I also got to suit up and go again during my internship. During the last week I went to Schacht Heinrich in Essen to see the mine water pumps. I even got to go to the top of the symbol of the Ruhrgebiet: a Förderturm, and I finally found out the name of said symbol: in German: Förderturm, and in English: Head Frame (though I think most of us just think of it as that triangular German Mine structure)

Presently, the region is at a crossroads. Many industries have left or are leaving, such as mining. However, the region is adapting to this changing landscape. Instead of plans for mines, the RAG is writing plans for renewable energy projects on top of old mine sites, putting solar panels and wind turbines on "Halden" and developing other projects such as underground pumped hydro storage.

Also during my time at the RAG, I had the opportunity to go to the grand opening of the "Zukunftshaus" in Bottrop, an Innovation City project (also, incidentally sponsored by the Initiativkreis). The "Zukunftshaus" was a normal house in Bottrop that was renovated to be energy efficient. It is now even more efficient than a Passivhaus. It's an "Energie-plus" house meaning that it creates more energy than it consumes.

My internship was great in that it gave me an opportunity to do and see many things that I wouldn't have done otherwise. I really enjoyed learning about the renewable energy projects, seeing the Zukunft Haus and witnessing how the coal industry is changing in Germany. However, I was never assigned a project at RAG so I did not gain much in terms of work experience, which I would have liked.

One of the best things about doing the Ruhr-Fellowship are the new friendships I formed. Because we lived together and spent a lot of time together, especially in June, we rapidly formed a close bond. Some of my favorite memories of this summer are hanging out with the other fellows sharing beers, telling jokes and experiencing German culture.

One thing that could be improved upon in the program is the German language course. I did not learn as much German as I probably could have in the four weeks of the course. It would have been better for me to have had a more individualized language course rather than sitting in on an A2 class. Even so, I still learned a lot of German during my time in the Ruhrgebiet. Real world practice is always better than the classroom. I spoke German every chance I got (or in some cases when I had no choice because the other speaker did not speak English). Buying things at the grocery store, chatting with people at parties, working at RAG and even meeting my relatives all pushed me to practice my German. As such, after this summer, my German has definitely improved, and I plan to continue my language studies during my last two semesters at University.

Overall, the Ruhr fellowship was a highly enjoyable experience. The new friends, language skills, and cultural experiences I gained will be with me forever. I really cannot emphasize enough what a great job Uta and Ann Kathryn did and would like to acknowledge their hard work in preparing and running the program. In addition, I would like to thank the Initiativkreis for giving me this opportunity.

by Kyle Rawding

I just wanted to begin by thanking all those involved in the planning and execution of the Ruhr Fellowship for creating and continuing a fantastic program; I was shocked to learn that this was only its second year in existence because of how flawlessly the entire process went.

I thought I'd briefly give my impressions first of the first month (seminars, field trips, and language classes), then the second month (internship), then the living situation, then the buddies, and finally on the weekends (travel).

The first month of the program was a great introduction not only to Germany, but to the university, the surrounding region, the German language, and the other Ruhr Fellows. I really enjoyed the language classes, and felt that even with almost no studying outside of class, I picked up a good amount of German (at least enough to never feel out of control when traveling or working my internship). If anything, it would be nice to have the classes continue through the second month (maybe 4 days of internship, 1 day of class per week?) because once I got to my job and was constantly surrounded by the sound of German on a daily basis, I constantly had the sense that I was only a few words away from understanding the conversations going on around me. I also really enjoyed all of the cultural seminars, particularly the history and current events seminars. I got the sense that some seminars appealed more to some students than others, so perhaps in the future it would be nice to have a list of seminar options students could sign up for so that every speaker would be guaranteed an attentive and passionate audience, and students who wanted to attend more seminars would have the option.

I also enjoyed touring the engineering departments at all 3 campuses and all of the companies. I found the tours of facilities to be more interesting and memorable than the presentations or classroom workshops, although I realize that every department/company wants to give their spiel first. Among the company tours, I found Evonik's to be the least interesting, just because we never left the bus, but I'm speaking relative to the other companies because in truth I found them all fascinating. The ThyssenKrupp visit actually helped prepare me for my internship at SMS Siemag because SMS helps design steel factories like those of ThyssenKrupp, so I had a practical idea of what the process involved. The Siemens tour also really appealed to me as a mechanical engineer because of the sheer size and complexity of the machines they produce. Among the campus visits, I found RUB's wind tunnel and electric car facilities, UDE's nanotechnology facilities, and TU Dortmund's biotech and metal-bending facilities to be the most interesting.

During the second month we all went our separate ways to begin our internships. From talking to the other students, it seems to me that different internships appealed to different people, and that some students were happier than others with the experience. I personally found my internship to be very interesting and fruitful, but found that the overly long commute somewhat detracted from my enjoyment of



the experience as a whole. I worked for SMS Siemag in Düsseldorf, specifically in the Electronics and Automation department which was responsible for creating computer programs to automate, monitor, and simplify the steel-making process. I had a great relationship with my advisor and coworkers, eating lunch with them every day and spending several evenings with them enjoying carnivals or restaurants around Düsseldorf. The projects that I was assigned were specifically chosen to help me build useful skills (including learning several programming languages and learning how to build guided user interfaces), but were not simply abstract teaching exercises – over the course of the month, my work was incorporated into corporate brochures and presentations presented to customers and company management, R&D for future projects, and into the actual software package that SMS Siemag is developing. At the end of the month, my advisor strongly encouraged me to apply for graduate school in Germany, or even to apply for jobs at SMS Siemag after school, and promised to provide any necessary recommendations or guidance. As wonderful of an experience all of this was, the commute to Düsseldorf was at a minimum 1.5 hours each way, resulting in 3-5 hours of each working day being spent on buses, trains, trams, and walking. That process was really tiring on a daily basis, and I wasn't sorry to commute for the last time. In the end though, I would still recommend SMS Siemag for future internships, especially during Duisburg/Essen years. At the very least, I read more books in that month than in the past few years combined.

All in all, the living situation was fairly ideal. There were minor gripes to be had about the dorms themselves (lack of community spaces, esoteric plumbing fixtures and door locks and laundry system, intermittent internet/outlets) but I think these issues could be easily solved by a simple how-to manual or tour of the building (for example – how to add money to your student ID card and then operate the laundry machines). Also, one student in our group ended up buying and installing a wireless router, and that made internet SO MUCH EASIER; it might be nice for the program to just provide one. It also allowed us all to use the kitchen as a community space because then we could all be on our computers there instead of shut away in our separate rooms. We managed to find dependable routes of public transportation everywhere we needed to go (the 346 stop on Markstrasse to RUB, and either the 349 stop further down Glücksbürger Straße or the CE31 stop on Königsallee to Bochum HBF, or the U-Bahn stop at Markstraße) after a little exploration.

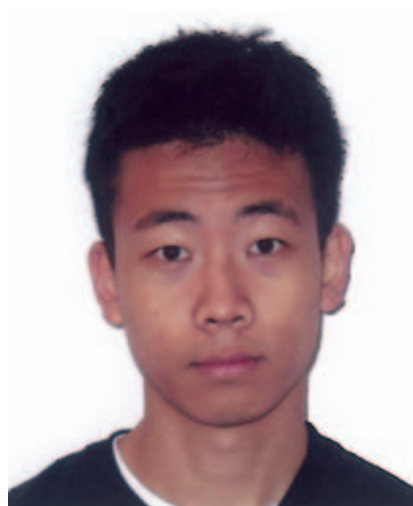
In all honesty, the buddies are one of the biggest assets of this program – if used effectively. What I mean by that is that although both of my buddies were fairly busy and I didn't end up getting to spend as much time with them as I'd hoped, among the American students we shared our buddies pretty freely, so that meant that there were 30 German students available to us for guidance, hanging out, sightseeing, and invitations to barbecues, campus events, etc. In addition, through the buddies we met many roommates, friends, etc who ended up being just as close to us as the buddies. As such, I'd suggest that future students share their buddies similarly, and that the buddies be invited to as many events as possible because most seemed genuinely interested in making our stay as enjoyable as possible and were always looking for opportunities to hang out. Other American friends I know who were in Germany this summer under different programs were incredibly jealous of the immediate network of local friends available to us upon arrival.

The opportunity to travel on the weekends was one of my favorite parts of the program. In the two months, I visited Berlin, Köln, München, Potsdam, Prague, Brühl, Maastricht, Bonn, Lüdinghausen (in the Münsterland), Aachen and Amsterdam. It helped to form and cement friendships, and I'm glad to say that everyone in the group was both friendly and independent, so whenever I was planning a weekend trip, I could just ask around the kitchen "Who wants to go to Berlin this weekend?" and I would be happy to travel with whoever else wanted to go – there were no worries about "Oh, I don't want to travel with that person."

Thanks again for a fantastic summer; it was better than I ever would've imagined and I'm sure the memories and friends I made this summer will stick with me for a very long time.

by Michael C. Sha

The Ruhr Fellowship was a great way for me to learn a new culture and develop a new professional network. I want to highlight some of the critical parts of the culture in the Ruhr Area and Germany in general, followed by my experiences in the internship. In the Ruhr Area, we were given metro passes to visit any city in the NRW. I often visited, Dortmund, Essen, Düsseldorf, Köln, Aachen, and of course, Bochum, where I lived. My time in Bochum was spent at Ruhr Universität, where I took a one month Deutschkurs. The language was new and interesting for me because I had never been submerged in such a language before. The Ruhr Area proved to me that an area can grow from an area of coal mining to an area for services. During the internship with Deutsche Bank, I was able to experience culture in a professional work setting. The more significant aspect of the internship with Deutsche Bank was the cultural impact of working in Germany. I was placed in a rotational internship, where I would rotate from DB Corporate Finance to DB Sales and Markets. From day one, the language barriers, behavior barriers, and other cultural differences were immediately noticeable. The best part of working in corporate finance was the exposure to senior bankers who have been working in the industry for years. The culture within the MidCap Department was very client driven, where the relationship was the most important. The relationship managers are consistently on the phone speaking with clients. Luckily for me, most German bankers spoke English fluently and had no trouble with the language so communication was not as much of a problem. However, clients often only spoke German so my client exposure was limited. The work that I had to complete sometimes such as company analysis were often in German but occasionally in English so that I was able to understand. I was also able to work in the Düsseldorf office, which was a little bit larger and busier. In Essen, the office has a sense of calmness. Some clients were large, international companies who had established procedures and protocols. The relationship managers were very client focused and always thinking of new ways to provide solutions to their clients. The sales and markets team was the most hectic atmosphere of all the teams I worked with. Sales managers are constantly on the phone, checking rates on their computers, and asking questions to their colleagues. The culture was client focused, quantitative, and fast-paced. The working hours followed the market hours.



My internship was divided into: MidCap Department, Credit Risk Management, Structured Finance, Trade Finance, and Corporate Treasury Sales. German Mid-Cap Coverage, within CB&S/Corporate Finance, covers companies with turnover from 25mn up to the multi-billion stock listed companies. Employees in MidCap Coverage are multi-product generalists and the relationship manager between the client and the product experts. From the MidCap team, I learned about general understandings of business models. Performing tasks such as SWOT analysis, industry analysis, and powerpoint presentations gave me knowledge on the soft skills that are necessary in the banking industry. Credit Risk Management (CRM) provides a second check in credit decisions that relationship managers must make. Employees in CRM cover credit exposure and risk in their respective departments (ie: MidCap, Emerging Markets, Hedge Funds). Primary tasks include calculating the credit score of companies and the probability of default (PD). The more mathematical background exposure in CRM allowed me to understand which ratios and measures in a financial statement point to good health of a company. The analysis of financial statements, credit analysis, and investing mindset gave me skills that I can apply to any quantitative role in banking. Structured Finance teams, separated by MidCap/LargeCap, are responsible for providing financing solutions for clients. Complex financing solutions can include bilateral loans, syndicate loans, revolving loans, term loans. Working in the Structured Finance team allowed me to be familiar in the origination, advisory, and execution of individually structured debt. I gained knowledge in the vast world of fixed-income, one of the many possibilities in banking. GTB-Trade Finance supports client's international foreign trade activities. Responsibilities include managing guarantees, letters of credit, and bills of lading. In Trade Finance, I became more familiar in financial supply chain solutions and transaction based finance. Corporate Treasury Sales, within CB&S/Global Capital Markets, advise companies on risks in FX, interest rates, commodities, and credit. Sales Managers sell solutions and products ranging from forwards and futures to option derivatives. The teams utilize the Autobahn Trading Platform. Working in CTS showed me the world of sales and markets, another large and important part of Deutsche Bank. This experience allowed me to get a clear idea of working on a sales team, selling financial products like derivatives. I enjoyed the quantitative aspects of working in CTS.

The overall experience with the Ruhr Fellowship was amazing and I would recommend this program to any who are interested. I intend to visit Germany again to continue to learn about the people, the history, and the culture. I am happy to serve as an ambassador for the Ruhr Fellowship. The summer has been fantastic and I would like to thank everyone who was involved with the program to make it such a success.

by Melody Tan

I think it is safe to say that this summer has been a more than worthwhile experience for me. It was not just a summer of regimented learning and working as I had initially imagined, but was also filled with adventure, excitement, and the unexpected. If I had a choice to do this summer over again, I would.

The learning experience of this summer was composed of three main elements: German classes, company/university tours/seminars, and an internship. No, I can't say that I am now fluent in German, but for the one short month that we had, I think I can say that I learned quite a lot – from the basics, such as colors, question words, and days of the week, to a bit more complicated topics including giving/asking for directions, ordering food in a restaurant, and talking about our hobbies. German classes allowed us to have a good, solid basis for a sort of general comprehension of our surroundings whether it was reading street signs or trying to understand what the cashier is saying to you.

The German classes for the first month were complemented by company/university visits and afternoon seminars. These were great opportunities to not only learn more about German culture, but also about different engineering disciplines. The most memorable of all the visits was our trip to one of the Ruhr area's last working coal mines. We had the unbelievable opportunity to actually go down into the depths of the mine and see the coal mining process. We received the all-inclusive mining experience. Before we went down, we suited up from head to toe in the miner uniforms (underwear included). For the first leg of our journey, we took a sort of terrifying elevator ride down to a certain depth. Then we hiked for what felt like forever deeper and deeper into the earth as we felt the temperature slowly rise. By the time we reached where the coal miners were working, I was sweating bullets. The grime and the sweat really did not bother me though, considering the fact that it was such an awe-inspiring, once in a lifetime experience. I even got some coal as a souvenir.

For the second month of the fellowship, each fellow split off to intern at their respective companies. I had the wonderful opportunity to work at HOCHTIEF, Germany's largest construction company, operating at an international level. I was more than thrilled to learn that I would be interning there this summer, considering my Civil Engineering background. As part of the Tunneling division of the company, I had the chance to learn all about Tunnel Boring Machines and the construction of tunnels/railways, a topic I had no experience in and had never had the chance to learn about during my four years as an undergradua-



te. Though the internship was only for a month, I had the opportunity to learn about all the work put into contract bids and new tunneling technology. In addition to tunneling, I also learned a lot about offshore foundations for new wind turbines and had the chance to visit several construction sites to see surveying at work. Surveying had also never been a topic I had known much about, so it was another fresh topic I was able to gain more knowledge in this summer.

Another portion of the fellowship involved pairing each fellow with a German "buddy". These buddies were students from the Ruhr University-Bochum who were matched with us to help us out and show us around if we needed. Our buddies, however, became more than just our tour guides and the people who picked us up from the airport, they quickly became our friends. A lot of times, one of the most important aspects of an experience is who you share it with. Our buddies, as well as my other fellow Ruhr fellows were what made this summer experience worthwhile and unforgettable for me. The eclectic mix of students provided a wide range of perspectives and cultures, interesting conversations and travelling buddies. I learned a lot about the different schools we attended, the differences between the German and American academic systems and culture that you can only learn from interacting with the German students.

In addition to all the other wonderful aspects of the program, one of the perks of being located in the Ruhr area on the western edge of Germany is the proximity to other countries such as Belgium, the Netherlands, France, England, and so on. During this summer, I got the chance to go to England and the Netherlands for the first time. Travelling around Europe, as I have learned this summer, is actually a fairly easy thing to do with the amazing spread of train systems that can really take you anywhere. I also learned about the intra-Europe airlines that also provided a fairly cheap and quick way to hop between European countries. Compared to the European train and airline systems, travelling within the US seems like such a hassle. Although I would have liked to have travelled more around Europe during this summer, I am certain that I will be returning to Europe in the near future to hit all the places I have missed.

One final note I would like to add about my experience this summer would be one of the most amazing aspects of traveling to a foreign country – the food. I cannot count how many times I ate Currywurst over there, but let me tell you, I did not get tired of it. If you ever go to Germany, the basic must-haves food-wise would probably be Currywurst, Berliners, and basically every other kind of wurst you see. Oh, and the soft pretzels from Ditsch are amazing. In England, you have got to try the fish and chips, and in the Netherlands the raw herring is pretty great. Even going into a supermarket in Germany was a fun little experience because a lot of times I did not know what I was buying, but the mystery is part of the travelling fun and adventure, right?

All in all, this summer has been absolutely amazing and definitely an experience I will never forget. The people, the sights, and the learning experiences have made this one of my most memorable and worthwhile summers yet.

by Nathan Tyrell

The two months I spent in the Ruhrgebiet were probably the two quickest months of my life. That the time seemed to pass so quickly is testament both to my busy schedule as a Ruhr Fellow, as well as to the novelty of the experience; spending each day discovering something new about myself, about the world, about my friends, left me excited each night to plan my next and newest adventure. With such eager interest vested in the morrow, my time could not help but to fly.

Before I get into my story, I would like to express my thanks to Uta Baier, Ann Kathrin Weber, Marcel Rosefort, Hubert Koch, Thien Dang, Jakob Stinner, Burak Adar, and everyone else who helped me during my German adventure. I would like to thank every one of the Ruhr Fellows for being wonderful companions and good friends.

That said, I really had no idea what to expect when I signed up for this; I didn't speak a word of German. All I knew was that the Ruhr Fellowship Program, as advertised by the Keller Center at Princeton University, seemed a promising alternative to study abroad, from which my complicated academic schedule precluded participation. Besides, I had heard of Düsseldorf before – I loved photographers like Gursky and the Bechers, who I knew had come out of that foreign-sounding place – and I had been searching for a good way to get photographic funding from the university for a summer project (I study photography as well as mechanical and aerospace engineering). I wrote my Fellowship application and my funding proposal – with the Becher's industrial typologies swimming through my head – and I happily envisioned some sort of grand photographic documentation of my journey through the engineering and industry of Germany.

My acceptance letter came, complete with a tiny book of German recipes, and I remembered that Europe does not use the same paper sizes as the United States. I committed to the program anyways, signed a bunch of forms, got some Polaroid passport photos taken on a rainy day, and mailed/mailed all that stuff back to Bochum. An email came a few weeks later telling me that I would be working in July for Trimet Aluminium AG in Essen. That didn't mean much to me at the time, but, upon Googling the company and finding out that they produce, among many other things, cast aluminum engine blocks, I was optimistic about my German job.

I spent the rest of the springtime scrambling around, trying to get my things in order; I was happy and thankful to receive a photography grant; I only met my fellow Princetonian Ruhr Fellows once, at a quick lunch, but they seemed like very nice people, even though Melody was late; I even talked to John and Burak, two of our German “Buddies” (paired up with us through the program), on



Facebook, and I was surprised by how open they were to conversation, and by how excited they were to meet me. I was also excited about the prospects of a German summer, but a bit apprehensive as well – Would it be hard to make friends with Germans? Would I like the other students in the program? Would they like me? Adding to my worries, my debit card was stolen just before I left. I canceled it, and I got on an Amtrak train in Boston with my backpack, a really heavy bag without wheels, 30 rolls of medium format film, and only a few hundred bucks in my pocket.

But my journey waxed fortuitous when, at Newark Liberty International Airport, Lufthansa bumped me up to a direct, business-class flight to Düsseldorf. I guess they had overbooked my original flight to Frankfurt and only business-class seats were available on the Düsseldorf flight. Buoyed by the free champagne before takeoff, the faux three-course meal which still tasted pretty terrible, the embedded back massager in my reclining chair, and an imposing Lufthansa employee who shook my hand, introduced himself, and then hastily retreated when he realized that I was not related to the important-looking businessman seated next to me, I didn't sleep much on the seven hour flight.

My first glimpse of Germany was of the airport runway sometime before 6am, appearing at the last possible moment out of a thick cloud layer. I deplaned in a haze of adrenaline, grabbed my checked bag, and converted all my cash into euros. I found Uta Baier, the program coordinator from RUB, waiting for me in the airport hallway. Mike and Katie (fellow Fellows), unbeknownst to me, had also been on the flight, and they quickly met up with us as well. I was soon embarking on the first of countless Deutsche Bahn train rides, headed towards Bochum.

Like everything else on this journey, my adjustment to life in Bochum seemed quick; I was never even jet-lagged. I met my Buddies, Jakob and Burak, at the train station, and we moved my things into the dorm at Glücksbürger Straße. I was rapidly acquainted with the extensive public transportation system of the Ruhr (the VRR) as I shuttled back and forth between our dorm and downtown Bochum, to eat food and buy supplies. I ate breakfast at a Turkish place with Burak and Jakob. I was surprised by how much cheaper cell phone service is in Germany; I noted that the Ruhr, unlike New England, has almost no wooden houses. I met Ann Kathrin (a student program coordinator from RUB), along with most of my the other Ruhr Fellows, standing in a circle outside a Saturn electronics store. I got lost for the first time, when I accidentally took the bus one stop past Markstrasse. I was struck by how independent I felt, almost immediately.

We plunged into a hectic but fascinating schedule. I was treated to my first German meal at a restaurant. I had my very first Currywurst mit Pommes, on my first evening in Bochum, when I met up with a good friend from Princeton who happened to be birdwatching in Duisburg for senior thesis research. Deutschkurs started on the first Monday, just two days after arrival, and I did my best to learn what I could of a language with so many rules and genders.

Special events, tours, and lectures planned for our program began almost immediately. As a group, we met Mr. Nissen, the head of the Initiativkreis Ruhr

(a consortium of German corporations, allied with RUB, TU Dortmund, and Duisburg-Essen University, that sponsors the Ruhr-Fellowship Program), and he gave us cake (cake is a German cultural institution!), coffee, and a presentation about the Ruhr. We toured a blast furnace at ThyssenKrupp (I felt like I was in a science fiction movie); we toured the Siemens steam turbine manufacturing plant in Mülheim (the lathes and milling machines were so big I felt as if I were an insect); we even eventually got to descend one mile underground, into one of the two remaining coal mines in the Ruhrgebiet (an almost indescribably unique experience). I saw cooling towers and mining towers that I recognized from photographs.

The three universities of the ConRuhr provided us with lectures and engineering department tours; hailing from a predominantly liberal-artsy American university, I was amazed by the scale of the German engineering departments. Their labs looked to me like factories, and they seemed to operate like factories as well; the intimate ties between engineering industry and engineering academics was not something I was completely used to, coming from sheltered and theoretical Princeton University. The hospitality of everyone I met at schools and at businesses was incredible; I ate an ever-increasing amount of Kuchen. I was fascinated by the cultural, political, and historical differences between Germany and the United States, which were discussed in various cultural seminars provided at RUB, and which I could observe in real life as I explored cities along the Ruhr, the Rhine, and beyond.

Back at Hegge-Kolleg on Glücksbürger Straße, I adapted to everyday life in Germany. I shopped at Rewe and cooked meals in our new and well-outfitted kitchens; as a group, the Ruhr Fellows had “family dinners” each week. I got used to the annoying showers that turned off every couple minutes, as well as the Spartan foam mattresses; I got quite used to beer that cost less than one euro. I kept getting lost on the VRR, but I slowly stopped getting worried about it. I swam in the Ruhr, and I snuck onto the roof of the Maschinenbau building at RUB. We had a Fourth of July barbecue, but needed German help to light the grill. I fed the fish in the Chinese pond at the botanical gardens of the Ruhr University. I went to parties and bars with the other Fellows and our German friends. I got up early almost every day in June for Deutschkurs, and I kept trying to learn German.

I got to know the others on the program primarily on our weekend trips. We organized excursions to Berlin, Verona, Venice, and Amsterdam, and we helped each other buy train passes and book cheap hostels. We took the train everywhere, even to Italy! Those trips were so amazing that they each deserve a separate essay in and of themselves. We went to the fair in Düsseldorf, bicycling in Münster, and up the cathedrals in Köln and Aachen. We were often joined by a few of our German Buddies. One of my fondest memories of the entire program was a spontaneous visit to moated castles in the Münsterland. I will always remember the sun setting over the farm houses and fields as we rode the train back to Bochum.

I also traveled by myself, to Hamburg, Frankfurt, and Düsseldorf, and these experiences were equally valuable as the trips taken with my newfound friends. I loved the solitude of riding a bike through the docks of Hamburg and eating a Fischbrötchen, and of photographing the Gehry buildings in Düsseldorf. I even loved frantically running around Düsseldorf by myself, trying to find an ATM after the photo lab said they didn't accept Mastercard, only to realize that I didn't know the PIN of my new debit card (recall that my old one was stolen); I eventually found an Apple store and looked the number up online. I reserved most of my photography for the time I spent alone; I became fascinated by the German architecture and started to take pictures of tall, solitary buildings. I tried to speak in German with the people I met, but everyone kept replying to me in English.

I've saved a quick description of my German job for last, not because it was the least important component of my German journey, but rather because it was the most.

I spent the month of July interning at Trimet Aluminium AG in Essen. On my first day, I was shown to an office in the R&D building and given a desk, a factory uniform (jacket, overalls, leather boots, safety helmet, safety glasses), and a tiny laptop. My office-mate and my boss showed me around the complex, and I was stunned as hundred-ton aluminum slabs were whisked over my head and rivers of molten metal flowed to casting molds. Aluminum is produced from aluminum oxide via electrolysis, and the massive electric current required induced a magnetic field strong enough to animate the change in my pocket. I was told that Trimet's factories alone account for more than 1% of the electricity consumption in Germany.

I was given an independent assignment, examining the effect of various heat treatments on the corrosion-resistance of extruded aluminum. My coworkers were always helpful, though there was a bit of a language barrier to be overcome. I was soon using furnaces, polishing machines, microscopes, and lots of aluminum to complete the project that I had designed.

I will never forget the characters with which I worked at Trimet, nor will I forget the cafeteria (the best I ate at in Germany). On the first day, the head chef (the tallest man I met on my adventure), greeted me “Oh you're from Boston, like the Bee Gees!” “The rock band?” I was very confused; the Bee Gees are from England. Speaking of rock bands, my boss' boss played bass guitar in a group from Düsseldorf, which I found apropos, as I play bass in a group from Princeton. He would later invite me to his house for a barbecue (best steak I had in Germany), at which I was able to play his Fender bass (same model as mine but 40 years older) and have a moving discussion with his wife about the fall of the Berlin Wall. At Trimet, someone was always willing to give me a ride to the train station if I asked, and they would always brush off my sincere thanks. One of my coworkers was a student from RUB; we became friends, and I was able to attend some of her materials science lectures; I spent long hours at the student bar with her and her friends, and I felt as if maybe a part of me belonged in Germany after all. Of the approximately 20 work days I spent at Trimet, we had homemade cake on five and barbecues on two.

But what captured my imagination most at Trimet was the huge scrap pile of aluminum outside my office-building, across the train tracks, and in the shadow of the huge blue and white smokestack. Trimet buys this aluminum as scrap, from other factories and manufacturers, to melt down and recycle. As such, the pile is forever changing, growing and shrinking; standing beside it, one is transported to a strange, malleable, and beautiful alien environment. It was very visually arresting, and I turned my photographic endeavors towards documenting how this recycling pile changed during my time at Trimet. In a way, this resonated with my conception of Germany as a country forever cognizant of its past, yet always striving to efficiently progress and adapt. I was moved by the resourcefulness of the Ruhr – by the transformation of industrial parks and coal mines into beautiful public spaces, by the willingness of the people to embrace a working-class heritage and a high-tech future, by the pride and proliferation of industrial legacy – and I could see this resourcefulness reflected in the jagged, shiny, repurposed aluminum.

I got out of a cab at Düsseldorf Flughafen at 5:30 am on July 31, and the cab driver took a picture of our luggage, astonished that we had fit it all in the trunk. It was raining, just like when I arrived exactly two months earlier. I am sure that I will come back someday.

by Kasun Waidyaratne

When I applied to be a Ruhr Fellow, I had no idea what a wonderful time I would have in the Ruhrgebiet. I applied because I wanted to spend some time abroad and have an international work experience. The program was exactly what I was looking for. However, it also provided a broad range of experiences I did not foresee.

I did not have much time to prepare for my stay in the Ruhr area and no experience with the German language. However, the German course during the first month of the program gave me a good introduction to the language. I was able to learn enough to get by during the first few weeks, and eventually I started to understand bits of conversations that people around me were having. The course instructors were helpful and gave students the opportunity to learn in a rigorous, structured manner, but also provided key phrases that would be needed for everyday use. Although on some days the lessons were tiring, I always felt like I learned something afterwards.

In addition to the language courses, our first month was filled with various trips and cultural programs. One of the most memorable events was a visit to Westfalenstadion. Despite being a fan of football, I had never visited such a significant venue. Standing on the pitch was a once-in-a-lifetime experience I will never forget. It was nice to be in an area where people are passionate about football. I happened to be in Dortmund for the Super Cup final against Bayern Munich, so I watched it with hundreds of BVB supporters on a large outdoor screen and cheered along as Dortmund won 4-2. Another memorable excursion took us down into a live RAG coal mine. We got up close and personal with the working machines and got a look at the industrial side of the Ruhr region. Although the mines are scheduled to close in several years, we could feel that the people have great pride in their industrial history.

Many of my favorite moments occurred when I was interacting with German people, often strangers, that I came across. There was the man at the RUB chess club who knew more about American culture than I did, consistently asking about American football, ESPN, and TV shows I had not seen. There were the program buddies, who provided friendly guidance and knew of less popular but interesting things to see. Lastly, there were strangers that helped me out when I needed direction or quick instruction. Not only did I have a good time, but my



German comprehension increased the most when I was forced to interact with someone in German. However since most people I came across knew English, that did not happen often.

I did my fair share of traveling during the two months of the program. I appreciated that this region has several cities all within reach by train in under an hour. Within Germany, I visited the larger cities in the Ruhrgebiet as well as Münster. I liked Münster so much that I visited twice. Like many of the other cities, it has a beautiful central church, but also has several nearby castles. It is a gorgeous city that is especially friendly to bikes. Biking around the Promenade, a path around the city where the outer wall used to stand, was an adventure both times. On my first visit, the path was so crowded with people from a music festival that biking around them was a fun challenge. The Ruhr area also provides easy access to major European cities. I was lucky to find a cheap ticket to Paris that allowed me to see an old friend that I had not seen for many years.

During the second month of the program, I had an internship at ista. I was looking forward to my internship because it would be my first experience working for a private company, not to mention my first time working abroad. I learned a lot from my internship at ista. On my first day, I was presented with a project description and expected goals by my advisor. The project was appropriate for such a short period of one month, and I was doing a full day's work every day. I ended up writing a final report of my findings by the end of the internship. My advisor was consistently available to help me when I needed it, but also gave me freedom in how I chose to achieve the goals of the project. He was genuinely interested in my learning: much of the advice he gave me was not immediately relevant to the project, but will help me in my future studies and work. Our academic interests align, so he was able to provide good input during my (ongoing) struggle to decide what to do in the future. During my internship I also met many other people in the Products department at ista and learned a little bit about what they were doing. This gave me a good idea of the structure of the company and how everyone contributes. I left ista with a very positive view of the company. My department felt like a small family: everyone was very friendly with each other and loved to joke around, but we also got a significant amount of work done.

I came away from the program with a very positive view of the Ruhr region and Germany in general. I consistently came across kind people, hearty food, and reliable transportation. I will continue to recommend this program to anyone who is interested in gaining a cultural and professional experience abroad. The program connected me with a group of wonderful friends and immersed us in German culture, and I hope to return to the Ruhr area some day. I would like to thank the organizers of this program and express my gratitude for the opportunity to be a Ruhr Fellow.

by Kathryn Wendorf

The Ruhr Fellowship, in addition to being a great way to explore another culture and gain professional experience, catered really well to people like me who had never travelled internationally before. The entire experience was really comfortable. We had someone to pick us up at the airport when we arrived in Düsseldorf and someone to take us to show us to all activities throughout the program. We were all assigned two German “buddies” who were able to answer any questions and show us around. After only having been in Germany for a few hours, I had already rode the U-Bahn, bought a pre-paid cell phone to use while I’m here, and had my first taste of Currywurst.



I have German ancestors and relatives and I have studied German at school for several semesters. I participated in this program for the chance to explore my roots and practice the language. I still continued my German language education in an above-beginner class during the first month of the Fellowship. However, I found that most people in Germany do speak English. This was very helpful for Fellows who hadn’t studied German before coming here.

The first month was an introduction to Germany from an academic perspective. We learned about the history of the area, international relations, and even a little bit about Kafka, all while touring various engineering departments and companies and learning German in the classroom. While we were staying at the Ruhr-Universität Bochum, we did get a chance to tour the two sister universities - TU Dortmund and Duisburg-Essen. We had the opportunity to see several of Germany’s largest companies. After all, the Ruhr area is known for its industry. We saw the massive Chem-park for Evonik, an industrial chemical company;

huge blast furnaces at ThyssenKrupp Steel, and even got to explore a coal mine at one kilometer below the earth’s surface! It seemed as though the Ruhr area followed the motto “Go big or go home.”

The second month was an internship. While one month is a bit short to go really in-depth in an internship, we did get a good chance to get our feet wet, so to speak, at some of the companies we visited during the first month. I was assigned to Evonik. I was a little nervous, because I had never done an internship before, let alone an international one. I had nothing to be worried about. The work was very doable, and everything was done in English. I even made a few friends who I ate lunch with every day. That was my favorite part of the internship. I met people from Germany, France, Poland, and the UK. I even started to spend time with the other interns outside of work, and I will continue to keep in touch with them even though the program has ended.

The required programming for the Ruhr Fellowship ran Monday through Friday, which left our weekends wide open for exploring Germany. I made a trip almost every weekend to some new city, sometimes with various other Ruhr Fellows and sometimes by myself. It gave me the chance to visit a few of my friends from school who were doing summer programs in other parts of Germany. It was really cool to see just how diverse of a country Germany is. Berlin had a lot of tourist attractions which were both old and new, as it is still in the process of rebuilding. Munich was exactly what Americans think of when they think of Germany - cobblestone streets, beer halls, and men in lederhosen playing tubas. Each area I saw in Germany had a slightly different feel, which really helped to put the Ruhr area into perspective. It was a very down to earth area with real people, as opposed to all the large cities full of tourist attractions.

All in all I had an amazing time in the Ruhr area, and in Germany as a whole. I finally got my chance to leave the US, and spend time with people who are different from me in language, culture, and upbringing. I helped out on a project at one of Germany’s largest chemical companies. I tried many new foods (and of course beers!) and made many lifelong friends. And I owe all this to the Ruhr Fellowship. Thank you!

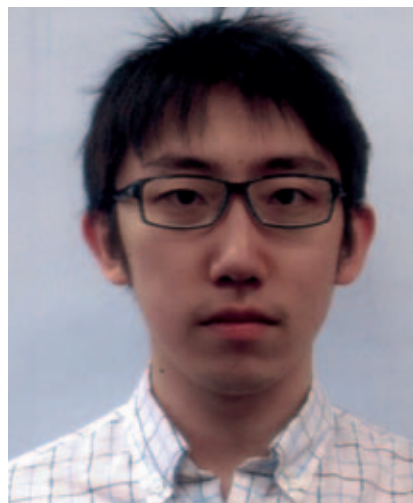
by Zhiyi Zhang

At the time I was looking for summer opportunity, the Ruhr-Fellowship Program was my favorite for its intensive academic and industrial training and colorful cultural immersion, and when it came to an end for the two-month journey in Germany, I would say that the program left the best memory ever of my summer experience.

Although English itself is my second language, I have never imagined that learning a new language to be that much of fun. The one-month introductory German course was designed to cover all the contents taught in a regular one-semester language class, so our German was building up daily by big blocks. It was particularly interesting for us with no German background that everyday we felt that we were exploring dark regions and a new area (e.g. ordering food, talking about our majors) on the big map was unlocked daily so we could survive in that aspect. But learning through classes was only a tiny part, and the larger part of German knowledge came from living the life in Germany. After missing the train for several times, I learned to figure out the delay of the train and the change of the track from the broadcast. After “Sprechen Sie Englisch?” received “No” in many restaurants, I managed to order food without pointing all the time. Rather than paying attention to memorizing vocabulary and grammar, I enjoyed learning language by gathering pieces from real life situations. This summer turned out to be a good starting point for me to continue learning German back in our school in the US.

Our host, Ruhr-University Bochum, made great effort in organizing various events for us. Almost every weekday afternoon in June was filled with meaningful activities. Most of the events fell in two categories: visiting renowned companies in Ruhr Area and tours in different faculties (departments) in Ruhr-University Bochum. The company visits were as exciting as adventures: at ThyssenKrupp we oversaw the waterfall of hundred tons of molten steel being poured from the furnace to the huge container; at SIEMENS we were amazed by how gigantic the steam turbines are which generate electric power for the world and how precise the manufacturing process is on the streamline; and during the coal mine visit we dressed like mine workers, went underground for 1,200 meters, and were deafened by the roaring drills that clear several hundred meters of coal zone in half an hour.

The school tours were also well organized. They usually lasted for the whole afternoon, during which we met students and staffs in one department, visited laboratories and had seminars with German students and professors. As we were all engineering or science students, the departments we visited were all under the school of engineering. In the labs, we were introduced to many cutting-edge sciences and technologies that are under development, such as new models of electrical cars that are more efficient and affordable, and 3D computer simulation systems where people can virtually build constructions and “step into” the architecture to exami-



ne all the details. I was also very impressive by the extensive cooperation between industries and research institutes in Germany: many companies are closely working with universities to utilize their research power to develop new business ideas and products, and in return generate substantial funding for the operation and research in the universities.

During the conversation with German students and faculties, we found out that although both countries have world leading higher education, Germany and the U.S. have very different college systems. For example, in the US the majority of top-ranking universities are private universities, but in Germany public universities supported by the government are usually among the best universities in the country. Unlike in a US university that a department consists of many professors, associate/assistant professors, and post-doctoral students, a university's department has only few professors and the rest faculties are postdocs. Also, in Germany many students choose to continue for a master's or doctor's degree after three or four years of college study, but in the US most students would go to work after they finish their college education.

Another program that I highly praise is the “buddies” program that paired each of our fourteen Ruhr Fellows with two students at Ruhr University. Upon my arrival in Germany, I was picked up by my buddies at the airport. During my stay, those two considerate friends helped me with many things from my study of German to where to find a good camera store. We also hung out together quite often. From them I learned a big part of my knowledge in German culture, college life, and places to visit and have fun. I believe carrying on this program would definitely help next year's Ruhr Fellows to get used to their study, work and life in Germany faster and better, and the long-lasting friendship between us and our buddies is also a great thing to take home after the program.

For the entire month of July, I was interning at Evonik Industries AG, one of the leading specialty chemical companies in the world. The place I worked is a huge chemical production site that has ten thousand employees working in more than six square kilometers' “Park”. The working experience at Evonik has been amazing! One month before my internship officially started, my internship advisors met with me and discussed about my duty. I did not expect that they were very serious about my internship. They listened to my expectations for the internship and then assigned me substantial work that was both challenging to myself and beneficial to the company. The work I did involved making models for cost management systems and making strategies for innovation project prioritization, which required my recalling of my mathematics, statistics and knowledge in finance and management. Besides daily work, my advisors also arranged many meetings for me to talk to people in different departments to have more understanding of what the company is doing in a bigger picture and how the company is operating through the collaboration of functional sectors. Also they introduced me to some senior managers in the company, and the conversation with them provided me with valuable insights in chemical industry and inspired me on my personal development. Though located in the heavy industrial area, the working condition was extremely good, with very clean and modern chemical sites and facilities as well as very comfortable office. My colleagues were very open-minded and helpful. They offered to give me a hand on various aspects, working or personal. And they were eager to share knowledge with me and hear my ideas even though I was only a short-term intern student. Through my internship I learned a lot about the industry, applied my class knowledge into practice, and gained more motivations for my career pursuit.

Weekdays in my Ruhr-Fellowship Program were always busy, but weekends were great chances for me to explore Europe. Going weekend by weekend, I visited Brussels, Barcelona, Amsterdam, Vienna, and various cities and towns in Germany. After the program finished in the end of July, I had a two-week travel in France and Switzerland. I would highly recommend to utilize weekends and holidays to experience the charming Europe, from Germany to everywhere.

The Ruhr-Fellowship Program gave me such a unforgettable summer that I am considering going back to Germany after college to further experience new things.

Wir danken an dieser Stelle ganz herzlich allen Unternehmen, die sich für das Programm engagiert und Praktikumsplätze zur Verfügung gestellt haben.

Vier Wochen lang haben sie den Studenten die Unternehmenslandschaft im Ruhrgebiet nähergebracht, ihnen zahlreiche spannende Einblicke und Gespräche ermöglicht und damit zu einer Verbesserung des Images der Region über deren Grenzen hinaus beigetragen.

Des Weiteren danken wir allen anderen Beteiligten, die mit viel Herzblut die Realisierung des Programms unterstützt haben. Dies gilt im Besonderen auch für die Kollegen der UAMR, die für die Realisierung des akademischen Programms verantwortlich waren.

Universitätsallianz Metropole Ruhr

In der Universitätsallianz Metropole Ruhr (UAMR) arbeiten die Ruhr-Universität Bochum, die Technische Universität Dortmund und die Universität Duisburg-Essen seit 2007 strategisch eng zusammen. Unter dem Motto „gemeinsam besser“ bieten die drei Hochschulen ihren Forscherinnen und Forschern vielfältige Möglichkeiten zur Kooperation und Vernetzung, während die Studierenden von dem großen Angebot an Bachelor- und Masterstudiengängen mit zahlreichen Spezialisierungsmöglichkeiten profitieren. Zahlreiche Kooperationen in den Bereichen Forschung, Lehre und Verwaltung zielen darauf ab, durch eine Bündelung der Kräfte die Leistungen der drei Universitäten auszubauen. Mit mehr als 100.000 Studierenden und über 1.100 Professorinnen und Professoren gehört die UAMR zu den größten und leistungsstärksten Wissenschaftsstandorten Deutschlands. Die internationale Zusammenarbeit der UAMR fördern die Verbindungsbüros in New York, Moskau und Rio de Janeiro/São Paulo.



BP Europa SE

BP nimmt mit einem Umsatz von mehr als 55 Mrd. Euro im Jahr 2012 (inkl. Energiesteuer) in Deutschland eine Spitzenposition unter den führenden Wirtschaftsunternehmen ein. Mit den Produkten und Dienstleistungen der Marken BP, Aral und Castrol erreicht das Unternehmen täglich Millionen Kunden. Hierzulande beschäftigt BP mehr als 4.800 Mitarbeiter. Das Tankstellengeschäft betreibt BP unter der Marke Aral und ist mit bundesweit rund 2.500 Tankstellen Marktführer. Zudem betreibt BP eines der größten Raffineriesysteme in Deutschland. Auch im Schmierstoffbereich nimmt das Unternehmen eine Spitzenposition ein und ist in allen wichtigen Marktsegmenten vertreten. Zudem gehört BP beim Vertrieb von Flüssiggas, Flugkraftstoff, Schiffsdiesel und Bitumen zu den führenden Anbietern. Weltweit beschäftigt die BP Gruppe rund 85.000 Mitarbeiter in über 80 Ländern und zählt damit zu den größten Konzernen der Welt.



Deutsche Bank AG

Die Deutsche Bank ist eine weltweit führende Investmentbank mit einem bedeutenden Privatkundengeschäft. Im Ruhrgebiet ist die Deutsche Bank seit 1925 eine feste Größe und Anlaufpunkt für die persönliche Betreuung in allen Finanzfragen. Privatkunden, Selbstständigen und kleinen bis mittelgroßen Unternehmen steht eine Rundumbetreuung von der Kontoführung über die Beratung bei der Geld- und Wertpapieranlage bis hin zur Finanzierung und Vorsorgeplanung zur Verfügung. Firmenkunden und institutionellen Kunden bietet die Deutsche Bank das ganze Spektrum einer internationalen Investmentbank – von der Zahlungsverkehrsabwicklung über die Unternehmensfinanzierung bis hin zur Begleitung von Börsengängen und der Beratung bei Übernahmen und Fusionen. Das Private Wealth Management der Deutschen Bank entwickelt individuelle Lösungen für vermögende Privatpersonen, Familien und ausgewählte Institutionen.



Evonik Industries AG

Evonik ist eines der weltweit führenden Unternehmen der Spezialchemie. Profitables Wachstum und eine nachhaltige Steigerung des Unternehmenswerts stehen im Mittelpunkt unserer Strategie. Rund 80 Prozent des Umsatzes erwirtschaftet Evonik aus führenden Marktpositionen, die wir weiter ausbauen wollen. Dabei konzentrieren wir uns auf wachstumsstarke Megatrends – vor allem Gesundheit, Ernährung, Ressourceneffizienz und Globalisierung. Evonik ist in mehr als 100 Ländern der Welt aktiv. Über 33.000 Mitarbeiter erwirtschafteten im Geschäftsjahr 2012 - ohne Real Estate - einen Umsatz von rund 13,4 Milliarden und ein operatives Ergebnis (bereinigtes EBITDA) von rund 2,4 Milliarden. Überzeugender Beleg unseres globalen Geschäfts ist ein Umsatzanteil außerhalb Deutschlands von 75 Prozent.

Exploring opportunities. Growing together.

Als Arbeitgeber bietet Evonik eine große Vielfalt an erstklassigen Perspektiven – sei es in der kreativen Spitzenforschung, im internationalen Management oder in der Produktion vor Ort. Entdecken Sie eine Welt voller Möglichkeiten bei Evonik. Wir freuen uns auf Sie!



HOCHTIEF AG

HOCHTIEF zählt zu den internationalsten Baukonzernen der Welt. Das Unternehmen realisiert weltweit anspruchsvolle Infrastrukturprojekte, teilweise auch auf Basis von Konzessionsmodellen. Der Konzern ist in den Bereichen Verkehrsinfrastruktur, Energieinfrastruktur und soziale/urbane Infrastruktur sowie im Minengeschäft tätig. Mit knapp 80.000 Mitarbeitern und Umsatzerlösen von mehr als 25 Mrd. Euro im Geschäftsjahr 2012 ist HOCHTIEF auf allen wichtigen Märkten der Welt präsent: In Australien ist der Konzern mit der Tochtergesellschaft Leighton Marktführer. In den USA – dem größten Baumarkt der Welt – ist HOCHTIEF über die Tochter Turner die Nummer 1 im gewerblichen Hochbau und zählt mit Flatiron zu den wichtigsten Anbietern im Verkehrswegebau. HOCHTIEF ist wegen seines Engagements für Nachhaltigkeit seit 2006 in den Dow Jones Sustainability Indizes vertreten. Weitere Informationen unter www.hochtief.de/presse.



ista international

Energiemanagement zur Steigerung der Energieeffizienz von Gebäuden.

Das Angebot reicht von der verbrauchsgerechten Erfassung und Abrechnung bis zu Wasser, Wärme, Kälte, Gas und Strom über die Analyse der Energiedaten bis zu individuellen Lösungen zur Energieversorgung. Kern des Unternehmens sind integrierte Sub-Metering Services für das Energieverbrauchsmanagement. Dies beginnt bei der Erfassung, Aufbereitung und Visualisierung von Verbrauchsdaten und ihrer Darstellung in Printform, Web-Portalen oder als App. Und es reicht bis zur Analyse möglicher Effizienzsteigerungen für Immobilienverwalter und Mieter. Als Grundlage dieser Services nutzt ista ein Portfolio von Hardwarekomponenten zur Energiedatenerfassung und -verarbeitung. Dieses besteht aus Heizkostenverteiler, Wasserzählern, Wärmezählern, Rauchwarnmeldern. Darüber hinaus bietet ista weitere Services zur Steigerung der Energieeffizienz, u.a. durch das Smart Sub-Metering. Dabei werden intelligente Funksysteme genutzt, um eine ganzheitliche Mess- und Analyseketten zu schaffen und aktuelle Verbrauchsinformationen bereitzustellen. ista blickt auf eine über hundertjährige Unternehmensgeschichte zurück und betreut heute weltweit etwa 11 Millionen Nutzeinheiten. So trägt ista als Schlüsselpartner für CO₂-Einsparung im Gebäudesektor zur Senkung des Energieverbrauchs um 20 % und mehr bei.



RAG Aktiengesellschaft

Die RAG Aktiengesellschaft bündelt die gesamte Kompetenz, die aus dem deutschen Steinkohlenbergbau erwachsen ist. Unter ihrem Dach firmieren RAG Deutsche Steinkohle, RAG Anthrazit Ibbenbüren, RAG Montan Immobilien, RAG Mining Solutions, RAG Konzernrevision, RAG Ruhranalytik und RAG Verkauf. Bis zum Auslauf des deutschen Steinkohlenbergbaus Ende 2018 gilt es für das Unternehmen, zuverlässig die mit der Politik vereinbarten Mengen an Steinkohle zu fördern und die sozialverträgliche Personalanpassung zu vollziehen. Jahrzehntelange Erfahrung befähigen die Bergleute, Ewigkeitsaufgaben kompetent zu bewältigen. Die RAG engagiert sich nach wie vor für den Strukturwandel in den Bergbauregionen. Die kreative Entwicklung ehemaliger Bergbau-Areale ist nicht nur ein Geschäftszweig – sondern darüber hinaus Verpflichtung und Teil der Tradition. Die RAG nutzt ihre Potenziale vielfältig. Die Erschließung neuer Geschäftsfelder im Bereich der erneuerbaren Energien gehört ebenso dazu wie der Verkauf von gebrauchtem Bergbau-Equipment und die Vermarktung von weltweit gefragtem Know-how „made in Germany“.



Siemens AG

Als weltweit führendes Unternehmen der Elektronik und Elektrotechnik steht Siemens seit über 165 Jahren für Pioniergeist, technische Leistungsfähigkeit, Innovation, Qualität und Zuverlässigkeit sowie Internationalität. Der Konzern ist auf den Gebieten Industrie, Energie sowie im Gesundheitssektor tätig und liefert Infrastrukturösungen, insbesondere für Städte und urbane Ballungsräume. Siemens ist außerdem weltweit der größte Anbieter umweltfreundlicher Technologien. Rund 40 Prozent des Konzernumsatzes entfallen auf grüne Produkte und Lösungen. Insgesamt erzielte Siemens im vergangenen Geschäftsjahr, das am 30. September 2012 endete, auf fortgeführter Basis einen Umsatz von 78,3 Milliarden Euro und einen Gewinn nach Steuern von 5,2 Milliarden Euro. Ende September 2012 hatte das Unternehmen auf dieser fortgeführten Basis weltweit rund 370.000 Beschäftigte.

SIEMENS

SMS group

Die SMS group ist eine Gruppe von international tätigen Unternehmen des Anlagen- und Maschinenbaus für die Stahl- und NE-Metallindustrie, die sich in die Unternehmensbereiche SMS Siemag, SMS Meer und die Industriebeteiligungen gliedert. Rund 13.500 Mitarbeiterinnen und Mitarbeiter erwirtschaften weltweit einen Umsatz von über 3 Mrd. Euro. Alleineigentümer der SMS group ist die Siemag Weiss GmbH & Co. KG, die Holding der Unternehmerfamilie Weiss. Im Geschäftsjahr 2012 entfielen rund zwei Drittel des Gesamtumsatzes auf den Unternehmensbereich SMS Siemag, dessen Produktprogramm die Prozesskette von der Stahlwerks-, Stranggieß- und Walzwerkstechnik bis hin zu Veredelungslinien für Warm- und Kaltband einschließlich der Elektrik und Automatisierung sowie dem dazugehörigen Service abdeckt. Der Unternehmensbereich SMS Meer hingegen produziert Rohranlagen, Profilwalzwerke, hydraulische Pressen, Kupfer- und Aluminiumanlagen sowie Gesenkschmiedeanlagen, Ringwalzwerke und die passende Wärmetechnik.



TRIMET Aluminium SE

Als innovatives, mittelständisches Unternehmen entwickelt, produziert, recycelt, gießt und vertreibt die TRIMET Aluminium SE an acht Standorten in Deutschland moderne Leichtmetallprodukte aus Aluminium. 1.900 Mitarbeiter sorgen gemeinsam mit unseren Kunden dafür, dass Autos sparsamer, Flugzeuge leichter, Windräder und Stromanlagen effizienter, Bauwerke moderner und Verpackungen ökologischer werden. TRIMET bedient und versorgt die gesamte industrieorientierte Wertschöpfungskette der Aluminiumwirtschaft mit maßgeschneiderten Produkten „aus einer Hand“. Das mittelständische Unternehmen ist seinen Kunden ein zuverlässiger Partner und seinen Mitarbeitern ein moderner und verlässlicher Arbeitgeber. Ob Praktikum, Ausbildungsplatz oder Einstieg nach dem Studium: Motivierten und engagierten Menschen stehen bei TRIMET alle Türen offen, um die eigene Zukunft erfolgreich zu gestalten – und die der TRIMET gleich mit.



Vaillant Group

Die Vaillant Group ist ein internationales Familienunternehmen mit rund 140-jähriger Tradition. Im Kerngeschäft Heiztechnik ist sie mit ihren acht Marken das zweitgrößte Unternehmen in Europa. Daneben ist die Vaillant Group in den Bereichen Lüftungs- und Klimatechnik aktiv. An Standorten in Deutschland, Frankreich, Großbritannien, Spanien, Italien, der Slowakei, der Türkei und in China entwickelt und fertigt das Unternehmen effiziente und ressourcenschonende Produkte. Ein Schwerpunkt der Vaillant Group liegt auf Produkten und Systemen, die regenerative Energien nutzen. Dazu zählen unter anderem Wärmepumpen, die Wärme aus dem Erdreich oder der Umgebungsluft nutzbar machen, und Hybridsysteme wie zum Beispiel solarthermische Anlagen. Die Vaillant Group ist in mehr als 20 Ländern mit eigenen Vertriebsgesellschaften präsent und exportiert in über 60 weitere Staaten. Im Geschäftsjahr 2011 erzielte das Unternehmen, das sich seit seiner Gründung 1874 in Familienbesitz befindet, mit mehr als 12.000 Mitarbeitern einen Umsatz von rund 2,3 Mrd. Euro.

VAILLANT GROUP

Initiativkreis Ruhr

Der Initiativkreis Ruhr (IR) ist ein Zusammenschluss von 69 führenden Wirtschaftsunternehmen. Sie beschäftigen zusammen rund 2,25 Millionen Menschen weltweit und machen rund 630 Milliarden Euro Umsatz. Ihre Führungskräfte repräsentieren als Persönliche Mitglieder den IR. Mit zukunftsfähigen Strategien und praxisnahen Konzepten setzt der Initiativkreis auf die kreative Kraft gebündelten ökonomischen Know-Hows. Aus dieser Stärke erwachsen Zukunftsprojekte mit Strahlkraft – immer mit dem Ziel vor Augen, die Metropole Ruhr als konzentrierte Aktion verschiedener Akteure weiterzuentwickeln.

- A.T. Kearney
- Accenture
- Baker & McKenzie
- BANK IM BISTUM
- Bayer MaterialScience
- BDO
- BP Europa
- BVB 09
- Commerzbank
- Deloitte & Touche
- Deutsche Annington Immobilien
- Deutsche Bahn
- Deutsche Bank
- Deutsche Post
- Deutsche Telekom
- Duisburger Hafen
- E.ON
- Emschergenossenschaft und Lippeverband
- Ernst & Young
- Evonik Industries
- Fahrzeug-Werke LUEG
- Ferrostaal
- Flughafen Düsseldorf
- Funke Mediengruppe
- Gelsenwasser
- Grillo-Werke
- Hellweg – Die Profi-Baumärkte
- HOCHTIEF
- ifm electronic
- Imperial Logistics International
- ista International
- Klöckner & Co
- KÖTTER Services
- KPMG
- Kümmerlein
- MATERNA Information & Communications
- MC-Bauchemie
- Messe Essen
- NATIONAL-BANK
- NRW.BANK
- Pilkington
- PricewaterhouseCoopers
- RAG
- RAG-Stiftung
- RHEIN-RUHR COLLIN
- RMM Metallhandel
- Roland Berger
- Ruhrverband
- Ruhr Nachrichten Verlag
- RWE
- Schalke 04
- Siemens
- Siempelkamp
- SIGNAL IDUNA
- SMS Group
- START Zeitarbeit NRW
- The Boston Consulting Group
- Thyssengas
- ThyssenKrupp
- Tönnies Holding
- TRIMET ALUMINIUM
- TÜV Nord
- TÜV Rheinland
- Vaillant
- Veltins
- Verlagsgruppe Handelsblatt
- Vivawest Wohnen
- Westfalenhallen Dortmund
- WGZ BANK

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