

## RuhrFellowship **2015**



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Wir danken allen Studierenden  
für die Bereitschaft, uns die  
Bilder für dieses Booklet zur  
Verfügung zu stellen.

# Vorwort

Heißt es der, die oder das Nutella? Was schmeckt besser: Pils, Altbier oder Kölsch? Und wie übersetzt man „Eierlegende Wollmilchsau“ ins Englische? Das sind Fragen, die unsere 17 RuhrFellows bei ihrem zweimonatigen Aufenthalt im Ruhrgebiet bewegt haben – aber natürlich nicht nur diese: Die begabten Studierenden renommierter US-Hochschulen kamen in die Region, um ihre Deutschkenntnisse zu verbessern, Industrie-Praktika zu absolvieren, eine Summer School an der TU Dortmund zu besuchen und die Region als Arbeits- und Lebensraum kennenzulernen. In diesem Jahr ging das RuhrFellowship in die vierte Runde. Es wird seit 2012 durch den Initiativkreis Ruhr und die Universitätsallianz Ruhr (UA Ruhr) getragen.

## Ziel des Programms

Schon jetzt ist Deutschland nach Angaben des Deutschen Akademischen Austauschdienstes das dritt wichtigste Gastland für amerikanische Studierende – nach Großbritannien und Kanada. Das Ruhrgebiet übt dabei mit seinem dichten Netz von Universitäten, innovativen und weltweit agierenden Unternehmen sowie einer lebendigen Kulturszene einen wachsenden Reiz auf die US-Studierenden aus. Genau hier setzt das RuhrFellowship an: Ziel ist es, das Image der Metropole Ruhr zu verbessern und begabte junge Menschen von US-Eliteuniversitäten für unsere Region zu interessieren. Die Nachfrage ist groß: In diesem Jahr gab es etwa fünfmal mehr Bewerbungen als zu vergebende Plätze. Wir freuen uns, dass sich 2015 erstmals die University

of California, Berkeley beteiligt und das RuhrFellowship damit den Sprung von der Ost- auch an die Westküste der USA gemacht hat.

Während ihres Aufenthalts lernen die Studierenden die Universitäten der Universitätsallianz Ruhr kennen und knüpfen Kontakte in die Ruhr-Wirtschaft. Ob Universitäten, Wirtschaft oder Stipendiaten: Von unserem Programm profitieren alle Beteiligten. Zumal wenn Gäste zurückkehren, um sich im Ruhrgebiet weiter zu qualifizieren oder eine berufliche Zukunft aufzubauen. Nach ihrer Rückkehr in die USA werden die RuhrFellows eng in das Alumni-Programm des Verbindungsbüros der UA Ruhr in New York eingebunden. Dadurch werden sie Botschafterinnen und Botschafter des Ruhrgebiets in ihrem Heimatland. Damit tragen sie zur Bekanntheit unserer lebenswerten Region, ihrer leistungsfähigen Wirtschaft und ihrer innovativen Universitäten auch jenseits des Atlantiks bei. Sie sind Impulsgeber für künftige Kooperationen in Wirtschaft und Wissenschaft.

## Lehrreiche Praktika

Das zweimonatige RuhrFellowship teilte sich auch in diesem Jahr wieder in zwei Phasen: In den ersten vier Wochen besuchten die Studierenden eine Summer School, zu der auch ein intensiver Deutschkurs zählte. Das akademische Programm organisierte die UA Ruhr unter der Federführung der TU Dortmund. Die Studierenden erhielten intensive Einblicke in die Lehre und Forschung der drei

UA-Ruhr-Universitäten: Ruhr-Universität Bochum, Technische Universität Dortmund und Universität Duisburg-Essen. In der zweiten Hälfte absolvierten die RuhrFellows ein vierwöchiges Praktikum bei Mitgliedsunternehmen des Initiativkreises Ruhr. Praktikumsplätze boten in diesem Jahr BP Europa, Deutsche Bank, EMSCHERGENOSSENSCHAFT und LIPPEVERBAND, Evonik Industries, HOCHTIEF, ista, KPMG, National-Bank, RAG, Ruhrverband, RWE, SIGNAL IDUNA, SMS, Siemens, Thyssengas und Vaillant an.

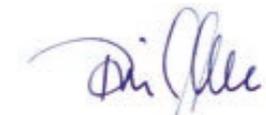
## Spannende Besuche

Zahlreiche Exkursionen führten zu Einrichtungen und Orten, die den Studierenden Einblicke in die wirtschaftliche Vielfalt und kulturelle Attraktivität der Region Ruhr ermöglichten. Die Studierenden besuchten unter anderem den Ruhrverband sowie Druckerei und Redaktion der BILD-Zeitung in Essen, lernten das Projekt InnovationCity Ruhr in Bottrop kennen, waren bei Thyssengas in Dortmund zu Gast, besichtigten die Kokerei Hansa und erlebten eine Grubenfahrt im Bergwerk Prosper-Haniel in Bottrop. Sportlich ging es beim fünften Essener Firmenlauf zu: In RWE-T-Shirts liefen die RuhrFellows durch das Ziel im Grugapark. Bei einer Führung durch den SIGNAL IDUNA PARK bei Borussia Dortmund bekamen die Studierenden zudem Einblicke in die große Fußballkultur im Revier.

Sicher ist schon jetzt: Das erfolgreiche Programm wird fortgeführt. 2016 wird die Ruhr-Universität Bochum die

Federführung haben. Wir hoffen, bei der Zahl der Stipendiaten mindestens die 20 vollzumachen. Und versprechen ganz selbstbewusst: Auch die künftigen Gäste werden vieles Neue und Spannende im Ruhrgebiet entdecken – über die Frage nach der, die oder das Nutella hinaus.

Mit einem herzlichen Glückauf!



**Dirk Opalka**  
Geschäftsführer der  
Initiativkreis Ruhr GmbH



**Prof. Dr. Ursula Gather**  
Rektorin der Technischen  
Universität Dortmund



# Preface

Should it be der, die or das Nutella? Which is nicer: Pils, Altbier or Kölsch? How does „Eierlegende Wollmilchsau“ translate into English? These are questions our 17 RuhrFellows discussed during their two-month stay in the Ruhr Area. But not only these, of course: the talented students of renowned US universities came to the region in order to improve their German skills, have internships in German companies, take part in the summer school of TU Dortmund University and get to know the Ruhr Area as an environment for living and working. This year was the fourth time the RuhrFellowship took place. Starting in 2012, the program is carried out every year by the Initiativkreis Ruhr, a union of about 70 leading regional commercial enterprises and institutions and the Universitätsallianz Ruhr (UA Ruhr), an alliance of the three largest universities in the region.

## Aim of the program

According to the DAAD, the German Academic Exchange Service, Germany is already the third most important host country for American students – after Great Britain and Canada. The Ruhr Area is hereby increasingly attracting American students with its close net of universities, its innovative and worldwide operating enterprises as well as its lively cultural and social scene. This is exactly where the RuhrFellowship comes in, with the aim to improve the image of the Ruhr metropolis and get talented young people from American elite universities interested in our region. The demand is high: this year about five times more

students applied to the Fellowship than there were positions to award. We are pleased that in 2015 for the first time the University of California, Berkeley, took part, which means the RuhrFellowship has jumped from the east to the American west coast.

During their stay the students got to know the universities of the UA Ruhr and established contact to the Ruhr industry. No matter whether university, economy or RuhrFellow: all parties profit from our program. This applies particularly to participants who return for further qualifications or with the aim of starting a professional career in our region. After their return to the USA, the RuhrFellows are closely integrated into the alumni program of the Liaison Office of the UA Ruhr in New York. Hereby they become ambassadors for the Ruhr Area in their home country. And help increase the prominence of our exciting area, its powerful economy and its innovative universities on their side of the Atlantic. They are initiators for future co-operations within the fields of economy and science.

## Instructive internships

This year the two-month RuhrFellowship was again split in two phases: during the first four weeks the students took part in a summer school, which included intensive German lessons. The academic program was organized by the UA Ruhr under the lead of TU Dortmund University. The students gained intensive insights into the teaching and

research of the three UA Ruhr universities: Ruhr-Universität Bochum, Technische Universität Dortmund and Universität Duisburg-Essen. During the second half of their Fellowship, the RuhrFellows had a four-week internship at member companies of the Initiativkreis Ruhr. This year, internships were offered by BP Europa, Deutsche Bank, Emschergenossenschaft und Lippeverband, Evonik Industries, HOCHTIEF, ista, KPMG, National-Bank, RAG, Ruhrverband, RWE, SIGNAL IDUNA, SMS, Siemens, Thyssengas and Vaillant.

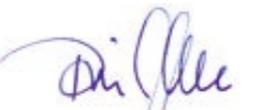
## Exciting visits

Numerous excursions took the students to institutions and places which offered them insights into the economic diversity and cultural attractiveness of the Ruhr region. Among other places, the students visited the Ruhrverband as well as the printing plant and editor's office of the BILD-Zeitung in Essen; they were introduced to the project InnovationCity Ruhr in Bottrop and guests at Thyssengas in Dortmund. They also visited the Kokerei Hansa and experienced an underground tour in the Bergwerk Prosper-Haniel in Bottrop. They became sporty during the fifth RWE fitness run in Essen: all RuhrFellows wearing RWE T-Shirts made it across the finish line at Grugapark. Also, during a tour of the SIGNAL IDUNA PARK at Borussia Dortmund the students got an idea of the great soccer culture in the region.

One thing is certain: the successful program will be continued. In 2016 the Ruhr-Universität Bochum will take the lead.

We hope to increase the number of Fellowships to at least 20. We also confidently promise: future Fellows, too, will discover many new and exciting experiences in the Ruhr Area – which will take them beyond the question whether it should be der, die or das Nutella.

Mit einem herzlichen Glückauf!



**Dirk Opalka**  
Managing Director of  
the Initiativkreis Ruhr GmbH



**Prof. Dr. Ursula Gather**  
Rector of  
TU Dortmund University



# Phase 1

## Summer School

TU Dortmund University organized this year's summer school for the RuhrFellowship. The summer school strengthened the Fellows' language skills in a four-week intensive German language course and gave them insights into the Ruhr Area. They experienced not only the industrial hubs, but also the three UA Ruhr Universities: Ruhr University Bochum, TU Dortmund University and the University of Duisburg-Essen.

### Many company visits

Visits to the universities enabled the Fellows to get an overview of the academic offer of the region and experience student life in the Ruhr Area. Furthermore, they gained insights into the Ruhr Universities' excellent research activities by visiting the cutting edge Fraunhofer Institute for Material Flow and Logistics in Dortmund. Participating in the class "Culture and Technology" and completing a project with German engineering students gave the Fellows a glimpse of the academic life of students in Germany.

During company visits throughout the month, the Fellows gained insights into the industries shaping the Ruhr Area and beyond. At Ruhrverband Essen the Fellows were able

to visit a water treatment plant and to learn more about supplying clean water for "green" projects. While visiting Bottrop's "Innovation City" project, methods for transitioning an entire city into a sustainable and eco-friendly community were discussed. The Fellows learned about gas production in the past and the future, as well as about the political and environmental challenges associated with it – during their visit to Thyssengas in Dortmund and a subsequent tour of the decommissioned Hansa Coking Plant, a stop on the Ruhr Area's Industrial Heritage Route. During a visit to RWE's "Ampa City" in Essen, the world's longest superconductor, forward-looking projects for electricity transmission were highlighted. At Evonik in Marl the students got an overview of one of Europe's largest chemical parks and the processes for creating acrylic acid, an important substance for manufacturing various plastics, adhesives and paints. During a tour of the Axel Springer printing office in Kettwig and the Bild newspaper in Essen, the Fellows became familiar with automated production processes and the considerations that have to be made for one of Germany's most popular newspapers. Finally, the highlight was being led over one kilometer underground into a working coal mine at RAG's Prosper Haniel Bergwerk. While



coal mines in Germany are set to close by 2018, the Fellows learned about RAG's plans for renewable energy and sustainable uses for former mining areas.

### Cultural program

A cultural program introduced the Fellows to the heart and soul of the Ruhr cities: A walk around Dortmund's Phönix Lake showcased a project that turned a former steel mill into an upscale recreational area. Touring the 80,000-seat Signal Iduna Park in Dortmund, home of the BVB Dortmund, even soccer "newbies" couldn't resist buying yellow and black jerseys. At the RWE Company Run 5k in Essen, all participants proved they were up to the challenge. Finally, the "Meeting of the Minds" brought the Fellows together with 25 other students from abroad completing research internships at the UA Ruhr Universities and treated them to both the rougher and finer sides of Ruhr culture. The group visited the UNESCO World Heritage Site Zeche Zollverein in Essen and toured the Red Dot Design Museum. After a dinner of Currywurst, the group was treated to a performance by Grammy Award Winner Michel Camilo at the Ruhr Piano Festival in the Essen Philharmonic.

### Facets of German life

The Dortmund Doubles program paired the RuhrFellows up with German students, each using his or her interests to show the Fellows new facets of German life - from the German-Turkish culinary culture (Döner and Mohnkuchen) to German music and, surprisingly, salsa dancing lessons. Inside and outside of the classroom, these four weeks were an unforgettable learning experience and a real preparation for living and working in the Ruhr Area.



Monday	Tuesday	Wednesday
<b>Week 1</b>		
<b>June 1</b>	<b>June 2</b>	<b>June 3</b>
arrival in Dortmund orientation and dinner	campus visit TU Dortmund/lunch meeting with Ursula Gather, Rector of TU Dortmund University	German course
	lecture: culture and technology	
	German course	organizational meeting
	welcome at IR	
<b>Week 2</b>		
<b>June 8</b>	<b>June 9</b>	<b>June 10</b>
German course	German course	
	lecture: culture and technology	
visit to the Ruhrverband Essen	culture series: deindustrialization	German course
	dinner with Arndt Neuhaus, CEO of RWE	
<b>Week 3</b>		
<b>June 15</b>	<b>June 16</b>	<b>June 17</b>
German course	TU Dortmund: visit to Fraunhofer Institut	German course
culture series: transatlantic perspective		Zeche Zollverein Essen: meeting of the minds
Dortmund: tour through the SIGNAL IDUNA PARK	Bottrop: visit to the InnovationCity Ruhr	
<b>Week 4</b>		
<b>June 22</b>	<b>June 23</b>	<b>June 24</b>
German course	lecture: culture and technology	German course
RAG (group 2) mine visit to the Bergwerk Prosper Haniel introduction to internship (group 1)	culture series: Germany in the EU	RWE Run Essen
<b>Week 5</b>		
<b>June 29</b>	<b>June 30</b>	<b>July 1</b>
German course	German course	beginning of the internships
Essen: visit to the Bild's printing house		

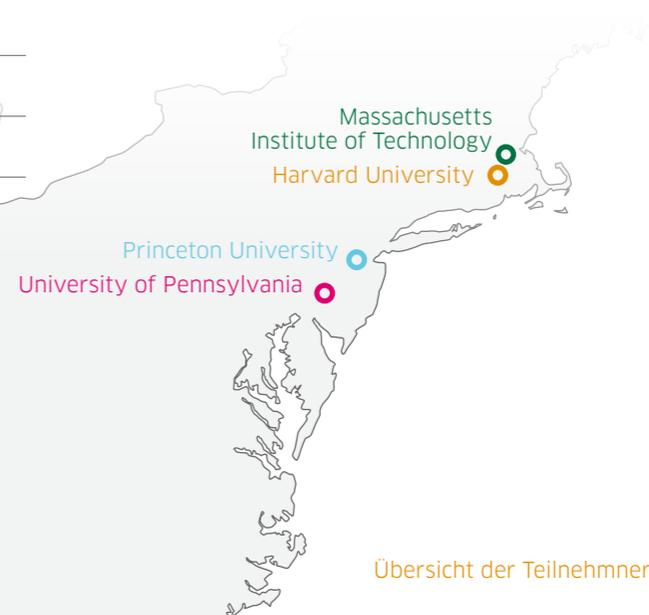
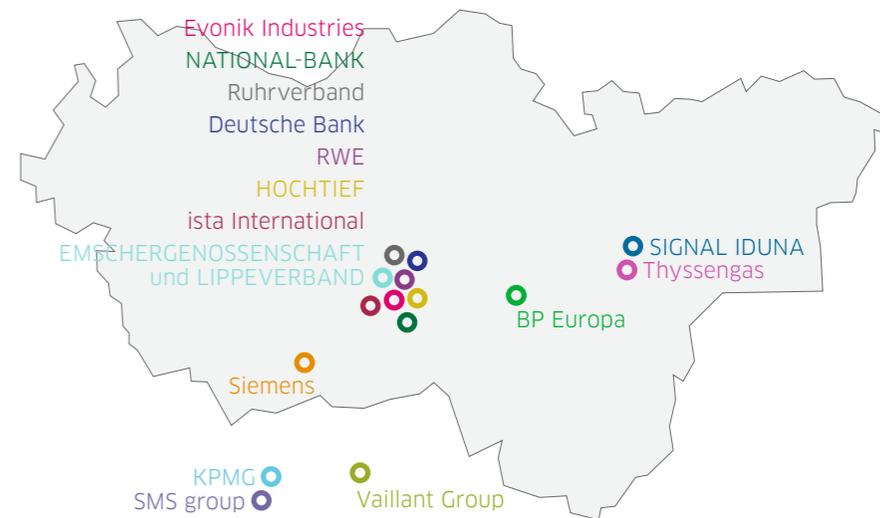
Thursday	Friday	Saturday
<b>Week 1</b>		
<b>June 4</b>	<b>June 5</b>	<b>June 6</b>
public holiday	University of Duisburg-Essen: visit to the NanoEnergy Technology Center	Ruhr University Bochum: 50th anniversary celebration
<b>Week 2</b>		
<b>June 11</b>	<b>June 12</b>	<b>June 13</b>
Ruhr University Bochum: tour through the laboratories of the engineering departments	German Course	
<b>Week 3</b>		
<b>June 18</b>	<b>June 19</b>	<b>June 20</b>
German course	German course	
RAG (group 1) mine visit to the Bergwerk Prosper Haniel introduction to internship (group 2)	Thyssengas: visit to the Kokerei Hansa	
summer party TU Dortmund		
<b>Week 4</b>		
<b>June 25</b>	<b>June 26</b>	<b>June 27</b>
German course	Chemiepark Marl: visit to Evonik	
visit to RWE/meet and greet with Heinz-Willi Mölders, Board of Directors		

German class
industrial excursions
science program
lecture
cultural program

# Übersicht **der Teilnehmer** Overview **of Participants**



Studierende	Universität	Studienfach	Unternehmen
Aakash Agarwal	UC Berkeley	Mechanical Engineering	ista International
Alex Bi	Princeton	Civil and Environmental Engineering with Technology and Society - Energy Track	EMSCHERGENOSSENSCHAFT und LIPPEVERBAND
Youjin Chung	UC Berkeley	Business Administration with Education	KPMG
Charles Du	UPENN	Computer Science and Business	Deutsche Bank
Nicholas Gailey	UC Berkeley	Conservation and Resource Studies	Ruhrverband
David Gilhooley	Princeton	Electrical Engineering with Certificates in Applications of Computing, Robotics and Intelligent Systems	SMS group
Madhav Goel	UC Berkeley	Economics with Applied Mathematics	SIGNAL IDUNA
Jerald Han	UC Berkeley	Civil and Environmental Engineering	HOCHTIEF
Katy Ho	Princeton	Electrical Engineering with Certificates in Applications of Computing, Robotics and Intelligent Systems	Vaillant Group
Toni Li	Harvard	Computer Science with Statistics	RWE Deutschland
Wanda Lipps	UPENN	Mechanical Engineering/Marketing/Management	Thyssengas
Remi Mir	MIT	Computer Science and Engineering	ista International
Andrew O'Rourke	Harvard	Bioengineering with Mechanics, Neurobiology	Evonik Industries
Sarah Toledano	MIT	Chemistry with Management	BP Europa
Jonathan Valverde Lizano	Princeton	Mechanical and Aerospace Engineering with Certificates in Applications of Computing, Robotics and Intelligent Systems	Siemens
Chatarin Wangsanuwat	Princeton	Chemical and Biological Engineering with Engineering Biology; Engineering Management Systems	Evonik Industries
Eric Wong	UC Berkeley	Business Administration with Political Science (International Relations Concentration)	NATIONAL-BANK



UC Berkeley

# Resümees **aus Übersee** Résumés **from Overseas**





# Aakash Agarwal

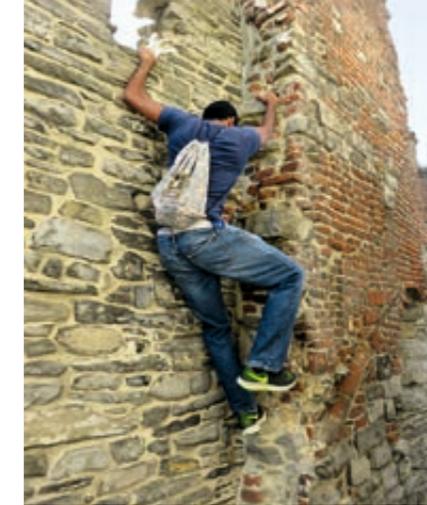
I have been asked countless times why I wanted to go to Germany, since deciding to take part in the RuhrFellowship last August until flying home this August. Interestingly, many of those who asked were Germans themselves, and they would ask because they could not imagine why I would want to leave California during the summer. It came down to two simple reasons. On the one hand, I was curious about Germany. I had heard a lot of good things about the country, from its strong economy to its very livable environment, and I wanted to see what all the hype was about. On the other hand, I wanted the ability to travel while doing something relevant to my major. The phrase “German engineering” brings about a lot of respect worldwide and even from people without a faintest connection to engineering. As a mechanical engineering student, I figured I should be able to find something good in the country. Plus, I knew virtually all of Europe is very accessible from Germany and traveling to a new country every weekend would be very realistic. With all this in mind, Germany was a natural place to spend this summer.

## Connect with Germans

Back in my hometown after a few months in Germany and elsewhere in Europe, I can say that I accomplished what I set

out to do. In fact, it is unbelievable how well things worked out. Being a RuhrFellow allowed me to connect with Germans of all walks of life, from students to CEOs. Furthermore, I got to know the Ruhr area very intimately while having the time to travel elsewhere in Germany. Had I gone about exploring Germany on my own, I would have either gotten to know a diverse group of people and areas superficially or a few people and places very well. Being a RuhrFellow allowed me to have a mix of both and see approximately what it is like to be a citizen of Germany. The curiosity that I had about Germany has been satisfied.

I was even more pleased with being a RuhrFellow because I got to do all this while still enhancing my skills as a mechanical engineer. And yes, I can say “as a mechanical engineer” and not simply “as a mechanical engineering student” because the work I completed during my internship is that which a salaried engineer at the company would do. This summer, I worked for four weeks at ista, a company that focuses on conservation and environmental-friendliness by developing measuring devices and technology that report energy usage. I spent my time designing a casing for a new meter, which, when I remembered to get my head out of



my engineering textbooks and consider all the things that could go wrong with the casing, was a much more complex task than I had initially imagined. But it was a good kind of complex - it gave me a good taste of what kind of things I would do as a mechanical engineer while actually building something. My boss and coworkers have promised to send me one of the 100000+ systems that will be manufactured, complete with the casing I designed, and I am looking forward to holding the product I helped create.

## Great food

Then, of course, was the traveling. Since my arrival on June 1st, I traveled literally half of my summer, visiting Berlin, Budapest, Bruges, Ghent, Brussels, Barcelona, Amsterdam, Munster, Dusseldorf, Copenhagen, Oslo, Bergen, Prague, Istanbul and Athens. I traveled so much I got sick of it and love the fact that I am spending ten days in my hometown before the semester starts. Along with seeing some beautiful sights and having great food, I have also met people from every continent (except Antarctica unfortunately). Some of these people are the most interesting I have ever met and I plan to meet many of them again on future travels.

## Solved questions

All this being said, I am conflicted about what I want my future to be with Germany. I solved questions I had, but the



answers I came up with were not the most satisfying. I can say that the rumors of Germany being a great place to work and raise a family are true. People are typically very satisfied with their jobs, have enough time to work and be active in their children's lives and are, in general, quite healthy. However, I thought there was a lack of drive that, as a resident of the Bay Area, one of the most driven places in the world, I am not comfortable with. Where I am constantly striving for improvement, the people and area largely seemed self-satisfied. While what they are settling for is pretty good, the idea of settling in such a way is foreign to me and, in the long run, I don't think I could thrive in an environment like that. I talked to several Germans regarding this to make sure I wasn't making hasty generalizations, most notably a boss at my internship and a student at TU Dortmund, and they agreed that my observations were accurate. Knowing that, I am not inclined to live in Germany in the future.

Also, although my work at the internship was satisfying in that I got the chance to contribute to an actual project, it was not as rewarding as I hoped it would be. I was working on a single aspect for hours everyday and I did not learn as many new skills as I could have had I worked on other aspects.

My boss told me there are generally two types of engineers, project managers who have to know a little bit of everything and float around, and project members who each know a lot about a small part of the project. Talking with him about my experience, he said I would make a better project manager and that I should steer my studies in that direction. Since this semester will be the first in which I can choose my classes more freely, knowing this helps me a lot.

#### **Glad to apply**

In all, this summer was a tremendous learning experience. Some lessons were easy, some were hard, but not nearly as many would have happened had I not been a RuhrFellow this summer and I am glad I applied and was selected for the program. It has been said that, "No matter what people tell you about summers or semesters abroad being the best time of your life, do not confuse 'best' with 'easy'. It will be difficult, physically, mentally and emotionally, but if you rise to the challenge you will be rewarded more than you can imagine." I can say, comparing what I know now to what I knew before, how I am now to how I am before, that this is absolutely true.

Until very recently, Budapest was no more than a pop song, Prague a stereotype borne of old spy movies, Berlin a Cold War hotspot from history class, and Bruges - is that even a real place? Traveling to all these places was one of the many benefits of living, learning, and working in Germany for two months under the RuhrFellowship.

However, let me note that it is not for everyone. The program is overwhelmingly geared towards engineers and those studying in the sciences or other technical fields, especially those interested in the energy industry. It may not be suitable for people of other majors or interests: our academic tours included electrical and civil engineering labs, a wind tunnel, and an engineering design lab, and the company excursions included such diverse destinations as a natural gas supplier, a water treatment plant, and a clean energy pilot project. That said, for those interested in energy and environmental issues, the RuhrFellowship is a goldmine of exposure and information. Germany is one of the very best hosts of the environment.

I originally applied for this program because I am interested in renewable energy and green technology, both of

which Germany is at the forefront, and I wanted to travel and explore. The RuhrFellowship was uniquely positioned to offer both in plenty. A significant portion of our company visits and excursions touched upon energy, efficiency, and emissions, including a trip down a coal mine that was due to be decommissioned in two years, a visit to one of the largest natural gas suppliers in Germany, and a stop at a water treatment company. Travel opportunities were also numerous and vigorously pursued, as I ended up going to Budapest, Vienna, Prague, and a number of other destinations I never would have dreamed of visiting just a couple months ago.

#### **Beautiful environment**

The wideness of experience traveling in neighboring countries complemented the depth of experience in the Ruhr area nicely. My stay in Germany was rewarding, enjoyable, and informative. While there was a period of culture shock and acclimatization, I grew to love the beautiful environment, friendliness of the people, and simple, happy lifestyle here. "Cultural immersion" is difficult to describe - I still don't know if I can define it - but I do know that it happened gradually over this summer, in cultural series lectures that painted a bullseye on the concept as well as during every day



train rides to and from work, in formal events and dinner discussions as well as chats with colleagues over lunch, in a classroom setting as well as through wanderings on campus and in the city. Cultural immersion happened in a quiet and unassuming manner until I was surprised to discover that I had grown accustomed to Döner Kebaps, ridiculously long summer nights, good beer at every corner, navigating and gaming the hectic train schedule system, and coughing out enough German when making purchases, ordering food, and during other brief exchanges to convince the other person (but sadly not myself) that I knew the language. Culture immersion crept into my life silently and secretly and before I knew it, my cozy dorm room felt like home and I was sad to see it go. Unfortunately, Bratwurst, Kartoffel and Pommes at every meal will take some more getting used to.

While the excursions were interesting and informative – in particular, exploring a working coal mine more than a

kilometer underground, getting locked in the stadium jail for Borussia Dortmund, and paying a visit to the national tabloid newspaper that described itself as “writing trash and proud of it” come to mind – I find the small, unexpected moments in everyday life more memorable. My most inspiring German language experience was not in class, but rather during an evening stroll outside my dorm when I struck up a (broken) conversation with an elderly German man who did not speak English. A second encounter a couple weeks later, which was smoother and longer, was one of the most personally rewarding moments of the summer.

### Fruitful internship

In addition to the cultural immersion and personal exploration, my internship was also fruitful. I spent a month at EmscherGenossenschaft, a water treatment company in the Ruhr area, where I rotated through two departments. I was fortunate to have the opportunity to explore both the technical challenges of water treatment in a previously heavily industrial region that left a legacy of pollution, as well as the political complications of navigating within a public company whose client base includes almost 20 municipalities, more than 150 commercial and infrastructure companies as well as mining industry. My internship was a rich and rewarding mix of pursuing projects and making a contribution to the



company, learning about different initiatives through discussion with colleagues, and site visits and excursions to see first-hand the results of the company’s restoration efforts. In this sense, I think it was a good mix between a traditional internship at a company and an extension of the cultural immersion and overseas exploration of the RuhrFellowship.

### Pursuing clean energy

When thinking back to the Ruhr area, I will miss the warm people, the sense of purpose and identity of the region, and the energy and vitality of the German people in pursuing clean energy and other inspiring initiatives. Life in the Ruhr area is very different to what I was used to in the U.S. and China, yet it is a good life. We would do well to learn from their work-life balance, social responsibility, and quality of life. In the pursuit of the good life, I can say with confidence that the German people are a step up above the rest of us and I would love to end up back here again in the future.





## Youjin Chung

Soccer, beer, chocolate, green initiatives, history. Germany has been a country where I have heard so many good things about and regretted not visiting during my study abroad program last year. So, when I heard about RuhrFellowship from my advisor, I did not hesitate to apply. However, the program went beyond my expectations and my impression of Germany has changed afterwards.

### Germany, why so attractive?

I was amazed by the sense of community in Germany. While I was told that Germans are very work-oriented, strict, and cold, I had the opposite experiences. I was greeted by Jan, one of the German coordinators in the program, at the airport and received help for basically everything because of my limited German proficiency. He welcomed me to ask questions and showed genuine interest in getting to know me and my experiences. I found these characteristics seemed to be embedded in the society. No one crosses the sidewalk when it is a red light (even though there are no cars around), everyone buys train tickets (even though there is no gate), and people give their seats away to pregnant ladies and senior citizens in public transportation. In Stuttgart, two Ruhr fellows and I were discussing where to visit and suddenly, an

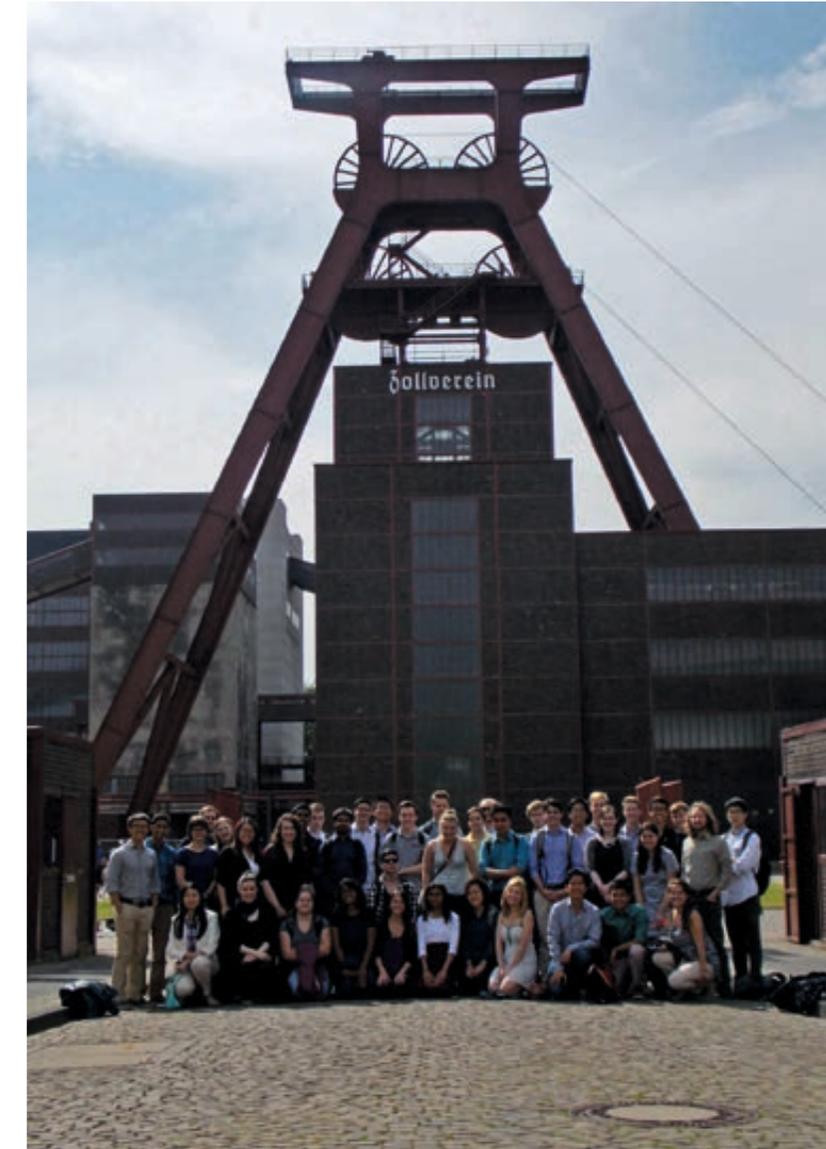
elderly man came to us and offered to give suggestions. Trust and respect are a part of the culture and people sincerely care about the well-being of their community.

From a legal perspective, those are reflected in the public policies. For instance, all stores are closed on Sunday so that everyone can spend time with his/her family. Despite the inconvenience, I have rather witnessed gratitude for having an undisrupted family time from the locals. I learned that it is easier to balance work and social life here, and appreciated that family time is still prioritized. Also, during a lunch break, I had a conversation about the European Union with my colleagues and heard that Germany is the most popular country for refugees because it provides free housing with a stipend of 300 euros when a refugee enters the country. In addition, housing is guaranteed for German citizens. The government provides a place to stay – so, there is no homeless people on a street (unless it is voluntary). When I asked if they are not happy with how their taxes are used, one colleague said “I wouldn’t be able to live in a community where my neighbor is sick and has nowhere to go, and no one cares about that.” She was proud of what Germany offers and willing to share her fortune with others in need.

### Ruhr area and its industrial transition

While Ruhr area was known for “industries” and manual labor for coal mines, I could not sense those at all throughout the program. During the train rides, I saw trees, houses with solar windows, electric cars, and windmills. Many of our company visits entailed information about energy efficiency and green energy. Reduction of CO2 emission is a collective goal for the region, as seen in the “Innovation City” excursion, and not only the energy companies but also all residents took responsibility in saving the environment. (In fact, there is no air conditioning except for cars so we got to experience the hottest train ride during the heat wave ...)

However, there are still few coals mines in operation. We visited a coal mine Prosper-Haniel in Bottrop where we wore a special uniform and equipment to go one km underground. As soon as I got out of the elevator, I could sense a different atmosphere – dark, damp, sticky and quiet. From observing where and how coals are obtained, I gained so much respect for the miners who work underground for eight hours every day and demonstrated pride of performing the arduous work. Due to the regional effort for green



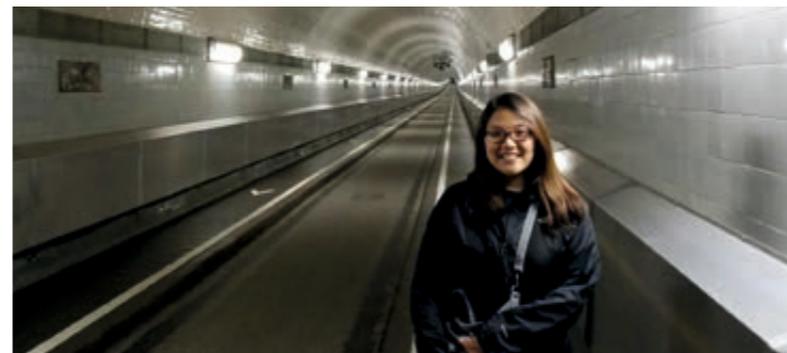
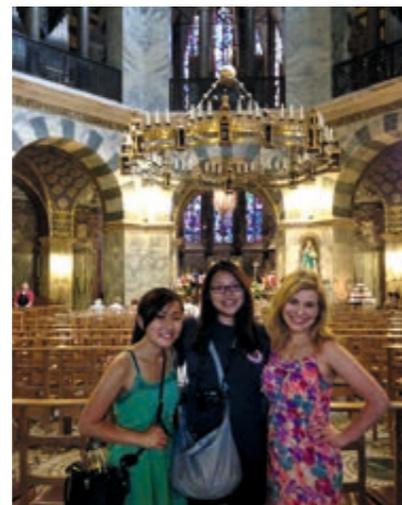
energy, the mine will be closed in three years. Employment is a big topic for discussion even though the government tries to provide alternative options for the current miners and further emphasize higher education to develop high-tech skills. In addition, the government is very active in business activities and closely work with companies so that they would have a smoother transition. Such support system may explain why Germany has been a leader in environmental protection with mostly small and medium-sized enterprises – and what many environmentalists admire in the US.

### Internship

In addition to the welcoming environment, my experience at KPMG was a huge asset to learning about German culture. As I extended the internship, I spent six weeks at the Dusseldorf office with Transaction Services team. The office was quite unique within Germany because it included the global pharmaceutical and chemicals team and thus provided me opportunities to work on projects at a multinational level. From flexible working hours and maternity/paternity leave policies to an exquisite taste of coffee, I was glad to get a glance of how German working culture looks like and understood why many people want to work here. It was unfortunate that my internship overlapped with the school holiday season, but that gives me an excuse to come back to Germany again and learn more from everyone!

### Adventure

I travelled almost every weekend visiting four countries and more than 15 cities so far. As I was told in the beginning, Germany's central location within Europe certainly helped to organize the trips. Most of the trips were no longer than four hours, and crossing the border to the Netherlands in an hour (without passport) reminded me of the easy access to various cultures in Europe. A few highlights include seeing the bridge view of Schloss Neuschwanstein, trying out different beers (and getting in trouble after comparing Düsseldorf Altbier and Cologne Kölsch ...), getting lost in the middle of the red light district in Amsterdam and having the “der/die/das Nutella” debate. Those memories are all treasured in my heart and I am excited for the upcoming adventures before I leave for the US.





# Charles Du

I chose to participate in the RuhrFellowship in order to experience German culture, learn German, and travel throughout Europe. I had an amazing experience this summer meeting amazing people, exploring the wonders of Europe, and getting a first experience on life in the Ruhr Area.

During the first part of the RuhrFellowship, I received intensive German language training and learned a lot about German history, culture, business, and engineering through our excursions. Thanks to the language program, I was able to develop my language skills from knowing only "Guten Tag" to the point where I was fluent in "Tourist German." That means that by the end of the first month, I was largely able to get by in German cities, by knowing how to ask for directions, figure out how much something costs, and how to order food - all essential skills when travelling in a foreign country. The excursions organized by the program allowed me to experience the best engineering, cultural sites, and research the Ruhr had to offer.

### Amazing tour

The most memorable company visit for me was the trip to Evonik. We got a tour of an amazing chemical park that

not only houses Evonik, but also several of the top companies in Germany. On top of an amazing tour, we were also given black trays that allowed us to get as much amazing food that we wanted from their cafeteria. It was certainly a great experience and a welcomed change from the food in the school's Mensa.

My favorite cultural visit was the one to the coalmine Prosper-Haniel. We went over a kilometer into the ground to see firsthand what it was like to be a miner in the 21st century. It was incredible seeing the machines they used and the expansive maze of tunnels that lies beneath the surface of the Ruhr Area. Moreover, it was impressive hearing the stories of the miners and how many of them came from families that have been worked in coalmines or steel mills for generations. I am curious to see what will happen to the miners and their families as well as the progress of the Ruhr as Germany stops coal production and shifts towards renewable energy.

During the internship phase of the fellowship, I participated in a rotational program at Deutsche Bank. At Deutsche Bank, I worked in Corporate Investment Banking, Asset



and Wealth Management, and Global Transaction Banking. Throughout July, I definitely gained a greater understanding of the financial industry, particularly in Germany and the European Union. Throughout the summer, I took part in a number of one-to-one training sessions with Deutsche Bank's employees, ultimately allowing me to gain a deep understanding of the many businesses of a global banking.

### Gain experience

In Corporate Investment Banking, I gained firsthand corporate finance experience by looking at a number of pitch books and financial models for various banking transactions, such as leveraged buyouts. I spent a large amount of time researching different companies, listening in on client meetings, and reviewing credit reports. I also got experience when it came to calculating interest rates for loans, particularly in the realm of public finance.



With Asset and Wealth Management, I was able to gain greater insight in the equity and debt markets as well as private equity. I spent time with the investment managers and worked on case study. I also got the opportunity to participate in the Deutsche Bank corporate responsibility initiatives and spent a day playing soccer with underprivileged children in the Ruhr Area with the rest of my team.



# Nick Gailey



Finally, in Global Transaction Banking, I was able to experience a better understanding of commercial banking products. I spent time in their various departments learning about trade finance, cash management, and how to set up banking contracts. The bank had a number of products and I explored a large majority of them with the employees in this division.

### Travel around Europe

Lastly, apart from the program prepared by the Initiativkreis Ruhr, I was able to travel throughout Europe on the weekends. This was my first time in Europe, and I definitely took the most out of this incredible opportunity and central location. Over the course of eight weekends, I travelled to Amsterdam, Prague, Budapest, Berlin, and Paris, to name a few. I saw the legendary paintings of Van Gogh, incredible castles and cathedrals, the remnants of the Berlin wall, the Tour de France, and the Louvre. Along the way, I got to know the other RuhrFellows as well as new people in every city. Thanks to the RuhrFellowship, I got an amazing experience in the Ruhr Area, Germany, and Europe as a whole.



Coming back to Germany, I had two major goals. I wanted to further my professional experience in natural resource management and learn more culturally about my family's German background. While pursuing these goals over the summer, I found it interesting and memorable to get to know the work of Ruhrverband, and parts of German culture in the process.

### Many excursions

My time at Ruhrverband was packed full of one-to-one conversations with experienced water management professionals and many on-site excursions to reservoirs, waste water treatment plants, hydro-electric power plants, and ecologically restored stretches of the Ruhr. I enjoyed the chance to get insights into the daily operations and wide variety of tasks that a water authority can be responsible for – which range from following regulations to ensure a minimum flow of water in major waterways to using electricity price forecasts to know when and how much hydro-power to produce each day. Adding to this well-established "routine" work of Ruhrverband, I found discussions over new issues to be especially relevant to my studies. Despite notable differences in climate and consumption habits, California

and Germany have some water problems in common. Micro-pollutant removal, increasing energy efficiency, restoration projects, and invasive species prevention topics that are increasingly important to water managers in many different places around the world. For example, chemicals commonly used in medical tests, plastics, and other consumer products have entered the water cycle and environment. Although it is still unknown how long-term human health will be impacted by these chemicals, some wildlife populations have already been observed to be negatively effected. With the recent technical ability to measure and remove these chemicals (which are found in very low concentrations) there is now discussion of whether or not micro-pollutants should be removed from the water, and if so, how to begin implementing such plans in terms of legal framework, finances, etc. This discussion covers one of the many new tasks that water managers are attempting to address in an increasingly complicated world.

### Coal mine

Also, after having gone down into a real Ruhrgebiet coal mine in June, I was very interested to have a meeting about a proposal to re-purpose old mining infrastructure for



# David Gilhooley

pumped hydro-storage. In short, water would be pumped above ground when there is excess energy being produced by solar and wind power, which then could later be used to generate electricity by "falling" down into generators located in the mine. If all goes well and the project is realized, this will make use of the soon to be non-operational coal mines and help meet Germany's need for greater energy storage capacity.

Among the various other excursions and meetings over the summer, I enjoyed attending a lecture on fish passes and re-naturation of waterways, and then visiting some examples along the Ruhr that demonstrated various principles of restoration, flood control, and river continuity. While the Ruhrgebiet has a history of heavy industry and high environmental impact, and is still very urban, there are efforts to bring back natural conditions.

## Laugenbrötchen and Mett

These efforts were reflected in a visit I made to a reservoir and fish hatchery. There, the hatchery manager explained how his project hopes to re-establish various native fish species, including one that has been hard-hit by the urbanization of the Ruhr. That day I also had the chance to try an interesting dish called "Mett". Simply raw ground pork, which is spread on bread, I found that to be one of the more unusual German culinary encounters. Leaving aside the Mett, I was very happy to introduce or re-introduce Laugenbrötchen,

dark chocolate, Schupfnudeln, cheese-less quiche, black forest cherry cake and many other great dishes to my diet.

I appreciated the company culture at Ruhrverband too, from which I learned not only about water management, but also German culture. I asked more about the Sie/du distinction and the use of first name or last name. In contrast to the relatively informal American workplace culture, I was interested to notice how other Germans traditionally address each other by last name, unless they really know each other, which I understood as being respectful and a way to differentiate between relationships. I also added some new German sayings to my collection at Ruhrverband. To illustrate that: there was no perfect solution to a given technical problem and every option involved a compromise, a Ruhrverband department manager told me that there was no "Eierlegende Wollmilchsau" (which translates to an egg laying, wool producing, milk giving, pig - an ideal situation). More generally, it was great to get to know bits of German culture that have long-since been assimilated away from my family in the U.S.

The experiences I have described - along with many other important outside experiences - were a great way to familiarize myself with German culture, while at the same time learning about the challenges of a career in river basin management.

Bis zum nächsten Mal!

Nick

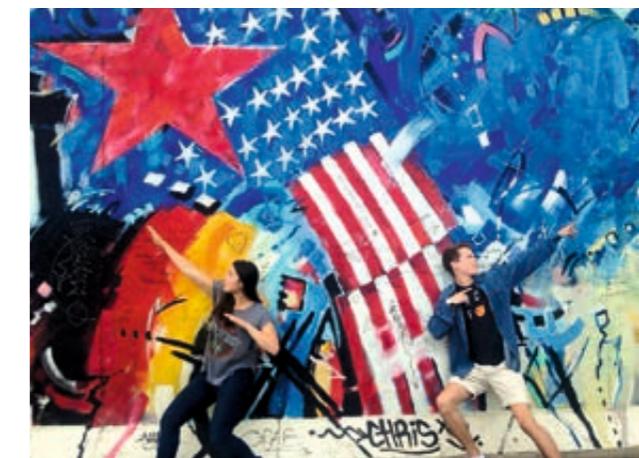
I started this trip with very little travel experience. I had never traveled by myself, I had never been outside of the American continent, and I did not know any German. This program produced my love for adventure and turned me into an international traveler. On top of the great internship experience and the month of incredible cultural events, this program taught me how to make friends in a foreign country, how to navigate unknown cities in unknown languages, and the amazing qualities of the German people.

## The Language

Germany was my first time being in a country where I could not speak the language and this created many challenges. One of my favorite memories looking back is ordering a sandwich on the first day. The cashier took my sandwich and told me my change but I didn't know any German numbers. I ended up giving the cashier a handful of change and just hoping that it was enough. I am so glad that my German has progressed enough that I can look back on that experience and laugh.

In the month of classes I learned a surprising amount of conversational German. I was able to introduce myself and

ask for recommendations about going out and eating. I was able to ask for the menu, order, and ask for the check without the waiter having to switch to English. Near the end of the program I would actually miss the German language when I would take trips to other countries. Later in the program, coming back to Germany from a trip I really started to feel like coming back home.



One of the best parts of the program was the fact that it paired us with people familiar with Germany and the area. Our language teacher, Matthäus, helped us make the language relatable to our lives. Two of my favorite things were when he introduced us to German rappers and the Der/Die/Das Nutella debate. After classes we got to practice our newfound skills on the German buddies that were also a part of the program. One of my favorite memories of the first month was going to a park in Dortmund with a mix of Americans and Germans. They taught us that Germans love barbecuing and sitting in parks in the summer. We talked about television shows and our relative experiences in college. It is great to know that despite being separated by an ocean, we have all had similar experiences and could connect and be friends.

### Cultural Trips

During the first month we were introduced to the complicated culture that existed in the Ruhr Area. The Ruhr area became famous throughout Germany for its flourishing coal and steel mills. The industrialization caused the cities to prosper so many people settled in the region. However, in the 1970's the German economy crashed, the factories were no longer prosperous, and the region needed to adapt these changes. Signs of these changes were everywhere. Some of the Germans and I went to an event called Extraschicht, where all of the old factories were transformed into cultural locations through paintings, graffiti, and dances. It was

interesting to see how the community has come together to stay relevant and move past the region's deindustrialization. One of our lectures had Dr. Sattler, a professor in American Studies, compare and contrast the Ruhr Area with Detroit. Many of the things that she said put the cities we visited into context (Essen, Köln, and Bochum) and explained the landscapes that we were traveling through.

On top of learning about the region's change in culture, we got to experience it firsthand. One of the most memorable experiences was visiting the Bottrop Steel Mine. We got to go over 1000 meters below the surface and see the machines that sheared coal out of the mines. Talking to the coal miners we could see that they had a lot of pride in their work and the things they produced. Learning that the plant would close by 2018 solidified Dr. Sattler's lesson about the deindustrialization of the area.

Meanwhile, we learned that Germany is an intellectual powerhouse when it comes to new industry practices and renewable energy. One of my favorite trips was visiting the Fraunhofer Institute in Dortmund where they were building robots for "Industry 4.0". A memorable project from that was an autonomous quad-copter that would monitor inventory in large factories. Another interesting visit was to RWE's "Ampa City" and to the Ruhrverband in Essen. We learned that almost a full 30 percent of Germany's energy comes from renewable sources. We also learned that

Germany cares deeply about water and river quality and has made plans that will keep the German rivers stable through years of drought or flood. These decisions combined with an amazing recycling process means that Germany is a much greener country than I would have originally thought.

### Personal Trips

An explanation of the RuhrFellowship would not be complete without mentioning the other amazing students and the journeys that we have all been on. For most of the students it was their first time in Europe and we quickly made plans to travel on each of the weekends. I have seen Holland, Germany, Belgium, Austria, and Portugal. I have seen the first stage of the Tour De France, ridden bikes in Amsterdam, and hiked across canyons in Porto. Traveling on the weekends was difficult at times but we got to see amazing new locations and it brought the RuhrFellows closer as a group.

Along the way I met many other incredible travelers, either from around Europe or the United States. Often people from England, Australia or America would hear me speaking English and come over to introduce themselves. When I was traveling on the weekends it was also easy to meet people through hostels and cafes to get recommendations and travel advice. I became much more outgoing during my time here as I kept realizing that everyone was friendly and would be willing to help even with some language barriers.



### The Internship

For my second month I interned at SMS, a plant- and machine builder-company located in Dusseldorf. I was responsible for creating web pages that would allow employees to access information such as: how hot the steel is, how many ladles are active, and what employees are watching which ladles. The internship was interesting and made good use of my skills as a Computer Scientist/Electrical Engineer. Throughout the month I also got to see some of German's



“Industry 4.0” in action. One of my coworkers was building a camera that could identify ladles based on temperature and location. They all seemed interested in their work and I was able to see myself possibly working in Germany as Engineer in the future.

For my internship I relocated to Dusseldorf, which is an hour and a half away from Dortmund. This was a great thing because it let me live in an entirely new city, but I was also located very far away from my friends in Dortmund. Living in Dusseldorf did let me see their enormous amusement park which is only available for a week and half in the middle of the summer. Many of the other RuhrFellows came to visit Dusseldorf as well and we used the city as a base to travel even further on the weekends.

### Wrapping Up

I would like to thank the RuhrFellowship for making this the most memorable summer of my life. Looking back, I cannot believe the amount of activities, culture, and information that was crammed into two months. I feel that I have a great understanding of the German culture and a rough understanding of the rest of Europe.

I would highly recommend this program for other students. It may make the experience easier if one already has German experience, but it is not necessary. The only thing that you need to bring is an open mind and a willingness for adventure and new places!

# Madhav Goel



The RuhrFellowship was a great experience that I am going to remember forever. The combination of work and study packed in a two-month program in a country different to where I grew up and study was a truly unique experience. Faced with the difficulties of moving to a new place and the opportunity to do so much in Germany was overwhelming. There were certainly problems, some negative like the limited Wi-Fi and some positive like deciding where to travel.

### German beer

The stay started with a bumpy ride of moving into the dorms at TU Dortmund. To get adjusted to not having Wi-Fi access was rather surprising but turned out to be a blessing because I got to hang out more with my fellow peers from the US as well as from Germany. The program started with a dinner, where Eric, my buddy at the university, introduced to me to the German beer. The following week was about revising my German and getting better at the slang language that the university students used. My fluency in German became a lot better and I learnt the language again in a rather informal way compared to my formal degree in the German language. It seemed to me that the older people had their own set of

vocabulary as compared to the university students for the same phrases or sentences. It was hard to comprehend both ends because on the one side it was pure German with the older people and a German with many English words with the university students. In the end I seemed to know an entirely different German from before.

### Energiewende

The first month of the program also made me gain a unique insight into “Energiewende” which no one was able to translate into an English word through the month but we definitely got the meaning. Company trips helped me gain an inside look at the German way of business and the tours of the attractions in the Ruhr area taught me about the German culture. A tour of the Signal Iduna Park was one of my highlights as I had always watched this gigantic stadium on TV. Meeting and talking to the editor of Bild was another visit that left an impression on me. The way how Bild reports news had always been of interest to me, as I read Bild when I used to learn German. It was also amazing to see the research facilities at the three universities – to see in person how Germany keeps up with what it is much famed for, the cutting edge technology.

After the theoretical learning of the German work culture and research methods, it was time to put it in practice with my internship at Signal Iduna. Since I during this entire month spoke German, I think it is only fair that I write about it in German.

### Eigenes Forschungsprojekt

„Bei Signal Iduna habe ich im Bereich Human Resources begonnen, um die Firma kennenzulernen. Dafür habe ich viele Seminare besucht, in denen ich Menschen aus allen Teilen Deutschlands kennengelernt habe. Das Talent-Management-Programm war ein besonderes Seminar, in dem es um Kommunikation ging. Wir haben mit einem Experten über Rhetorik und Moderation gesprochen, weil beides in der Geschäftswelt besonders wichtig ist. Anschließend habe ich Herrn Rath getroffen. Er leitet den Bereich Personal Aus- und Weiterbildung und Sijox. bei Signal Iduna. Ich habe die einzigartige Chance bekommen, sowohl verschiedene Bereiche der Firma kennenzulernen, als auch ein eigenes Forschungsprojekt bei Sijox zu leiten.

Bei Sijox habe ich nach Versicherungsprodukten gesucht, die weltweit verkauft werden. Systematisch habe ich mit Hilfe von Kollegen geschaut, was in Deutschland auch beliebt sein könnte. Das hat mir dabei geholfen, den deutschen Markt kennenzulernen. Ich habe deutsche und US-amerikanische Versicherungsprodukte verglichen. Dabei stand die Frage nach der Technologie im Vordergrund. Ich habe neue und alte Methoden studiert, die in beiden Ländern zum Einsatz kommen. Das hat mir auch Einblicke in die Vergleichbarkeit beider Wirtschaftssysteme ermöglicht – eine spannende Erfahrung.



Wie bereits erwähnt, durfte ich auch andere Bereiche und Abteilungen der Firma durchlaufen. Dazu zählten die Unternehmensrechnung, der Bereich Planung und Controlling, die Vermögensverwaltung und die LD/FD Entwicklung. Es war eine wunderbare Erfahrung, auf so viele verschiedene Leute in unterschiedlichen Positionen zu treffen. Der Austausch mit ihnen war sehr hilfreich, weil ich noch nicht weiß, wie mein Karriereweg aussehen soll. Als RuhrFellow konnte ich deshalb jede Menge Informationen sammeln, die für mein weiteres Berufsleben wichtig sind.“

### Discover Europe

I must admit that speaking German the entire month was exhausting but nonetheless my German language skills have never been put to such practical use. And this was not only at the internship but also while traveling in Germany and Europe. We had the weekends off and the first thing that came to mind was exploring other parts of Germany as well as Europe. It is so convenient to travel to anywhere in Europe given the centrally located Ruhr area. I had the



chance to visit Amsterdam, Brussels, Ghent, Bruges, Budapest, Hamburg, and Stuttgart. From the partying in Amsterdam to the thermal baths in Budapest, it was a truly amazing opportunity to discover Europe. But not to forget my best weekend trip, it was the trip to Stuttgart. The Mercedes Benz Museum was absolutely stunning and to see Neuschwanstein was like a dream come to reality.

### Perfect summer

The Ruhr area was something absolutely contradictory to what I had imagined it to be. My colleagues told me that at a point in time, they wouldn't be able to hang their clothes outside otherwise they would go black. It was hard to believe and imagine that because I found the Ruhr region to be rather green. The area has so much to offer from events and fairs to absolutely great companies and education. I don't see why this area was described to me as a chaotic place with coal and steel industries only. That may have been true, but I can certainly say that it isn't true anymore.



The two-month stay in the Ruhr area was a package like no other. It was a perfect summer with amazing weather, fun filled field trips, practicing the language, going to local fairs, the chance to travel Europe and getting that work experience. The part that I loved the most about this program was that we got to not only learn and see stuff but also gets hands on experience doing it. Overall the program provided a complete overview of life and opportunities in Germany, something to definitely look out for.



## Jerald Han

### “Deutsch? – I thought we signed up for German.”

For a bunch of thirteen year old Singaporeans who have never been to Europe, our first day of German class (in 2005) was the very first time we ever heard the word “Deutsch” in our lives. This was a year before the 2006 World Cup when the word “Deutschland” started showing up all over the media, and we have known better since then.

After a couple of years, I stopped learning German as a third language due to time constraints. However, having taken a few classes on German history and linguistics as breadth courses at Berkeley, I find myself with a renewed curiosity for the language and culture. I thought that the RuhrFellowship program would be the perfect chance for me to resume learning the language and experience German culture firsthand. Also, it would be an added bonus for me as an engineering major to be able to say that I was once, albeit briefly, a part of the renowned “German Engineering” brand.

### First Month

The first month of the program included a schedule packed with lessons, seminars, lectures, excursions and visits.

Through this, we were shown various initiatives undertaken by the people and the government of the Ruhr region and North Rhine-Westphalia to turn the slowing industrial economy into a vibrant technological and innovation one. I found this massive effort to be highly inspiring as it definitely takes a great deal of courage and aligned effort to introduce such dramatic restructuring in the largest metropolitan region of Germany. I believe that the painful yet motivating experience of the Ruhr population provides valuable lessons that anyone and everyone can benefit from.

I also benefitted a lot from the German language classes. Although some sessions stretched up to three or four hours, I found that I benefitted a lot from an experienced teacher like Kai. It was a good refresher for me and I tried, as much as possible, to form more complex sentences during class. I almost always stumbled, but I guess trying in the first place is an achievement in itself.

I am also grateful to have had the opportunity to interact and hang out with all the “doubles” through the planned and ad-hoc activities. My double was very opinionated and



had a lot of views on the policies affecting the university, the region and the country. One of my first few conversations with him took place at the first party we attended. With both of us having a bottle of beer in hand, he explained to me the political structure and parties of the state and the nation. That definitely was the most enlightening party I have ever been to. Also, the people I have interacted with during the program never fail to speak objectively and frankly about their country’s history, even as we traversed the difficult themes and parts of their history. This was what made the immersion process so refreshingly genuine and irreplaceable.

### Internship

It was certainly a delight working as a Civil Engineering intern at Hochtief. As it is a huge firm with international partners from various corners of the globe, there was a good spread in the projects that the different teams were working on. I personally got to help out with an interstate freeway project in the US, as well as an airport within Germany. I had to look at plans and understand them so that I could provide feedback or proceed with my calculations. It was also fulfilling to see how my feedback and calculations



were considered and communicated to the people from the other firms in the collaborative effort.

It was also wonderful that everyone at the workplace was incredibly friendly and patient with me even as I tried to communicate in grammatically flawed German. Although



they all had their own deadlines to meet, they always made it a point to explain to me what I was doing and why it was important. I have definitely learned a lot about the industry and technical work under their guidance.

### Experiencing Germany

Unlike my peers, I decided to purchase the German Rail Pass. While many of my friends were visiting places that were relatively far away such as Porto, Budapest or Prague, most of my weekend trips took place within Germany. One of my most favorite trips was my solo adventure to Dresden and the nearby Saxon Switzerland mountain range. Dresden was absolutely beautiful and the city center had been restored so meticulously that it did indeed feel like a trip back in time. From Dresden, I took a half an hour train ride towards the Czech border and hiked up the Saxon Switzerland mountains. There, I got a phenomenal view of the Bastei Bridge. It was surreal as I have been wanting to go there ever since I came across it on Wikipedia a few years ago.

The train rides to the far reaching corners of Germany have given me the chance to get acquainted to the local cultures of the different regions. From the Swabian to the Saxon, from Plattdeutsch to Hochdeutsch, from the western Rhine to the eastern Elbe, it is clear that Germany is far from a cultural monolith. While many of the old buildings had been razed and history may not be as apparent along the streets as it is in other European cities, I have come to learn that German history is best accessed through conversations with the people. From my Airbnb host recounting the night the Berlin Wall fell, to the cultural seminars on the Ruhr, it is evident that history is very much alive in the Germans' memory of the good times, the bad times and the way they see themselves as a nation as well as their place in the EU. While there is still so much more of Germany to understand and discover, I am glad that I have managed to learn so much in such a short time. I know I will definitely be crossing paths with Germany again in the future. Bis zum nächsten Mal, Deutschland!

I have lived in the United States my whole life and have never been abroad before. I wanted to do something completely new and out of my comfort zone during the summer after my sophomore year of college at Princeton, and the RuhrFellowship program seemed like the perfect opportunity to do so. Spending three months in a foreign country where I did not speak the language has been one of the most challenging and rewarding experiences of my life. I was able to gain invaluable work experience, travel on the weekends to some amazing European cities, and experience complete cultural immersion, all in one summer.

### The First Month

During the first month of the program, we had a variety of events and excursions planned that kept us extremely busy. We started nearly every morning with German class. I had no German language skills when I first came, so learning German in just one month was extremely difficult for me. Our beginner level teacher, Matthaeus, was extremely patient and focused the curriculum on topics that he thought would be immediately useful for us in daily life. During class we would also have discussions

about irregular German grammar rules and German cultural differences that we had noticed while being in Germany. On the last day of class, we all had breakfast together one last time before starting our internships the next day. Large companies in the area warmly invited us to visit their offices and to go on excursions. On the excursions, we visited unique places that provided really interesting insight on the work culture of the region, such as a water treatment plant with Ruhrverband and a chemical park with Evonik. My favorite excursion was the coal mine visit in Bottrop. We were invited to go down into one of the last running coal mines in Germany, alongside with other coal miners, to see how the process of coal mining works.

We also were enrolled in a course at TU Dortmund called Culture and Technology, which was one of the few courses taught in English at the university. We had the opportunity to attend a large weekly lecture and work closely with German engineering students in smaller weekly discussion groups. While we were only enrolled in the course for four weeks, I really enjoyed listening to different perspectives of culture and technology.

### Traveling

I took advantage of being in the heart of Europe and traveled to nearby cities such as Berlin, Amsterdam and London on the weekends with the other RuhrFellows. I was pleasantly surprised that the public transportation system in Europe is much more accessible than in the United States; traveling on the weekends usually took only a couple of hours. Navigating through unfamiliar cities where we did not speak the language was challenging, but definitely worth the trouble. Our semester travel ticket also allowed us to travel to cities all around the North Rhine-Westphalia region, such as Cologne, Dusseldorf, and Aachen. On days where I had extra time in the afternoon or on short weekends where I did not travel, I took many one day trips with the other fellows to these cities.

### The Internship

My internship was at Vaillant, an international company headquartered in Remscheid that develops energy efficient heating and cooling appliances. My internship at Vaillant was my first real technical job in industry. I worked in the research and development, electronics department, specifically on models and simulations of the appliances created by Vaillant on MATLAB and Simulink. I have used MATLAB in my previous coursework as an Electrical Engineering major, so I was excited to be able to use and further develop what I had learned in school in a practical setting. In addition I was introduced to other interesting

topics that were completely new to me, such as some of the basic physics behind heating appliances and controls engineering. The people at Vaillant spoke English very well and were extremely welcoming to me. During my first week I was invited to run a 5K with the company. The people on my team were always willing to answer my questions or to tell me about the projects that they were currently working on. My adviser also introduced me to many of his colleagues in different departments so that I could learn about some projects in other subjects, such as projects in solar thermal systems and ventilation systems.

Unlike the other companies, Vaillant is located in Remscheid. Remscheid is about 40 minutes away by car, but at least two hours away from TU Dortmund using public transportation because of bad connections and long transfer times. I was lucky that Vaillant was able to find me two incredibly warm and kind host families to stay with during the duration of my internship so that I did not have to commute every day. Living with a German family, I was able to experience German culture and life firsthand; I traveled to work every day with my host family, ate traditional German meals for dinner and spent some weekends with my host family getting to know the area.

My first host family lived in Remscheid, only 15 minutes away from the company by foot, so it was very convenient to get to and from work every day. The father worked



at Vaillant also and we would often walk to and from work together. My second host family lived in a city called Luedenscheid, which is about 50 minutes away from the company by car. Living in Ludenscheid was a bit inconvenient for me, but my welcoming host family made it all worthwhile. The family had two children and a dog living at home, and we would often all play card games after dinner. On my 50 minutes commute to work with the host father, I introduced him to popular American music and he would often take different routes to work as an opportunity to show me around the area.

I am extremely grateful for the experience that the Ruhr-Fellowship Program has given me this summer. This

experience has opened my eyes to how little I know about other cultures outside of my own; it has inspired me to be more open minded about other cultures and to seek more international experiences. I would definitely love to come back to the Ruhr region again.



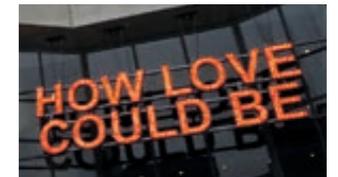
# Toni Li

I want to thank the Initiativkreis Ruhr, the organizers of the RuhrFellowship program, and everyone else who made this program possible for granting me the opportunity to participate in an experience of a lifetime in Germany.

The RuhrFellowship program offers a month of classes, lectures, and excursions combined with a month-long internship in Germany, but it seemed like so much more than that. Nowhere else in my college experience could I see firsthand the innovative projects of industrial companies and universities as well as the cultural advancement of Germany. In addition, I met a lot of new, awesome friends from all kinds of backgrounds. It also didn't hurt that I had the chance to see other parts of Europe on my own on the weekends. In short, the RuhrFellowship program was packed with fun, learning, and, most of all, adventure.

I came into the program not really knowing what to expect. I told myself I would improve my rusty German I learned in high school, explore Europe, and learn what it is really like to work in a large German company. First, I participated in the Advanced German section during the first month. Even though all of the Advanced German students came from

different backgrounds and varying proficiencies of the language, our instructor handled the class gracefully. He was entirely flexible and accommodating with drills and exercises, and he made sure we were all able to understand the material. Continuously speaking and listening to German, especially with a fluent speaker, improved my German enormously. Even though our schedule was extremely busy with classes and sections at TU Dortmund, excursions to numerous companies and universities and meals and events with the other fellows and with our German "doubles," we usually had free time on the weekends. I prioritized seeing Germany while I was there, so I traveled to places like Cologne, Berlin, Hamburg, Stuttgart, Düsseldorf, Duisburg, Essen, and Gelsenkirchen. In addition, I had ample opportunity to visit cities outside of Germany: Brussels, Bruges, and Ghent in Belgium; Amsterdam and The Hague in the Netherlands; and Paris, France. Finally, I interned at RWE, one of Germany's largest electrical companies, during the second month of the program. At the company, I worked in the sales and distribution department and evaluated new methods to analyze data. I found myself directly applying ideas I learned in school, especially from my Data Science class. Through independent research, I learned and practiced



many skills applicable to my studies in computer science. I also had the chance to sit in on some business meetings and even an international conference about big data.

### Learning effects

After completing the RuhrFellowship program, I realized these goals I had created were fairly generic and easy to achieve; I felt like I had accomplished much more. For instance, I also learned how to navigate a German cafeteria just by reading the German menu, how to travel on public transportation (and adjust for the delays and cancellations I experienced), how to travel on a budget (and splurge



# Wanda Lipps



when I had to), and even how to avoid “tourist traps” trying to rob oblivious visitors of their money. I also learned intricacies of the German culture I could only learn firsthand, both disproving and confirming some common stereotypes of Germans. For instance, the view that all Germans love eating heavy meat is false. These days, there are more and more vegans and vegetarians in Germany, and it is evident the country is trying to accommodate for special diets more. While there may not be as much variety in vegetarian meals as in the US, Germany is clearly adjusting and becoming more flexible. However, from what I have seen, the stereotype that Germans can drink a lot of beer is pretty true. I think the lower drinking age has allowed for a more relaxed attitude about beer; it is common to see people openly drinking on the trains or in the streets. Beer was also present at every party and event I saw and Germans certainly drank a lot of it, but I never saw them becoming a problem. For the most part, Germans appeared to be able to handle their beer. Also, more specifically, I saw how the Ruhr area is advancing past its dependence on industry,

especially coal and steel, and branching out to investing more in education and alternate energies, with its national parks built on the skeletons of huge factories and its repurposing of old industrial sites such as the Phoenix Lake, a newly residential and recreational area built where a steel factory used to operate.

Much as I may try, I find it difficult to sum up my experiences during my stay in Germany. There have just been so many activities and trips, from climbing up a mountain to see the Neuschwanstein castle to plunging to the depths of RAG’s Prosper Haniel coal mine, from soaring around TU Dortmund university campus on the hanging monorail to perusing the ruins of the coal and steel production plant in Duisburg’s Landschaftspark. I am glad I had a chance to describe some of these experiences further in my weekly blogs, but I am not convinced I can completely illustrate the modernity, excitement, and novelty of the entire progressive country in just words and pictures. My only suggestion is to travel there and try it out yourself. You won’t regret it.

**W**hen I first arrived at the Düsseldorf airport at 6 a.m. after a sleepless flight, I was excited, but extremely nervous for what the program would bring. I had never been to Germany or Europe before, and suddenly I would be living and working in Dortmund for two months without knowing much about the language or culture. Despite my initial worries, I had amazing and culturally enriching experiences that will stay with me for the rest of my life.

## Classes and Excursions

The first month of the program focused on taking classes at TU Dortmund and going on various cultural and business excursions. During this month, I learned much about Germany as a whole, but particularly the Ruhr Region or Ruhrgebiet. In addition to learning the basics of the language, our German teacher would often teach us about certain aspects of German culture, such as the education system, immigration, and nationalism, as well as give us recommendations on where to eat and visit in the area. Through the lecture and interaction with the buddies, I learned how different the college experience in Germany seemed from mine at Penn. College and studying did not seem to completely consume student’s lives, which contrasts to the “Penn

Bubble” I live in while at school. Additionally, through the tours of the University research facilities, I saw some differences in the approach and purpose of research. Research in Germany all seemed to have a greater focus on industry, as opposed to research for the sake of research. I was most impressed, however, at how organized and clean each lab we visited was. I even took a picture of a tool board that had outlines for every tool because I was so amazed by the superb organization.

In addition to academia, we went on cultural and business excursions. While all of these were amazing and educational, I will mention two highlights – Signal Iduna Park (Westfalenstadion) and RAG Prosper Haniel. Signal Iduna Park is the home of Borussia Dortmund (BVB), Dortmund’s football club. In Germany, and Dortmund in particular, football is huge. The entire city loves and is incredibly loyal to BVB. As a fan of the German National Team and the Bundesliga, visiting the stadium was a true dream. Not only was it an incredible experience for me as a football fan, but it was an insightful view into Dortmund culture. During the tour, you could see how proud citizens of Dortmund are of BVB and the unifying power the club has on the community. The



visit to RAG Prosper Haniel, or the coalmine, provided me with insight in the history and future of the region. During this excursion, we had the opportunity to go down into one of Germany's last operating coalmines. We learned the traditional miner's greeting ("Glück auf!"), put on all the gear, got our faces dirty from coal dust, then ate dinner with miners. The history of the Ruhrgebiet is heavily tied with the coalmines and other similar industry. While visiting the mine, we saw how the region embraces this past while preparing for the changes that will occur as they close.

### Internship

For the second phase of the program, I was working at Thyssengas, a natural gas distribution company, in the corporate development division. As part of my internship, I attended many meetings, helped my advisor with slide decks, and went on excursions to see technical aspects of

the business. As a personal project, I researched and gave a presentation about the United States natural gas distribution. Although the meetings were in a higher level of German than I could fully comprehend, I received detailed summaries from my advisor before and after, so I was able to see the connection between the meeting topics and concepts I learned in classes, such as M&As, corporate strategy development, pricing decisions, and outsourcing. Since natural gas distribution is a regulated industry, I was able to learn about how the German government and EU functions and plays a role in business decisions. I was able to experience the "German efficiency" firsthand while attending meetings. The meetings had a purpose and agenda that was followed. Meetings rarely went overtime; Germans follow their schedule. My coworkers would go to lunch at the cafeteria and to the coffee maker at the same time each day. They are able to accomplish all their work, yet still have time to

take long holidays. Further, the interactions I had with my coworkers and observing how they function were the most valuable lessons from my internship. I had many wonderful and eye opening conversations with my advisor and coworkers about politics, current events, and labor policies. These conversations broadened my perspectives and gave me new viewpoints I had never considered before.

### Impressions and Takeaways

If you were to look up German stereotypes, you would most likely find that Germans are distant and not very welcoming. This could not be further from the truth. Mostly everyone that I encountered from my coworkers to other students to random strangers were extremely friendly, warm, and willing to have a conversation. Coming from a medium sized town in the South, I am no stranger to engaging in small talk, but it seemed to happen more frequently and conversations



seemed to be more personal. People are not afraid of being in close proximity to strangers, which is very different from Philadelphia where even eye contact with strangers is abnormal. Out of all the different experiences I had this summer, my personal highlight would definitely be the compilation of all the conversations I have had with people. Once I let go of the "mind your own business" attitude of a big U. S. city, I was able to swap stories and compare cultures with coworkers, students, and fellow travelers. Not only did each conversation teach me about the world and various cultures, but they also taught me how to talk with people from different backgrounds and simply be a friendlier and more engaging person. From these conversations, I was able to leave the Ruhr Region with a better understanding of German and European culture as well as grow as a person. All in all, the RuhrFellowship provided me with a valuable once in a lifetime experience that I will never forget.



# Jonathan Valverde Lizano

**M**y name is Jonathan, and I am a rising senior at the Mechanical and Aerospace Engineering department in Princeton University. I am an international student from Costa Rica. This summer, I wanted to complement my education with practical experience, especially at a company, since I will most likely seek a job right after college. The RuhrFellowship provided this opportunity for me, as well as the chance of exploring Europe for the first time in my life!

## Living in Dortmund

Life in Germany proved to be challenging from more than one point of view. There are simply many differences, and one needs to adapt to a new environment. A big challenge was the language barrier. I had no background in German, and even with our course, I found it very challenging and was only able to master a few basic things. A considerable portion of the Germans that I encountered do not speak English. I survived, though, by either gesturing or articulating words in broken German, or looking for someone to voluntarily translate. However, the whole experience of adapting has made me a more mature person. I have been able to survive here with a limited German lexicon that consists of the numbers, “danke” (“thank you”), “bitte”

(“please” or “you are welcome”), “Ich spreche kein Deutsch” (“I do not speak German”), “bis später, Peter” (the equivalent of “see you later, alligator”), and a few other basic phrases.

## German course

German is hard! If anyone has ever told you that German is easy to learn for an English speaker, I doubt that person has ever done so him or herself! Try pronouncing squirrel in German: Eichhörnchen. German also has a case of noun combination, where two nouns can be combined into a single word. You can make up your own combined words, but the problem is this lends itself to really long words. Add that to case inflection for four different cases, three different grammatical genders lending themselves to fierce debates as to whether nutella is neutral or feminine (das vs. die), and a more complicated sentence structure than English, and you have got yourself the recipe for a very hard to learn language! However, these weeks of learning German were very educational.

I can now see a German word and have a more or less good idea of how to pronounce it (whether or not I can is a different story!). Nonetheless, knowing German numbers has

been extremely useful in my daily life. A lot of cashiers here are not fluent in English, so it will help a lot if you know the basic numbers.

## Excursions

Who can complain about free food and goodies to take home? My favorite excursion is definitely the trip to the mine, but what I liked about our trips is that there was something to be learned in each of them. I learned a lot about how German companies work and the problems they are facing with energy resources.

## The internship

I interned in Siemens, Mülheim. The division I worked with was in charge of steam turbine research and development, within power and gas. The facilities were very impressive; I was able to see huge turbines being assembled and transported. Previously, turbines had been a very interesting subject that we only glanced over in my Thermodynamics class back in sophomore year! The first weeks provided some background on steam turbines, too. My project, within the coordination department, was to create documentation and research possible improvements for the

system that is used to exchange information for project coordination. Since Siemens is such a big company, this provided me with a lot of knowledge of how complex projects are coordinated across departments and how information is exchanged up and down a complex company hierarchy. This background will be useful to me as an engineer, because design projects, which involve an incredible amount of work, are usually coordinated amongst several teams.

## Travelling

The area in which we stayed is pretty central in Europe and great for exploring. Nearby, you can visit big cities such as Essen, Cologne, and Düsseldorf. Book a bus or a train, and it is perfectly possible to visit Amsterdam during a weekend, even for a one-day trip! Paris is four hours by train. If you feel adventurous, like I did, Italy is a one hour flight away. Plan enough in advance, and you can go to London as well. Exploring Spain or Eastern Europe is also possible if you have a bigger budget and find the time.

Being on a limited budget, I decided to restrict myself to prioritize my dream cities, and seeing if additional trips

were possible after that. Therefore, my trips included Cologne, Brühl, Berlin, Amsterdam, The Hague, Rome, and Paris, distributed over five different weekends of travel. The last four cities were a big test for me, since I decided to go by myself. The experience really paid off as I was able to have complete freedom as to where I went and how much time I dedicated to each place. One weekend felt like very little time for most of these places, and if I am ever able to explore Europe again, I will gladly return. Let me tell you a little bit about my adventures ...

### Berlin

This is one city that was extremely central in recent world history, and it is amazing to walk by places in which such significant events happened. I travelled here with other four RuhrFellows. We visited several sections of the wall and several memorials. I was even able to get an (alleged) piece of the Berlin wall as a souvenir! Our visit would not have been complete without seeing the Brandenburg gate, the Bundestag, and the Olympic Stadium (where, as we learned, the final of the 2006 World Cup took place). Sadly, a lot of Berlin's original buildings were damaged or destroyed during the war. However, Germany is a resilient nation, and they have rebuilt a lot of these old buildings and made Berlin into a true modern metropolis!

### Amsterdam and The Hague

I had heard great things about Amsterdam from other RuhrFellows. However, I was not as interested in the museums and places they visited, so I was planning for a short trip to simply get a feel of this beautiful city and its canals. Upon learning that The Hague was nearby and that a trip in one day was possible from Amsterdam, I decided to dedicate



one day to each city. In Amsterdam, I took a boat cruise and went sightseeing. It was a good break from work; the canals transported me to a different era, and I was able to relax and breathe the Amsterdam air. On the next day, as a big fan of Escher, I had to visit the Escher Museum in The Hague! I got a souvenir with which I can see one of Escher's drawings in 3D. After this visit, I went to the Peace Palace, the location of the International Court of Justice. The inside of the palace is not open to the public, and I was able to access it by obtaining one of the last spots in a tour that is only offered during the weekends. I was very lucky, because the palace is unlike anything else I have seen in Europe; it is made of different gifts from the nations that built the palace. These include doors made of Brazilian wood, Dutch ceramic decoration, columns made of Italian marble, a Persian rug from Iran, a massive Russian vase, a fountain from Denmark, and Japanese wall decorations.

### Rome

The Eternal City is one of the big names of Europe, and with good reason! Even exploring normal streets of Rome made me aware that I was in Italy: the roads made of small blocks of stone, the places with Italian gelato or pizza, souvenir shops, and old buildings abundant in artistic detail. I spent three full days in Rome and was able to visit a lot of the main attractions. At the Vatican Museums, I marveled for about an hour at the frescoes inside the Sistine Chapel. Although it was relatively crowded, I was able to move

around, admiring different areas of the frescoes, and sometimes going back to spots that I really liked. It was a little hard to leave this breathtaking place, but I moved on when I was satisfied (also my neck needed a break). I visited the Colosseum, and through booking online, managed to skip the insane lines and get a tour to the Underground and the Third Ring, which are not open to the public!

The next day I explored ancient Rome once more in the Roman Forum and the Palatine Hill. I then moved to the Altare della Patria, which was built in celebration of the Italian unification. At the top, I had an incredible view of Rome. A telescope even let me see the tourists walking around the Roman Forum! Next, I visited the Pantheon, the Trevi Fountain, Piazza Navona, Piazza del Popolo, and the Spanish Steps. Rome truly is an open museum.

On my final day, I visited Saint Peter's Basilica. Quite simply, it is the most luxurious church you can possibly imagine. It was very impressive as well to be able to visit some Papal crypts, and Saint John Paul II's tomb. I also climbed to the top of the dome, which treated me to a final view of Rome, and allowed me to peek into the Vatican itself!

### Paris

I was afraid that my experience in Paris might feel not as exciting after such an amazing weekend in Rome. I was wrong.

I started my trip by climbing to the top of the Notre Dame cathedral towers. The view of the beautiful Seine River, the Eiffel Tower, and the Parisian streets already had won my heart. Sadly, by the time I went back down, there was a snaking line for the inside of the cathedral. I decided to leave this for my last day, when I could get there early. I then went to see, but not get into, the Saint-Jaques tower and the Louvre Museum (a visit here will have to wait for the future). I then walked all the Avenue des Champs-Élysées, until reaching the Arc de Triomphe, which I climbed. It was interesting to see that the arch, originally built by Napoleon, honors not only his victories but also WWI and WWII soldiers. I then made my obligatory visit to the Eiffel Tower, going up the steps to the second floor and on an elevator to the top. I was lucky enough to watch the whole sunset at the best spot in the top! It was also amazing to see the light display of the tower while being at the top. I dedicated hours to the tower, and these are memories I will forever cherish. The next day, I visited the Palace of Versailles and its gardens. Of particular interest to me was the Hall of Mirrors, where the Treaty of Versailles was signed. Next, I travelled back to Paris. After a stroll around the Pont Alexandre III, I enjoyed a relaxing cruise along the Seine with the Bateaux Mouches. I got some amazing shots of Paris! Finally, I went to Sacré-Cœur. At Le mur des je t'aime, I saw couples taking pictures with a wall filled with the phrase "I love you" in countless languages. After climbing the hill, I arrived at the cathedral to watch the end of the sunset, and explore a

little bit of this nice little area of Paris. I started feeling sad that I would be leaving on the next day.

I used my final day to explore the inside of the Notre Dame Cathedral, which was another breathtaking experience. Then, I went to the Pantheon (the Parisian version), where multiple notable French are buried. I also paid a visit to the Luxembourg gardens and the Place de la Sorbonne. Paris was really tempting me not to leave! I used my final afternoon in the city to visit Napoleon's tomb and Les Invalides, a war museum of France through the ages. The tomb was impressive and luxurious, while the museum displayed war propaganda, uniforms, miscellaneous articles, and information about several battles.

### Conclusion

The program helped me grow in several ways. I became a more independent person. Before this summer, I would have never thought that I could have planned and done a trip to Rome or Paris by myself! Being in a corporate environment also helped me mature professionally and think more about life after graduation. I was also able to explore several contrasting cultures. Europe, I will miss your cultural richness and diversity. I really hope our paths cross again. Adios, goodbye, au revoir, arrivederci, bis später!



# Remi Mir

## “What was your original motivation for participating in the program?”

I looked at the question again and blinked. In the course of two months, I had changed significantly. Newer motivations (traveling, meeting new people) were added to the ones I had had as an excited sophomore sending along an aspiration-tinged application, which I decided to re-read. And when I did, it all came flooding back: “a one-of-a-kind global experience”, “a chance to grow a global network”, and finding out if “working overseas for a future career is the best choice for me.” When I made those statements, I had in mind online research of the Ruhr Area, conversations with the German program manager at my school, and former Fellows’ impressions.

This was proof that sometimes we expect such specific things, but really don’t know what we are getting into. Because as much as someone can tell you how “cool” it is to work in another country, the mere concept of being in another country doesn’t mean anything until you yourself arrive at Düsseldorf Airport, scouring the McDonald’s for a “buddy” whose last name is Peper and feeling the panic/ excitement swell in your chest as you realize that

all the signs are in German, all the people around you are speaking German, and the next sixty days of your life will unfold in Germany.

Sixty days don’t seem like much, but believe me, if you pay attention, they are enough to make you realize how you are evolving as a person. At the start of mine, I felt like a baby, wide-eyed and taking in the newness of it all, from the moment Peppy Peper in his pink shirt found me and Youjin, to the first time I saw a DB train, to finally arriving at Ostenbergstrasse (OB) 99, Zimmer 361. Along the way, we had gotten lost and mistakenly took the H-Bahn to Campus Süd, and I was thinking how I wanted to go on a Roosevelt Island air tram that overlooks the city. My folks would say tomorrow or next week or next month, and after pushing it back enough times, we forgot about it. So when I rode the H-Bahn over “Jurassic Park” (it’s no New York City, but it’s still some ride), it was as if tomorrow really had come. It sounds silly, but I felt like I had accomplished so much on that first day. I had never been outside the U. S. on my own before, nor could I get over the fact that I had been allowed to travel so far from NY. It was like victory after victory for a homegrown homebody like me.



Ironically, the first new Fellow I met was the complete opposite: a seasoned traveler with a number of countries already under her belt, the latest being Turkey. After talking with Youjin, it became clear that neither of us knew quite what to expect from our internships, as details had been spare and not so specific. It was like being in the midst of a great mystery, like the one where perfect strangers are invited to a mansion under different pretexts.

By mid-June, however, we had all at least come to know each other and had gotten used to the rush of daily activities: campus tours one day, a walk through a giant water treatment plant the next ... and photos, so many photos! Laura said we might feel like celebrities, given all the press coverage. It was strange since we hadn’t done anything yet to merit that sort of attention - not that we didn’t enjoy it, of course!

## Lake Phoenix

The highlight of the excursions was Phoenix-See and, of course, the annual favorite, the coal mining tour. I took a course this past spring on how the environment (political, natural, social, etc.) affects the space in which we live and perform. One concept from it kept ringing in my head

as I walked by the lake: every square inch of land (and water) has history, affected by literally everything we do. Phoenix-See was originally the site for a blast furnace and steel plant, but I could envision men tearing it down and setting the stage for a less industrial front.

Had I not taken that course, I probably would have struggled with the idea of repurposing a place, since I know of areas back home that didn’t get a second life. I could look at Phoenix-See, though, and appreciate its past and present,

the latter of which we, to some extent, were a part for the time being. We heard the geese crowding amongst each other, felt the sand brush over and into our shoes, and saw the waves lightly unfurl into the sunset. And around eight, we went to Café Solo Factory, right by the lakeside, to eat and talk to Dr. Neuhaus from RWE. A man kind enough to spend his time and money on people he had only just met, he advised us, “Do this for yourself: do something that makes you stand out from everyone else.” It seemed obvious, but I guess it is one of those things you only truly understand when you actually do it.

### Man in the Mirror

Nine days later, I was on a bus heading towards RAG Bergwerk, with Laura on the sidewalk by IBZ waving, “Have fun! Don’t die!” In between a conversation with Eric, Madhav, and Katy about our priorities in life and Eric’s secrets, I kept imagining Los 33 in Chile and struggling to maintain composure. And then we got to RAG Bergwerk, where, after a presentation on the science behind coal mining and a discussion on the industry’s fate after the planned shut-down in 2018, we were ushered to the changing rooms. The other two girls in our group dashed behind their curtains but Katy and I stood there, exchanging looks.

Katy: Do we really have to ... change ... everything?

Me: ... I think so.

About twenty minutes later, we were on another bus, wearing other people’s underwear. Actually, we were wearing other people’s everything: undershirts, pants, hats, gloves, the whole lot. I turned to Katy and admitted, “Sometimes I wonder how we got into this situation.”



We sat there nervously, my stomach, and I imagine Katy’s, churning as we neared the entrance to the mines. There was a mirror right by the elevator that would take us down more than a thousand meters. A sentence above it (roughly) read, “This man is responsible for your safety and well-being.” That was deep. But it didn’t quite fit the situation since some of us weren’t actually men, but girls in men’s clothing – females aren’t allowed to work in the mines. In any case, we got the message. I will leave future Fellows to discover the ensuing details on their own, but the main takeaway was that I had worried for nothing. We got in and out quicker than expected, and the actual mining was way different from what I had thought it would be. Instead of a horde of miners striking huge walls of coal with their pickaxes, a giant automated cart rolled back and forth to collect the pieces, with only a few workers watching over the controls. No sun, no fresh air, no toilets (!) down there. The struggle was real, and I walked out with a greater appreciation for the work they do – safe, but not easy in the least.

### Sunday in Kreuzberg

That weekend was our Berlin trip. Sunday morning, I got up early and had originally planned to explore Kreuzberg,



the neighborhood we were staying in, on my own for a bit, but never got past the main door of the apartment building. A carousel with a single pole in the courtyard had caught my eye.

I stepped onto it and kicked the earth with my foot, watching the yard slowly begin to circle around me. I liked the quiet. I liked having space. The days before had been dense from start to finish, full of touristy things to see and do, crowds to weave through, and overuse of the word ‘typisch’. There is a point at which I realized I wasn’t the same person as the one who arrived at the airport more than three weeks ago. Not so wide-eyed anymore, but more like one of those quiet, careful kids on the first day of school. I kept my bag close, and my thoughts closer as I let others speak, listening to their stories and the sounds of the city.

Every once in a while, when I sensed I was coming to a stop, I kicked a little harder and leaned in closer to the pole. There was something about being still that made me nervous, like it wouldn’t be right if I took the ... motion out of my life. At the same time, I relished the peace and calm



around me, but more importantly, inside me. An unusual juxtaposition, sure, but I noticed it once I started going on weekend trips: Gelsenkirchen for the zoo, London, Oberhausen and Waltrop for the Extraschicht Festival, Brühl for the palace, Berlin, Aachen, Münster, Solingen for the castle, Essen for Villa Hügel, Amsterdam, and Dortmund City for the occasional shopping trip.

The whole idea of going out on the weekends – sometimes with others, sometimes by myself – and exploring new places was at first novel to me. Now that I was getting better at planning, making lists, and packing on short notice, I was adopting a new lifestyle, even if only temporary. It was exciting, but in the beginning, I also worried that I’d just be going to places, taking the ostensibly obligatory photos, and leaving without really having gotten much out of the day. And to an extent, this was true.

It happened in places where I didn’t quite “connect” because I either wasn’t actively looking for that connection or I simply couldn’t find it. Now that I had time to reflect, I realized I had been caught up in the thrill of traveling and my own adrenaline, used for soaking in a different culture – soaking, but not absorbing. To be fair, it’s hard to deeply

engage on that level in a place like a zoo or a palace once owned by a man obsessed with falconry. At the same time, I've recently begun to believe that it's up to oneself to find one's own meaning in different experiences, however big or small or strange.

After a good half hour or so on that one-pole carousel, I let up and decided I'd look for that meaning, not just in future trips, but also in my internship, new friendships, even engagements after the program.

As I returned to the apartment, I tilted my head back and looked up at the sky. It was so beautifully blue, and the buildings a sunny, blurry yellow. It probably would've been nice to grow up in that area – a different sort of nice from growing up in the States – but still nice.

### The Internship with ista

My commute to Essen was always a little under an hour, the commute back ... Well, let's just say it depended on the temperament of Deutsche Bahn.

I was given the task of creating an internal web app that would organize how different project components relate to one another, e. g. from where does a certain design property or work item (or ... and so on and so forth) originate? How can this be represented visually using an MVC framework in ASP.NET? It gave me insight into tying the front and back ends together, while appreciating different approaches to get there: using Entity Framework (out-of-the-box models with built-in database support) vs. custom models (more design flexibility but also more work to update the DB via ADO.NET commands) vs. a best-of-both-worlds blend

that was nice in theory but troublesome in practice when it came to debugging. I eventually went with the second approach, but in trying everything, I learned new concepts like POCOs, remote validation, and reflection in C#, which can help with future MVC projects.

I hadn't used any of the technologies needed for this project before, so I had a bit of a slow start getting up to speed with how they work. Tip for future RFs: try to find out as much as you can about your internship before July. Use any details to your advantage, e. g. do tutorials for a new language/framework they'll expect you to use, instead of spending the first couple of days trying to get accustomed to them. A month is very short, and every day counts!

### The End

One lesson from my internship was that if you expect something to take X hours or days to implement something, it could really take Y, where  $Y > X$ , and sometimes  $Y \gg X$ . So I started packing three days in advance, and already began to miss a lot of things, like how accessible different cities and countries are from the Ruhrgebiet.

A Ruhr resident might casually mention a weekend trip to Amsterdam, but after going on one myself, it was still mind boggling that I had been in another country only 24 hours earlier. While I was there, I felt like a cool kid as I explained to my friend (who came from Paris) the similarity between Dutch and German, using words we saw in trams like "nooduitgang" and "notausgang". It turned out that, while I hadn't reached fluency, I did know a lot more German than I thought I did, thanks to learning from Matthäus in June and keeping my eyes and ears open the whole summer.



I knew I would also miss the juxtaposition of tradition and modernity, greenness and urbanity. You could be walking through an Altstadt (nearly every city has one) and then be back amongst newer buildings that still mesh perfectly well with the older architecture, or through campus and then all of a sudden find yourself in a giant grassy field.

I will especially miss the piano players right in the city center and the sweet smell of donuts in the Dortmund HBF, with its sandwich shops and buzz of life, even at 4 in the morning. I'll miss catching RE trains just in time and the sunny path back to OB, hearing "Ja, genau!" at least three times a day and riding the U with Jerald up to Messe Ost/Gruga each morning. And, of course, I'll miss the people I met: the other RuhrFellows, my ista colleagues, Gerhard, Nicole, Laura, Katrin, Matthäus, and Sydney. There were simply so many stories shared, so many adventures I had the pleasure of hearing (and telling) about, that my stay abroad was far more vivid and "full" than I could've ever imagined.

I don't know if/when I'll return to Germany, but I am grateful that it is now a part of my own story. After re-reading that application, I came across a part where I compared



NYC and the Ruhr metropolis. Two telling months have proven, however, that they are just not comparable. One has skyscrapers and Times Square and many bridges, and the other has a million industrial sites that the residents are proud of, and palaces and castles just hours away. Each place has a different flavor, a different sort of attraction. And they are all worth getting to know.

At the end of my sixty days, when I was taking the trains back to the airport, I kind of felt like an old-timer who has seen and done it all, already feeling nostalgic for all that has come to pass. Far from true, of course – I have got plenty more days ahead of me, and whether I take them sixty at a time or one by one, the Fellowship taught me to find and appreciate the meaning in every single one of them.



## Andrew O'Rourke

The RuhrFellowship caught my eye in the fall of my junior year as I was sifting through Harvard's international summer opportunities. As a junior who had spent two summers on Harvard's campus, once for research and once for study, I wanted to 1) get away and 2) work for an engineering company, as opposed to studying or researching with a university laboratory. The RuhrFellowship offered both and was made even more appealing by the fact that I did not need to know how to speak German to be eligible. It also allowed me to be with a group of American students, which was great for traveling in groups on weekends and exploring.

I interned with Evonik Industries, a company that specializes in chemical production. My co-intern, Chad, who was also a RuhrFellow, and I worked on butanol production and purification processes. We performed computer simulations that would inform the laboratory testing that the company will eventually carry out. Narrowing down the candidate strategies and chemicals involved before entering the lab testing stage saves the company both money and time associated with lab testing. In broad terms, making butanol production more efficient and therefore cheaper is a very important issue in the chemical production and energy industries, as

butanol has many advantages over ethanol as an additive to gasoline. Chad and I worked under Martina Heitzig and Axel Prinz, who gave us a great mix of active work tasks and education about butanol production.

### Excursions

I enjoyed the driven attitude and pride of the companies and people of the Ruhr area. Everybody I met knew the exact year that the last coal mine was closing (2018) and had an opinion about how to make the Ruhr area even more successful despite relatively recently losing much of its industrial identity. As I quickly learned, the coal and steel industries were the heart of the Ruhr area, and the area has had the opportunity to recreate itself. I use the word opportunity instead of burden because everyone was so lively and full of energy about it. The companies we met discussed the transition and are clearly very aware of it, working together to help the area prosper. The soccer team, BVB, also gives the area a lot of pride and togetherness. I received all smiles and friendly teasing while walking around in the BVB jersey that I bought at the fan shop during the stadium tour. When I wore my jersey in Salzburg, which is in Austria and much closer to the Bayern Munich soccer club, a group of

kids started singing to me and a stranger yelled "BVB!!" at me from across a street.

Out of all the excursions, going 1.5 km into the earth to tour one of the last three coalmines in Germany was my favorite. I personally had never thought much about coal mining, so the only image I had in my mind was of workers in small spaces, covered in soot, chipping away coal with pickaxes. I could not have been less informed - the tunnels were huge. In some places they were about 20 feet high and 30 - 40 feet wide. And the actual "chipping" away at coal by workers can be more accurately described as a mining engineer monitoring a very high tech piece of automated machinery that efficiently mines pounds and pounds of coal every few seconds.

### Street food

There are many things that I will miss from my summer in Germany: the food, especially Döner - the cheap street food in the States just is not the same. I will miss having so many amazing, new places nearby. I was able to visit Paris, Amsterdam, Berlin, Frankfurt, Brussels, Brühl, Düsseldorf, and Cologne on weekends and stay in Europe after the program to visit Salzburg, Strasbourg, London, and Barcelona.



I will miss having every day a full experience. When you are abroad for a finite amount of time, you don't unconsciously order a coffee, you practice how to order a coffee in German and the correct pronunciation while you are in line (although often the employee will speak English back to you). You look at the landscape while on the train more than you would back home. You take every chance you get to ask Germans questions about their country, ranging from music to the EU. When you don't know that much about your environment there is a lot to take in. The first half of the fellowship gave us ample chance to do those things.

I would recommend this program to anyone who wants to go abroad, but doesn't want to just study. The combination of purposeful immersion and work experience is the most special aspect of this program. I had the most memorable summer of my life here and hopefully will return to the area at some point!



## Sarah Toledano

**M**arch 2015: Waiting to board the plane at the Munich airport after a month of teaching at Gymnasium Untergriesbach, I was sad to part ways with Germany six months ago. There was so much more left to see and experience beyond the small town in Bavaria where I lived with my host family. Not knowing when I would be back in Germany, I wondered if the weeknights spent on Duolingo learning basic German would go to waste. Every German course I hoped to enroll in the last year overlapped with a required chemistry course; so without a practical reason to continue learning German, I could have lost everything I learned beyond "Danke" and "Sprechen Sie Englisch?"

Fortunately, I learned that I would be returning to Deutschland for the summer, and this time in the Ruhr Area. I was thrilled by the opportunity to gain German industry exposure, learn about chemical plants and fuel additives relevant for my new job this fall, improve my German and explore a new region of Germany. The company excursions proved to be exciting experiences, providing the opportunity to see the end-result of diverse engineering projects and consider the challenges and potentials for real world relevance. Personally, the highlight excursion was the trip

to the Evonik chemical park. It was my first time visiting a chemical plant and it was exciting to see chemistry that I had spent years learning utilized on a large scale daily for industrial purposes. It was exciting to learn about the logic behind the design of certain flow reactors and observe the scale firsthand as we walked through the enormous plant. I also enjoyed having dinner with Dr. Neuhaus from RWE and sharing perspectives on what it is like to go from a pure chemistry background to a career in the business world.

### Learning German

In June, I had the opportunity to take my first German course with an introduction to the puzzling world of German grammar. The experience made me realize that the more German I learn, the more German I still have left to learn. Although the challenge can seem infinite at times, after two months of putting in the effort to learn German, I can now understand segments of conversations at work, navigate the streets of the Ruhr area and finally hold a conversation with my roommate who can only speak German and Chinese. While progress has been made, I would still consider myself a beginner (at least by German standards).

### Internship

In July, I had the opportunity to intern for the Global Fuels Technology group at BP in Bochum. Although I spent four years studying chemistry in a theoretical and laboratory setting, this summer I had the opportunity to get an industry perspective as a member of the team working on Fuel Standardization policies. I helped develop a database of the changes made to European Fuel standards for Gasoline, Diesel, FAME (biodiesel), Ethanol and LPG (liquid petroleum gas) over the last 25 years and the factors driving these changes. In the process, I learned a great deal about the balance between the European regulatory body pushing for new environmental regulations, the technical knowledge that goes into modifying fuels to be more environmentally friendly without compromising engine compatibility, and the market conditions that allow these changes to endure. I enjoyed not only learning about the applications of chemistry and engineering that goes into developing fuels and additives but also the layers of policy that dictate how these fuels should and could be developed; whether they are environmentally sound and whether they are practical for nations with diverse climates and infrastructures across Europe.

### Adventures

Outside of my internship, I had the opportunity to go on many adventures with RuhrFellows and MIT friends that spanned the Ruhrgebiet, Hamburg, Berlin, Porto, London, Paris, Brussels and Ghent. One of my most memorable travel experiences was when I arrived in Hannover alone from a last minute flight back from London, only to be stranded at the Hannover Hauptbahnhof at 12.30 AM for the last two and half hours of a 310-minute train delay. Yet, at the moment when I was about to laugh about how everything that could go wrong, went wrong, I was joined on the bench by a young, equally exhausted, consultant from Hamburg. I was excited to tell her about how beautiful it was to run through the streets of Hamburg for the 2015 Hella Halbmarathon and she told me that she was also there on the sidelines cheering on her closest friends. We kept each other entertained for the remainder of the delay and once on the train, we alternated setting alarms on our phones so that neither of us would miss the stop at Dortmund. We both successfully made it to work three hours after our train arrived in Dortmund and since both of our August trips to NYC overlap, we are hoping to meet again in three weeks.



### Exploring Dortmund

One of my biggest takeaways from this summer is that you can truly make friends anywhere if you are open minded, outgoing and don't mind stepping outside of your comfort zone. I had a great time exploring Dortmund with two German girls I met outside of my dorm, finding the Hans im Gluck in Essen with the sister of my chemistry TA (who happens to be from Essen) and getting to know my different Airbnb hosts in Berlin. Throughout these experiences,

I have been impressed by how genuine, warm and outgoing Germans are. When I asked one of my neighbors whether there is an Aldi or Lidl near Emil-Figge-Straße, she sat down with a pen and paper to write down every single grocery store nearby with the specific buses, bus stops, walking directions and closing times. Thinking back to my first day in Germany when my buddy spent his entire afternoon taking me back into Dortmund and helping me communicate with the o2 representatives "auf Deutsch", I am still impressed by how many of the Germans I met are willing to go above and beyond what would be expected to help a new friend.

From my flight out of Frankfurt on August 1st, I returned to the US with more than the Ritter Sport and Haribo I bought for family and friends. I have been inspired to emulate the dedication and precision that Germans put into the work that they do, I have gained an appreciation for home-cooked meals and fresh bread, as well as a newfound ability to remain calm in stressful situations and some great new friends and memories. I know it won't be too long until I return to Germany so, Deutschland, Auf Wiedersehen, bis zum nächsten Mal!

## Chatarin Wangsanuwat



What drew me to the RuhrFellowship was a strong sense of curiosity and thirst for new experiences. I had always wanted to come to Europe, see different cultures and how Europe countries function. Moreover, working in industries was definitely new for me and I wanted to know what it is like. RuhrFellowship also offered me German classes, and it was always nice to know another language. I had great fun this summer and I could not imagine any other summer program that would give me this complete experience.

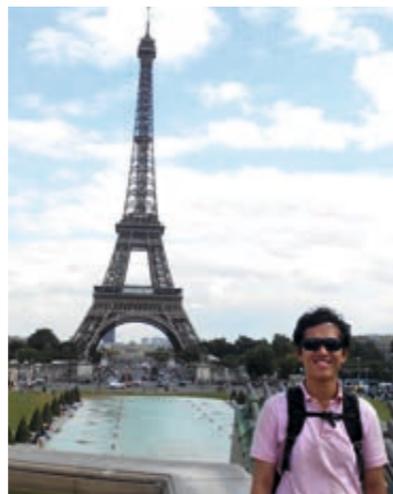
My summer actually started off with arriving in Brussels for one week travel before the program. I visited a couple of cities in Belgium and the Netherlands. I then arrived in Dortmund, settled into my dorm, and met the German buddies. The dorm itself was very comfortable and big for a single, though its location was not exactly ideal. It was three bus stops away from the university but the transportation was free with our student ID.

### Learning German

The first month included both a language course and excursions to businesses, industries and attractions in the Ruhr area.

I, along with ten other fellows, was in the intro section. The class was fun though it moved much slower than I thought, so I did not learn enough German as I would have liked. The excursions in and around the Ruhr area were interesting. I especially enjoyed the trip to an active coal mine, going deep underground. It was an eye opening experience. I grew sympathetic of people who work there because the condition underground was quite terrible. One downside, however, to the excursions was that some of them were not as interesting as others (while still maybe interesting to other fellows). It was quite clear which fellows were interested in each particular excursion by seeing who was actively asking questions or who was kind of fading to the background with his phone. I think it was good because our interests vary significantly so this was to be expected.

In addition to the course and the excursions, I had a chance to travel every other weekend to different places in Germany, organized either with the other RuhrFellows or on my own. I went all around Germany - to Berlin, Hamburg, Brühl, Solingen, Heidelberg and Stuttgart, as well as to Utrecht in the Netherlands for Tour de France Grand Depart and Paris for the finish of the Tour de France. I really enjoyed the balance



## Eric Wong

of having an intense program during the week with some free time to travel on weekends. It was very exhausting so I ended up just sleeping in for some weekends! Traveling to places was a great way to see the different micro-cultures throughout the country like Hamburg, Berlin and Heidelberg. Once the second month started, I felt my experience change from short trips around the Ruhr area to a very focused, much slower pace in German industry. My internship was with Evonik. My project focused on running simulation in Aspen for two-phase reaction. It was quite interesting and fulfilling to do something related to my major. I also had a first look at company culture in general. People actually say hi to each other on the hallway, which is nice, though it was awkward sometimes when we said hi to each other in different languages as in German and English. During the internship, I also got to know other interns who were completing their mandatory internships or Master thesis.

### Navigation

The RuhrFellowship in total was a great experience. I think another important skill I acquired besides very introductory

German and working in chemical firm, is how to figure out maps and train schedule. I did not have GPS when I traveled and Deutsche Bahn delayed a lot and I missed my original trains all the time. My city maps and fahrplan reading skill and my finding train connection technique improved dramatically. I also was not as upset when my original plan didn't carry out. I just grew more patient and more understanding, which are totally lifelong skills.

**M**y path to Germany was as if the stars aligned. I first heard of the RuhrFellowship in one of the many email blasts sent out by a school career counselor. I rushed to submit my application by the December deadline. I had no prior German language knowledge and decided to take beginning German class in case I was accepted into the Fellowship. And then I waited three months before I heard back. Thankfully I was accepted and my journey to Germany began.

I expected the Ruhr Area to be Germany's industrial heartland as I learned that the Ruhr Valley was the historical heart of Germany's coal and steel community. But that is not what I found when I arrived. Indeed, the Ruhr Area was the historical industrial heartland, but it has evolved from it. Technology centered around sustainability and efficiency has taken its place. Take for example the Ruhrverband, the wastewater recycling and treatment company tasked for managing the watershed encompassing the Ruhr Area. Or Ampa City in Essen where they are starting to use superconductors continuously cooled with liquid nitrogen to as the next electrical grid. Technological advancement and embracing of it has seeped into the Ruhr culture. But

that is not to say the Ruhr Area has forgotten its industrial heritage. We toured Hansa Kokerei, the Zollverein, and most memorably got to go down nearly 1200 meters into one of the last three operating coal mines in Germany. However, a mixed feeling of nostalgia and quiet remembrance best describes the attitude toward these artifacts of the Ruhr Area's industrial past. Their industrial heritage still persists into the present, but is without a doubt decaying as each day passes.

### German food

Beyond the Ruhr's industrial history, I also got to make good friends with people in the Ruhr region and across Germany. On the warm days we hung out in the park where I learned how to play flunkyball and enjoyed bratwurst fresh off the grill. We cooked dinner together where I got to see a typical German single family home and spend a quiet night enjoying their company. On my weekends I was able to take advantage of my train ticket and travel around Nordrhein-Westfalen and a little further beyond, for example traveling to places such as Aachen (Charlemagne's seat of power), to Dusseldorf (where I had to try the Altbier), to Cologne (to see the Dom), to Hamburg (to go through



the infamous Reeperbahn and after that eat Matjesbrötchen and Bismarckmatjesbrötchen at the Fischmarkt) and further down to Heidelberg (a quaint city not bombed out during World War II famous for its castle and university). In each city I met great people who were always willing to lend a helping hand.

### Internship

While I was not traveling, I was based in Dortmund, where for the first month of the Fellowship I went on company excursions and learned German. The company excursions were geared towards engineers whom the Fellowship focuses on; nevertheless I was able to appreciate the business and finance side of the company and mingle with executives at very nice dinners. In regard to German class, I

learned extensively German grammar, syntax, and developed my speaking, listening, and writing skills. For the second month of the Fellowship I worked at National-Bank in Essen in their Research Department for two weeks and for the last two weeks in the International Markets Department. I worked hard in each department and took away many lessons from my time in each department: specifically a greater analytical sense of the drivers of the fixed income market and the purpose and use of swaps, futures, and forward contracts. Beyond that, I got to see first-hand, filtered through the eyes of a German bank, the attitude and feelings of the German public through the entire Greek debt negotiations saga. Additionally, I was able to accompany the head of the Interest and Currency Management Department to a client meeting with executives of a local export company. In all, I was glad to be placed in such a welcoming environment at National-Bank.

### Conclusion

In summary, I hoped to gain a greater understanding of German culture, both professionally and personally, in my two months in Germany. I had to put myself out there and learn to quickly adapt in a foreign environment; in the end it all paid off. Thanks to the RuhrFellowship for providing this wonderful opportunity to push the limits of my comfort zone and expand my cultural horizons; I will carry this experience forward with me for the rest of my life.



# Liveblog



# Week 1

Chatarin Wangsanuwat

My name is Chatarin Wangsanuwat from Bangkok, Thailand. I am a rising senior of the Chemical and Biological Engineering Department at Princeton University. I participated in this program because I think it will be a good opportunity for me to spend a summer in Germany, immerse in German culture, learn German, gain German industry and university experiences and travel around Europe. I have had good experiences so far!

## Mon Jun 1st: Moving in and welcome dinner

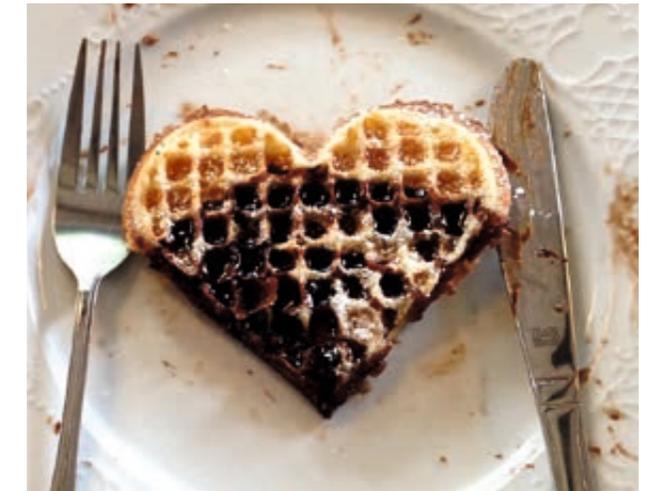
I arrived at Dortmund Hbf by train around 1:30PM on June 1st and was met by three German host friends picking me up: Dennis, Frederic and Alex, who is my "Double" (specific host friend). We took the train to TU Dortmund University, and Alex showed me to my room in Emil-Figge street, building 3.

I have to admit that I knew nothing about the Ruhr area before I got here. This is not uncommon, as the Initiativkreis Ruhr explained they want people to get to know the area. To me personally, I expected the university to be more city-like, maybe because the university is only three train stops away from Dortmund city. However, there is a

big field near my dorm, which is not what I am used to. I like it though: very safe and calm.

I have a single room in the Emil-Figge building, also three bus stops away from the main campus, fifteen minutes walking or four minutes by bus. The room is really nice: much bigger than a typical single at Princeton. There is a bathroom and a tiny kitchen (with a small fridge!). I am still missing cooking utensils, a chair and a curtain, but they are coming soon!

The lock on my door is very different from any lock I have used before. Normally, you just unlock and open the door, but for my door, you actually have to turn left about three rounds and then you have to turn left a little more to the last click and push the door open right when you have that last click. Obviously, I did not know that and neither did Alex. So we went downstairs to ask the maintenance guy to help us. I was glad that Alex was with me because I don't speak any German. He came to our room and very easily opened the door. He gave us one good look and then just walked away without saying anything. He must have thought we were very stupid.



Q: How many engineers do you need to open a door in Germany?

A: They can't. You need to call maintenance.

After that we took the train to Dortmund and Laura Hope, our program coordinator, treated us to a traditional German dinner. Quite a good first day.

## Tue Jun 2nd: First German class, Culture and Technology class and Meetings

After a brief campus tour, we had our first introductory German class. I found the whole "sein" verb, which is an equivalence of "is/am/are" in English, very confusing. They also

differentiate between you-singular, you-plural and you-formal. This is going to be a challenge...

Then we joined in a regular class called Culture and Technology, which quite a few German Engineering students here are taking. Since my devices were not yet connected to the internet, I didn't have any distraction and actually paid a lot of attention! We talked about how identity affects technological invention and distribution.

Afterwards we had a series of introductions to new people who have worked to put this program together, as well as lots of group photos: we had a lunch meeting with Dr. Ursula

Gather, Rector of the university. We then were introduced to ESN (Erasmus Student Network), an international student organization that has planned a few events for us and also gave us our German sim cards, which made them very popular! In Essen at the Welcome Reception at Initiativkreis Ruhr we were introduced to the Ruhr Area and the objective of the program.

### Wed Jun 3rd: More German class, opening the bank account, IKEA trip and pizza with doubles

We had more German class, this time from 9 to 12. We sometimes get a little off topic, but are learning about quirky parts of the German language. The most interesting one is "Die Nutella" versus "Das Nutella." People are apparently passionate about one or the other. Our teacher, Matthäus, strongly suggests 'Die' because of the ending "ella" which is obviously feminine. We did end up looking it up in der Duden but it says people use both. On another day we had a small talk with a lady on the train and asked whether it should be 'die' or 'das.' She looked unsure and said probably 'die.' But then another lady nearby just shouted "das. Das Nutella!" So the first lady just said "das" too. I am now convinced that people are passionate about the article of Nutella.



We were also introduced to the "Mensa", the university's lunch cafeteria. The food is really cheap for Western standards, since it is subsidized by the government. There are generally three prices: lowest one for students, middle one for people who work at the university and the third one for guests. The student price for food is really low; I can get a full-cost meal for 2.50-4 Euro!

However, the drinks are still pricy, especially when you add on the deposit. This is not specific to TU Dortmund but to Germany in general. They are obsessed about recycling. For example, when you go grocery shopping, you should bring your grocery bag with you because usually it costs money to take plastic bags. Also, you have to pay a deposit for plastic bottles. For example, I bought a 500mL coke, and it should cost 1.10 Euro but it ended up costing 1.25 because 15 cents are for the bottle. I have to return the bottle and get a 15



cent coupon for my next purchase. After organizing things like bank accounts and supplies for the rooms (thanks to the Ikea employee who brought us to the front of the line!), in the evening we had pizza and Turkish food with our buddies and were introduced to "Flunky ball" (actually I'm not 100% sure on the name). It was pretty fun: each team lines up and one person throws a tennis ball at a water bottle in the middle. If the water bottle falls down, people in the team can drink their beverage of choice (it is Germany, so of course, beer) while the other team runs and sets the bottle back up. After the other team is done, we have to stop drinking. You win when everybody drinks his/her entire bottle. As you can see, that involves a lot of drinking for everybody! Also, the winners drink more, which is the total opposite of the US games! Later in the evening, there was a school wide party because the next day was a national holiday. I went there to hang out a bit which was fun.

### Thu Jun 4th: National Holiday and Cologne

On June 4th there was Corpus Christi, a national holiday in Germany. Surprisingly, not many people know the significance of the holiday. Apparently, "there's something to do with Jesus," one said. Anyway, we took advantage of the day off to go to Cologne, which can be reached by train using our semester ticket within one hour and a half. We spent our morning and afternoon there. We split off into groups because our interests were different. I went to the Chocolate Museum sponsored by Lindt, walked along the Rhine River and got up to the Köln Triangle to have a nice view of the city.

By the way, all regional trains are free because we have student semester ticket. However, we are starting to notice that German efficiency and reliability doesn't always apply to the trains:



- On our way to Cologne, four of the others could not make it in time for the train so we went ahead. Unfortunately, our next train to Cologne was delayed 55 minutes and later cancelled. We had to take the same train one hour later, which was also 20 minutes late, so we spent 1.5 hours waiting for the train (this happens a lot). The four people who didn't make the early train went the other way, hopped on one other train and ended up in the same train as us. They got extra sleep AND arrived at the same time!
- On the first day, we were supposed to take the train from the university to Dortmund Hbf. We met at the train station around 4:45PM. The person told us to get off at the next stop so we did, but what she meant was the next major stop, which was 2 stops away. So we ended up waiting for the next train, which was then cancelled. We ended up waiting for about 45 minutes at that stop; but, still, it was a great bonding time.

#### **Fri Jun 5th: U-Duisburg-Essen, Cenide center visit**

We took a morning train to visit University of Duisburg-Essen and Cenide, which is a nanoscience center at the university. They have really great facilities and not many people were there because people just took Friday off to have a four-day weekend. In the evening, we went with our group to West Park to have barbecue.

#### **Sat Jun 6th: Ruhr University Bochum 50th anniversary**

Saturday was the 50th anniversary of Ruhr University Bochum, and we were invited to the ceremony. The ceremony was very fancy with live jazz music and small cocktails. During the ceremony, the President of Germany gave a speech and they celebrated the collaboration between Bochum and a university in Krakow. I learned quite a bit about the history of the Ruhr area and how they had to fight to have a university established in the industrial area back in the 50s through the speeches. There was also a dance show and an a cappella group with orchestra.

#### **Sun Jun 7th: ZOOM Zoo**

One of the perks of the program: We went to the Gelsenkirchen zoo on Sunday since one of the companies in the program is a zoo sponsor and sponsored free tickets for us. The zoo contains three sections: Alaska, Africa and Asia. Almost ten of us went there together and it was amusing for me to see each of my friends suddenly get super excited about one animal for not so obvious reasons. They claimed that animal is the best or the coolest.



# Week 2

Youjin Chung

My name is Youjin Chung. I am a recent graduate from UC Berkeley, where I studied Business Administration and Education. I was born and grew up in South Korea and came to the U. S. for higher education six years ago. With a strong interest in German culture and its green initiatives, I decided to participate in the RuhrFellowship program and have learned much over the past few weeks about the history, language, and people of Germany.

I will start each blog post with a “phrase of the day” related to what happened for the day or what I learned in German class. I have lots of stories to share, so let’s begin!

## Monday, June 8th

Phrase of the day: “Das kannst du besser” (You can do better) After learning verb conjugation and helpful phrases in our German class for three hours, we had our first visit to a partner company: Ruhrverband – a water treatment company that purifies water in the Ruhr region. Founded in the early 1900s, the company contributed significantly to the supply of clean drinking water in this heavily industrial area, in addition to supplying water to ongoing “green” projects. We first heard an introductory presentation from the company’s

CEO about its services. While hearing about the political relationship between the company and the government, a number of us had questions about Ruhrverband as a public entity and its way to hold the company accountable. For example, the U. S. has encountered several issues with monopolization of public companies, and, therefore, even in the water management industry, private sectors still exist to generate competition. Professor Dr.-Ing. Bode, however, found that question rather absurd and explained the complex legal process and regulations the company needs to go through. This reminded me of other incidents I could never imagine happening in the U. S. or Korea: no gates at the train station, entering the bus from the back door, and no street crossing where there is no zebra crossing. It was surprising to see that accountability can exist without strict monitoring, and I was very happy to witness that trust can replace extra security guards and gates here in Germany. Ruhrverband’s commitment towards clean environment and higher quality service was definitely visible throughout the presentation, and we were amazed by some of the cultural differences.

After the presentation, we visited the water treatment plants where we not only saw (and smelled) the purification

process, but we also saw the self-fueled eco-friendly sewage treatment system. Here I was able to understand the hard work put into cleaning the water and the privilege of having such service available in the area. Apparently, in the U. S. the average person uses three times the amount of water of an average German, and consequently many states are suffering from droughts – time to learn to take shorter showers and wash dishes more efficiently!

## Tuesday, June 9th

Phrase of the day: “Ich liebe die Natur” (I love the nature) We had the first cultural studies series today after lunch. It was about the deindustrialization of the Ruhr Area which used to be known for coal mining and steel production. Although I was informed prior to the fellowship that the Ruhr region is an industrial area, I still found this information to be surprising since all I have seen throughout my train rides were trees, green hills, and wide grassy fields. Consisting of 53 cities, the Ruhr Area has encountered many issues with air and water pollution and initiated green projects about 60 years ago along with increasing emphasis on higher education. Some interesting comparisons are made between the Ruhr region and Detroit,



Michigan. For example, both cities are built for industries – Detroit for cars and the Ruhr Area for coal mines – and underwent major transformations with respect to demographics and urbanization. New houses were constructed near factories and life-long, multi-generation professions became a norm in both communities. Yet the change in the world supply and demand in the car and coal industries ultimately hurt the economies in both areas. By closing the mines to improve the environment, the Ruhr Area struggled with high unemployment, low youth population, as well as unoccupied residential buildings. Thanks to various governmental employment and training programs, the unemployment rate decreased and a new job market for renewable, clean-energy industry rose in the region.

Before our dinner with Dr. Neuhaus, CEO of RWE, we were able to witness one of the green initiative projects. When I saw the surrounding area of Lake Phoenix, it was hard to imagine that it was the center of major steel production with extremely polluted water and air. The lake had clear water with many geese and people were running or walking along the trail filled with flowers, free from any trash. As discussed in the workshop, de-industrialization was

visible in Dortmund, and people seemed to really appreciate nature.

Meanwhile, throughout the workshop and the short excursion, I couldn't stop asking myself two questions: "How did people struggle with the high unemployment rate?" and "How did the coal mining and steel production companies handle the decline of their industry and the regional trend toward green energy?" Dr. Neuhaus gave me a brief and clear answer - globalization. Although the domestic demand died out from the shift toward green and high-tech renewable energy, the international demand still remained high. For example, cheap and less processed steel would be exported to China while the U. S. would import more delicate, high-quality, processed steel. It was an unavoidable fact that the steel industry suffered and shrank as a result of the de-industrialization. The businesses found a way out and more surprisingly, the government provided essential support for the survival of those in the Ruhr Area.

During dinner, we were able to share thoughtful conversations with the CEO about the European Union and Germany's critical role in the European economy. I found his comparison between the EU and the U. S. particularly interesting. He described the U. S. as a "melting pot" of different cultures and ethnicities, while the EU is more like a mosaic. Each country or region maintains a strong cultural identity and thus the diverse traditions and values of numerous communities make Europe a more interesting place to visit. I am not entirely sure whether this characteristic has benefited Europe or not, but it was certainly an interesting way to view the relationship among EU countries in comparison to that of the states.

### Wednesday, June 10th

Phrase of the day: "Der, die, das Nutella?"

Today was a bit more flexible and relaxing. After our morning German class, we had the first Culture and Technology discussion section. Each of us was paired with German students for group presentations, and I met Lukas, Oliver, and Simon, who study Industrial Engineering. One side note - industrial engineering in Germany is a bit different from that in the U. S. In the U. S., industrial engineering refers to engineering within a specific field of industry, so the focus is on "engineering" even though it may be an interdisciplinary major. However, at least at TU Dortmund, it has an equal emphasis on business and engineering. Students learn accounting, finance, human resources alongside their engineering courses, and may even pursue more business-related careers after they graduate. Regarding the group presentation, my group discussed various issues both Germany and the U. S. share and decided on the topic "attitude toward renewable energy." Perhaps because I took a course in Global Warming last semester and studied alternative energy sources to oil and gas, I shared similar views with my group regarding Germany's green energy projects and really hope that more people become aware of the severity of the environmental issues worldwide.

For the first time, I had some free time without any traveling plans. Another RuhrFellow and I went to Dortmund and spent time exploring the city. We made three discoveries: 1) Primark in the Thier Galerie has very good deals - some items are cheaper than those in the U. S.! This store changed my assumption that shopping is expensive in Germany. 2) Bring bags - especially for grocery shopping. We stopped by a grocery store in the Galerie and all bags (both



plastic and paper) cost an extra ten to 15 cents. 3) Dortmund seems to be a small city, but it takes multiple visits to explore everything.

### Thursday, June 11th

Phrase of the day: "kostenlose Bildung und starke Forschung" (Free education and strong research)

Today's schedule included a day trip to Ruhr Universität Bochum (RUB) for a campus tour. This visit was more informative and detailed about the origin of the university and its research projects. RUB was the first university built in Germany after World War II (which explains to a certain extent why the president visited the 50th anniversary last weekend) and has four main colleges/schools: humanities, engineering, natural sciences, and medicine. Among all the facts about the university, I was genuinely shocked by the free tuition policy - even for international students! Students pay the student ticket (about 300 euros) and housing if they live on campus, but there is zero payment needed to register for classes. Studying at a public university in the U.



S., I at first could not understand the cost structure to afford thousands of student's higher education. UC Berkeley charges domestic students about \$20,000 annually and about \$40,000 for international students. Sadly tuition is increasing every year, despite student protests. Yet considering the amount of taxes people pay, it made more sense as to why education can be subsidized more in Germany, compared to California. I heard that research budgets are often

tight, but it was still incredible to think that German universities can support highly technical and innovative research studies solely with the government funding.

The research labs were also fascinating. We saw everything from energy-efficient lights for automobiles and wind tunnels for bridge construction, to ice cream making with liquid nitrogen. The tour took approximately six hours. I would say that it was not easy to completely understand the physical theories or engineering concepts while visiting several labs, but as someone who studied education policy, Germany's financial and intellectual support for students continuously amazed me. I really liked the idea of voluntary education where students can "freely" choose to pursue higher education – and the consequence of not pursuing does not necessarily limit one's future career. Also, the broad access to higher education seemed to resolve the unemployment issue in the Ruhr Area and encourage students to become more specialized in their field of interest, free of charge.

#### Friday, June 12th – Sunday, June 13th

Phrase of the trip: "eine Stadt, zwei Kulturen, vier Länder" (one city, two cultures, four countries)

I had my first weekend trip to Berlin with four other Ruhr-Fellows. We took a Flixbus on Friday and arrived in the late evening after a seven-hour ride. The area we were in was very peaceful and uneventful – not necessarily a good place to find a restaurant at night, but I appreciated the undisturbed sleep.

On Saturday, we joined a walking tour led by a Greek guide, Arthemis. I found out "Alexander Platz" is the only non-German Platz in Berlin, as it was named after a Russian King. Although this was done to maintain a good political relationship with Russia, it did not last long, and thus the name did not serve the purpose in the end. Next stop was Museum Island, which is surrounded by water – in fact, there are boats sailing around the museums – and is home to famous museums (the old and the new museum, Pergamon Museum, the German history museum to name a few) and a church. We were lucky enough to see the beautiful view of the fountain and other architecture. After walking for a few minutes, we got to Humboldt University of Berlin, one of the oldest universities in Germany. As tuition is free, this university is extremely difficult to enter and has many Nobel laureates as alumni and faculty members. We were also told that

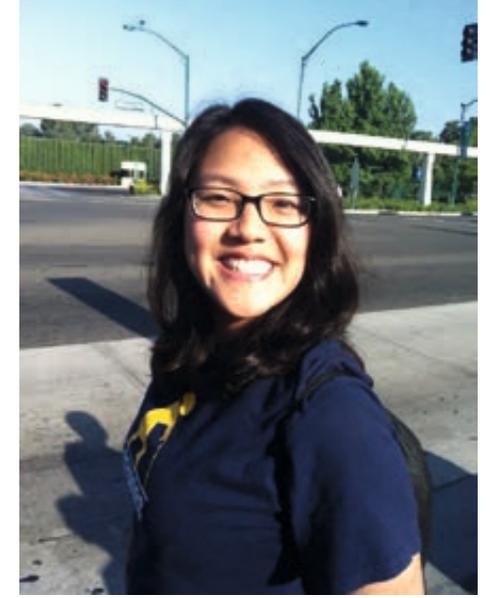
all the books related to the Jewish culture were burnt in the university during Holocaust and we were able to witness the importance of education from the empty library bookshelves.

We also visited Checkpoint Charlie, Topography of Terror, the Holocaust Memorial, and Brandenburg Gate. Unlike many other places, Berlin has numerous memorials and museums on the Holocaust and the Berlin wall. It feels as though Berliners consciously attempt to remember the tragic past and communicate the horrors of war to today's society. I was moved by their effort to raise awareness on why we should avoid wars by revealing their own painful history, and I praise their bravery and leadership. Accountability, trust, and transparency – I am now getting a better sense of why people come to love Germany so much.

On Sunday, we started our tour at a flea market. There I met a Korean chef who was making traditional Korean dumplings and pancakes based on his mother's recipes. The brief conversation about Korea and Germany reminded me of how privileged I am to be able to go back home more often and keep the connection with my old friends in Korea. Later we

went back to Museum Island and went inside the cathedral. Very detailed sculptures welcomed us at the entrance and each step gave me lessons about Germany's religious history and the Prussian Empire. The view from the top was gorgeous.

As we arrived at the East Side Gallery, the ambience changed and the type of art and architecture shifted as well: the surroundings looked more residential, fewer people were present on the street, and the people sounded different (I don't understand German, but phonetically or attitude-wise the language sounded different). I learned more about the German history, the art seemed to describe the emotional pain or chaos people underwent forty years ago and the silence in the eastern side represented the unseen cultural separation between the two "sides." I wish I would have had more time to explore East Berlin but, this gives me an excuse to visit Berlin again.



# Week 3

Charles Du

My name is Charles Du. I'm originally from Excelsior, Minnesota, and currently a rising junior in the Jerome Fisher Program in Management and Technology, studying Computer Science and Business at the University of Pennsylvania. Thanks to the RuhrFellowship, I will be spending four weeks at TU Dortmund and six weeks at Deutsche Bank.

## More Classes

When I came to Germany, I told people my proficiency in German was equivalent to 300 EXP in Duolingo. I knew maybe 30 words – a few verbs, a few nouns (mostly animals and foods), and how to say hello. Now, after my third week of German classes, I know enough general phrases to ask where the bathroom is, introduce myself, and order food at a restaurant. I am making progress and can't wait until I can tell jokes in German!

I have realized that when I say "Hallo!" really confidently and with a big smile, people will think you are fluent in German. Unfortunately for me, this is not the case. There have been multiple moments where I greet some Germans only to have them find out moments later, that I can't put together

more than a few basic sentences. I have had a few awkward encounters, but it will get better, I know.

## Signal Iduna Park

After class on Monday, we stopped at Signal Iduna Park, home of BVB, Dortmund's soccer team and the largest soccer stadium in Germany. The stadium is always sold out and the majority of the fans are season ticket holders. Apparently, the entire city wears yellow on game days, and there isn't an atmosphere like it in all of Europe. I only wish I could have come to Dortmund sooner or stay later to see BVB in action. We started the tour with a stop at the gift shop, where many of us picked up BVB jerseys. We went through the pressroom, locker room, and finally onto the soccer field. The end result was a number of epic pictures and a newfound interest in soccer. As a sports fan, I have always loved basketball and American football. I have never been a huge fan of soccer and I have watched at most two complete games in my life – both during the recent World Cup. However, after this trip, I definitely would not pass up an opportunity to go to a game at Signal Iduna Park. Who knows? I might start watching it at home, yet no promises. Sorry Dortmund. Sorry Germany. Sorry Europe – not converted yet.



## Fraunhofer Institute

On Tuesday we visited the Fraunhofer Institute for Material Flow and Logistics, a research lab affiliated with TU Dortmund. There we saw some pretty cool robots, drones, and different projects related to autonomous systems. My understanding of it was that one day, companies will be able to ship packages and manage their inventory using only machines.

## Meeting of the Minds: Red Dot Design Museum and Essen Philharmonic

The next day we had the Meeting of the Minds, which is a fancy title for an event that brought all the American students doing internships in the Ruhr Region together. There were students from the RuhrFellowship, RISE, and REACH meeting each other for the first time at Zeche Zollverein for a tour of the Red Dot Museum, Currywurst, and the Essen Philharmonic. For me, the highlight of the Meeting was seeing the Red Dot Museum. The museum was a showcase for the best of the best in contemporary product design. I am extremely interested in product design and how to make products that are efficient and effective. I want to highlight one useful product, one ridiculous product, and one product that I wish I owned from the museum:



Useful: Snuggle Baby Bath – Essentially a bathtub made out of foam. It not only keeps the water warm, but it is also cheap to make and protects infants from slipping or getting hurt.

Ridiculous: GROHE Ondus Digital – The museum guide called it “the Ferrari of showers.” It is a programmable showerhead that stores shower settings including temperature and pressure for the ultimate shower.

Want: Red River Sandal – Shoes that are handcrafted to perfectly fit the bottoms of your feet. Sounds very comfortable.

### I Become a Coal Miner and Germany's Green Gene

Glück auf! is the traditional miner's greeting. If you translate it, it means luck up. I believe this completely summarizes the miners' hope of finding coal and returning home safely after each day of work.

On Thursday, I went to the RAG Prosper-Haniel Coal Mine in Bottrop. It is one of the few active coal mines in Germany and is set to close in 2018 along with all the other coal mines in the country. Other countries are able to mine coal more effectively and cheaply than Germany, since they can mine closer to the surface, and as a result, they plan on importing 100 % of the coal they need in the future. It is incredible to think that they have decided to be energy dependent in that regard, where that would never be a thought in America. However, Germany is cutting back on coal use and focusing on renewable energies, so they will need much less.

We got to the mine right after lunchtime. After a brief introduction, we changed into mining gear and headed down into the mines. We went 1.2 km below the surface in less than two minutes and were soon in the world of rocks and coal. After getting to the bottom, we took a train for almost half an hour to reach the active coal veins. We watched their big machines go to work and got to take home pieces of authentic German coal for ourselves.

We also spent time at Thyssengas, Kokerei Hansa, and Innovation City, where we really got to see Germany's developing "Green Gene" in action. We saw their commitment to clean and safe energy from their policy decisions to move out of coal, natural gas, and nuclear energy. 40 years ago, you couldn't even dry clothes outside in the Ruhr Region,

but today it is the home of beautiful green land and blue skies. I am amazed at the progress Germany has made in this direction and proud to have seen first-hand the reclamation of the Ruhr Region.

Since I started this section with a German word, I want to end it with one too: "Kokskuchenführungswagen." Try saying that five times fast. Yes, it is a real word, and it has to do with one of the machines in the Kokerei Hansa in Dortmund.

### Budapest

I, along with Alex, Madhav, and Aakash - three other Ruhr-Fellows - spent the weekend in the beautiful city of Budapest, Hungary. There are two halves of Budapest: Buda and Pest, separated by the Danube River and connected by the many bridges that span it.

We arrived Saturday morning after waking up at 4 AM to catch our flight out of Dortmund Airport. Upon arriving in Budapest, we stopped by our Airbnb place to drop off our stuff and immediately headed out for lunch and a day of adventure.

Instead of Euros, Hungary uses Hungarian Forint. One Euro gets you around 300 Forint and we immediately felt like rich men on the streets of Budapest. Upon the recommendation of our host, we headed to a nearby Hungarian restaurant. Delighted, we found the food incredibly cheap and delicious. I was able to get Chicken Paprikash, an authentic Hungarian dish, for around 1000 Forint, which was just over 3 Euro!

With our bellies full, we walked from landmark to landmark, being classic tourists looking to see all the famous





parts of town. On the Pest side of the city, we walked past the famous Hungarian Opera House, climbed all 302 steps of St. Stephen's Basilica, saw the Shoes on the Danube, and stopped at the Hungarian Parliament building – all of which I would recommend visitors of Budapest to see.

We later crossed a bridge towards the Buda side of the city to check out the Castle Hill district. But first, we stopped on Margaret's Island on the way for some delicious snacks and a beautiful fountain. We had Magyaros lángos, which are fried pieces of dough with toppings on top. They were absolutely delicious. On the Buda side of the city, we stopped by Fisherman's Bastion, where there were four weddings going on simultaneously. I can definitely see why the area behind the bastion (Várhegy) is so popular for weddings. It looked like it was straight out of a Disney movie. There were castles in the background, beautiful streets, and looked like a fairy tale. What's even more interesting is that tourists seemed more intent on capturing the weddings than the beautiful bastion that they were standing in.

We finished our adventure for the day by stopping at Buda Castle, the former home of Hungarian Royalty. We climbed every lion statue around the castle and thoroughly explored their courtyards and street food vendors. Here I tried Kürt skalács (Chimney Cake) and Rétes (Hungarian Strudel). These of course, were also delicious.

Finally, we had dinner at Borkonyha Winekitchen, one of four Michelin Star restaurants in Budapest. While it was fancy, it was still incredibly affordable since we were in Eastern Europe. We spent around 20 Euros per person for food from one of the best restaurants in the city. If I learned anything the first day in Budapest, it is important to do more than just see landmarks and tourist sites when traveling; you need to take the time to learn about the culture, history, and food of the country as well.

On the second day, we wanted to spend time like the locals. We woke up and headed to City Park and the Széchenyi Baths. When I first heard that Budapest was famous for its public bathhouses, I was skeptical. However, after going there, I can definitely say they are the coolest thing about Budapest. It looked like paradise on earth, and I assure you, if there is anything close to that, this would be it. After three weeks of stuffed schedules and little sleep, we were finally able to spend a large portion of our day relaxing and hanging out with the locals of Budapest in a beautiful mixed indoor-outdoor bathhouse. This place is definitely a must see in the city.

We spent the rest of the day walking around the city, eating Budapest desserts like Rose Gelato, and took a night cruise along the Danube. All in all, I have to say, Budapest is one most beautiful cities I have ever been to and that I will definitely be coming back in the future! Viszontlátásra!

# Week 4

Tony Li

Hello! My name is Tony Li. I am a rising junior studying Computer Science at Harvard, but I am originally from Fayetteville, Arkansas. I joined the RuhrFellowship because I wanted to improve my German, experience the German culture firsthand, explore German universities, and receive practical experience with interning at a major company in the country.

After trickling back into TU Dortmund from our exciting weekends, we buckled down to the regular, well-rehearsed routine of classes and excursions.

## Internship Introduction

On Monday, half of us visited the RAG Bergwerk (coal mine), and the other half met with representatives of our July internships. This was the week I saw the mine, which was an amazing experience, but since Charles already described his visit there, I will briefly mention my visit to my company, which wasn't any less amazing than the coal mine. I am interning at RWE (or Rheinisch-Westfälisches Elektrizitätswerk), one of Germany's largest electric companies, which is based in Essen. Having figured out the local public transit system long ago, I easily found my way to the city. Unfortunately I went into the wrong building, since I didn't know RWE

had several office skyscrapers in the same city. Once I found the right building I was greeted by a handful of electric cars charging at RWE stations in the parking lot. After showing me up to the 12th floor where I would be working, the representatives overwhelmed me by outlining many of RWE's current projects, saying "Choose any one you are interested in." They were extremely nice and enthusiastic to invite me onto their team, and I in turn couldn't wait to get started.

## The Run

On Wednesday some of us went to RWE's Firmenlauf, a 5K (technically a 5.1K) run and originally this event was mandatory. Laura, our coordinator, had introduced it a couple weeks back, saying "You don't have to run ... fast." This caused our eyes to widen in terror, including mine. I have led the relaxed lifestyle since arriving in Germany – opting out of the gym membership on campus and thriving off of döner (a Turkish-German street food that is a favorite among the Ruhr fellows), wurst, schnitzel, and the occasional beer. Not to mention that I am fairly terrible at running and I can maybe run a mile on a good day. That is why I almost celebrated when the run became voluntary, but after all I am working at RWE in July, and it DID sound like a lot of fun, so I dove in not



expecting in the least to survive the whole span of the run. Once we got there, we received nice and comfortable (not to mention stylish) RWE team jerseys, and we enlisted with 800 other RWE employees to join the RWE team. In total I heard there were about 8.000 runners. With so many runners and spectators it almost felt like a party, especially with pop music playing on loudspeakers and people showing off their boogie moves as a pre-run stretch. Once I actually started running, five kilometers didn't seem that long. All along

the way there were spectators cheering for us on the side, yelling "Lauf! Run!" or "Schneller! Faster!" One elderly runner even laughed at me, "Langsamer! Slower!" Finally I reached the finish line alive and I was greeted by a large medal and admission into an actual after-party, where there were tents, a DJ, beer, freshly-made granola, and lots of friendly people. All in all, it was a good time.

### RWE

On Thursday I returned to the same RWE skyscraper I visited before, this time with the rest of the RuhrFellows. After introducing us to the company and its work with superconductors, RWE showed us its "AmpaCity" project - the world's longest superconductor electric power line. After visiting one of the AmpaCity power stations, we gathered for a press photo in front of the company building. However, this time we were encouraged to form a "dynamic" group photo, with two electric cars as our props and it took us awhile to figure out where to put our bodies. By this time we RuhrFellows were masters of the group photo, automatically filtering out the shorter people in one row and the taller people in a row behind the first. We even had the "sorority-squat" and the "take-a-knee" poses perfected. But what were we

to do with two small cars? Eventually we figured it out and came out more confident in our enhanced talent to look fabulous in front of a camera. Afterwards we learned about the company's graduate program and had a dinner of hors d'oeuvres and a delectable asparagus soup with Herr Dr. Mölders, the human resources director at RWE. After that we were all sufficiently worn out from a full day, and exercised our other talent of napping on trains on the way back home.

### Evonik

On Friday we went on another excursion, this time to Evonik in Marl to see one of the company's plants and the Chemiepark Marl, one of Europe's largest chemical parks. Before we entered the park we again donned helmets and took our well-rehearsed positions for a press photo. When asked to be dynamic in our photo with the company sign, we knew what to do and practiced what we learned from RWE. First our bus took us to Evonik's acrylic acid plant, which we realized by the sharp smell walking through the front door. After seeing the control room, we had to make sure we were wearing enough clothing (pants, long sleeves, and closed shoes) and put on goggles in addition to our helmets before we could see the plant. Afterwards we climbed



a building to see the park from an elevated perspective. The 6.5 square kilometer jungle of twisting pipes and towering containers was an impressive sight, even if you had no idea what the Chemistry Park was. At the end of the tour we had the most impressive cafeteria experience we have had for a lunch. Brandishing fancy black trays, we were given free rein on a fairly wide range of food options in the cafeteria. Of course we took the offer of an all-you-can-eat meal to heart.



# Week 5

Chatarin Wangsanuwat

## Weekend Trip – Hamburg

On the weekend we once again scattered into smaller groups to different parts of Europe. I went to Hamburg with a couple other fellows that weekend. Besides general sightseeing and gawking at the beautiful landscape and old, impressive architecture, we stopped by several tourist attractions. One such attraction was the Miniatur Wunderland, a museum of miniature models of different parts of the world and the largest model train system in the world. It was four stories of impressively detailed models that reminded me of the chaotic scenes in the *Where's Waldo?* books I read as a kid, especially since the designers had some fun in creating the miniature people and their actions. For instance, I spotted a miniature model stalker waving a flag inside a to-scale sports stadium in the midst of a game. Another attraction was an International Maritime Museum, which displayed the most model ships I had ever seen in one spot, as well as many other artifacts: naval uniforms from different countries, antique and modern naval weapons, a maritime art collection, and more.

We also went on walking tours to see the historic parts of town as well as the town hall and some of the city's

cathedrals. Hamburg even boasts of being the first place where the Beatles became famous, erecting a Beatles-Platz in honor of the English rock band. Of course we also caught a glimpse of Hamburg's not-to-be-missed red light district, or more precisely, the Reeperbahn, that is filled with "gentlemen's" clubs as well as bars and restaurants. The tip I received from German students was to "party" all night Saturday, then catch the Fischmarkt, or fish market, at 5 o'clock Sunday morning. Unfortunately my group was pretty tired, and I was coming down with a cold, so we didn't stay up all night, but the next morning we definitely caught the sunrise and the Fischmarkt anyways. It turned out to be a thriving center of activity. It seemed like all parts of the city – from the late-night partygoers, and the casual early-risers, to the locals and international tourists – showed up for the weekly market. Despite the name, there was much more than fish: there were baked goods, candy, souvenirs, beer, livestock, and random bargain items in the fray, right next to the harbor. After recharging with a nap, we ambled around the city and took in all the sights we could before heading back to Dortmund for our last week of classes before our internships.

## Last German class and last company visit

I can't believe that June has come to an end; I feel like I just arrived in Dortmund two weeks ago. On Monday we visited the printing company Axel Springer Printing in Essen-Kettwig, as well as the newspaper Bild Zeitung, which has been described as "notorious for its mix of gossip, inflammatory language and sensationalism" according to Wikipedia. However, the people there believe in good journalism and they write what people want to read, so you have to take the claim with a grain of salt. I find it very interesting that they also have an office in LA, even though they are German newspaper. This office covers the news that happens when most of Germany is asleep at night.

On Tuesday, we had our last German class and breakfast together with the advanced class. We watched one-minute news videos and with the help of visual media, we seemed to understand what was going on a bit, so my German has improved!

## Start working (except, not really, more like settling in)

We started our internships on Wednesday. I am working at Evonik Industries AG in the Chemical Park in Marl, one of

Europe's largest chemical parks. The public transportation is quite brutal, taking almost two hours one way, so it has been quite a challenge commuting to work. Luckily, our mentor/boss managed to find a person we can carpool with from Dortmund, so instead of taking the train and then the bus, we took the train from Dortmund Universität to Dortmund Stadthaus, which is only four stations away with one train connection in the middle. We are supposed to meet with that person at 7 AM, which is quite early and means that Andy and I had to wake up around 5:20 AM. I think he wanted to beat the traffic and he had to be at work by 8 AM. It only took about 40 minutes to get to work, so that was very nice.

The beginning, however, was marked by computer challenges: We tried to get set up on company computers, but it didn't work. We ended up going to the IT center and dropping off our company computers. So we had a free day, and I spent my time writing this blog! Thursday was better because our colleague decided to pick us up directly from TU Dortmund. It still amazes me how fast cars can get us from Dortmund to Marl. I got my employee card in the morning. We were able to log in, and I was so happy that I didn't even care that I still couldn't connect to the internet.

### Last German class and last company visit

I can't believe that June has come to an end; I feel like I just arrived in Dortmund two weeks ago. On Monday we visited the printing company Axel Springer Printing in Essen-Kettwig, as well as the newspaper Bild Zeitung, which has been described as "notorious for its mix of gossip, inflammatory language and sensationalism" according to Wikipedia. However, the people there believe in good journalism and they write what people want to read, so you have to take the claim with a grain of salt. I find it very interesting that they also have an office in LA, even though they are German newspaper. This office covers the news that happens when most of Germany is asleep at night.

On Tuesday, we had our last German class and breakfast together with the advanced class. We watched one-minute news videos and with the help of visual media, we seemed to understand what was going on a bit, so my German has improved!

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My programs, Aspen Plus and Aspen Custom Modeler, were installed remotely to my computer, and I talked with my boss more specifically about what I will be doing for the next six weeks. The project seems quite complicated, and there are a lot of equations and properties involved. I will basically be finding the best composition of the gas feed and designing a reactor with varying pressure to have the maximal concentration of the product in the gas phase (while reactions only occur in the liquid phase). It should be fun and fulfilling to use the materials I have been learning

about in my undergraduate career and applying them to an actual project.

#### Day(s) trip to the Tour de France

On Saturday at 5 AM, we took the train to Utrecht in the Netherlands for the first race, "Utrecht Grand Depart", of this year's Tour de France (each rider bikes for 13.8 km one by one, one minute apart each). I did not know anything about Tour de France (except of course the whole Lance Armstrong issue) and for the most part I still don't. But we have two big fans in our group, so they taught me the Tour de France 101. We got there at 9 AM and it was very sunny out and it might have even hit 40 degrees Celsius at some point. We had been camping out near the fence since 10 AM and the race did not start until 2 PM and there was no shade. We had to defend our spots so we had to take turns getting food.

It was a lot of fun, though; the part I liked the most was when the audience went crazy for their favorites (Sky team, Dutch team, and one other team I can't remember were the most popular) for maybe 5 - 10 seconds and then they just biked past us and we also saw them on their way



back. I didn't care for anyone in particular so I just went crazy with the other fans. Afterwards there was a concert in town so we hung out there a bit. Utrecht is also a nice city with small canals, and it felt a little bit like Amsterdam (not as big or impressive, but much more peaceful).

On our way back, since we wanted to stay in Utrecht until around 9 pm, there was no ICE train to take home. Our original plan was to take a couple regional trains home, but unfortunately the train broke down from Deventer to Hangeloo, so we had to transfer to the bus and then continue from Hangeloo to Eschede to take another train to Münster. Because the transfer took time, and we didn't know what to do in the beginning (no one speaks Dutch so none of us understood why everybody just got off the train at Deventer), we missed the train to Münster, and it was the last train of the day. We and around ten other people (all foreigners) shared the same fate. We pretty much accepted that we had to stay at the station the entire night. But luckily, the people at the station were amazingly nice about our situation, and after 1.5 hours, they actually booked hotel rooms for all of us. The hotel was literally next to the train station - and with complimentary breakfast! With our bellies full, we then took the 8 AM train

directly back to Dortmund, hoping through the entire ride that the train wouldn't break down, and I got home at around 10:45 AM. The whole experience was quite surreal.

#### Side note

Our interactions with IT people both in Marl and in Hanau are quite memorable. Unlike most IT people I have encountered with a superiority "I know computers but you don't"-attitude, they are incredibly nice and helpful despite language difficulties. Since I don't really speak German, we had some difficulties communicating especially when there are specific computer words involved. IT people in Marl just kept apologizing for their English (even though their English was really good), and I kept apologizing for my German. It was quite an interesting experience and it reminded me how important German is.

# Week 6

Charles Du

## Working at Deutsche Bank

During the month of July I will be interning at Deutsche Bank. I will be participating in a rotational program that will offer me experience in Corporate Investment Banking: German Large Corps, Global Transaction Banking, and Asset and Wealth Management. For my first rotation, I will be working in the Corporate Investment Banking – German Large Corps division in Essen.

For some background, Deutsche Bank is a German global banking and financial services company headquartered in Frankfurt, Germany. It has a presence in over 70 countries and offers a variety of services for private and business clients such as sales, trading, research, mergers and acquisitions, and asset management among many other things. The German Large Corps division in Essen focuses on providing coverage and advisory for large German companies in the Ruhr region, with a focus in Essen.

This week, I spent time learning about the Greek Crisis, how to calculate interest rates for loans, and the details of how to conduct a leveraged buyout (LBO) transaction. Here are some of the highlights of my week: On Monday, I listened

to a conference call with the Head of European Foreign Exchange and Head of Multi Asset Coverage at Deutsche Bank on the Greek crisis and its impact on the economy and European markets. On Tuesday, I went to our division's bi-weekly meeting in Düsseldorf with the larger half of the Germany West team. At the meeting I was introduced to several visiting bankers from Frankfurt and got to meet the team from Düsseldorf. The meeting was mostly in German, but thanks to some quick translations from my advisor, I was able to understand the gist of the meeting and the current outlook for the team. I then spent the remainder of the week learning about setting interest rates for loans and looking through an LBO transaction. Thanks to Deutsche Bank, I learned a lot about financial modeling, industry analysis, and the banking business model.

My advisors at Deutsche Bank also took the time to continue my German cultural education. It was the team director's birthday a week ago and as a result, there was cheesecake in the office. While enjoying the cake, my co-workers took the time to give me beer recommendations and introduce me to several German musical artists including: Herbert Grönemeyer (a Ruhr native from Bochum), Helene Fischer, Heino,



and Die Toten Hosen. My favorite songs were Bochum by Herbert Grönemeyer, Currywurst by Herbert Grönemeyer, and Tage Wie Diese by Die Toten Hosen. I definitely recommend you check some of this music out if you are interested in learning more about German music!

## Exploring Düsseldorf

Most nights of the week I am so tired after working and commuting that once I get back home, I cook dinner, watch some TV, and go to bed pretty early. However this week I took some time to explore Düsseldorf with a few of the RuhrFellows. After getting off work early on Thursday, Remi, Chad, Youjin and I went to explore Düsseldorf. Düsseldorf is known for its famous Alt Beer, so prior to going my advisor recommended a brewery called Schumacher. I stopped there and I will tell you what, the beer was delicious, and like all German beer – extremely cheap. We also got dinner in the city and took a walk through the old town and along the Rhine River. Düsseldorf is a beautiful city, and I definitely plan on spending more time there after work over the next few weeks. I certainly do not want to waste my free time and this opportunity in the Ruhr region by watching Netflix in my bed.

## Prague

At the weekend I took a trip to Prague, Czech Republic, a city full of tourists, street performers, music, and all things named Charles. On Saturday morning, I arrived at the airport in Düsseldorf and soon found myself on a small, propeller plane with less than 50 people on it. When I first saw the plane, I was skeptical. I had never flown on such a small plane before and I expected a cramped and turbulent ride. However, it turns out, small planes have their advantages too. We boarded quickly, took off quickly, and even arrived early. I guess it is true what they say: “you can’t judge a book by its cover” or in this case “you can’t judge a plane by its propeller.”

I took the bus from the airport to the city and shortly arrived at my hostel in the old town of the city. I met up with another Ruhr fellow, Alex (he took a train), and set off to explore the city. We had to change our currency again, as the Czech Republic, while a member of the EU, was not on the Euro and instead on their own currency, the Czech Koruna. In Budapest, we called the Hungarian Florint (their currency), “points,” because for most of trip, we weren’t sure what to call them. The same logic applied for us in

Prague and as a result, we used the term Czech Points whenever we had to pay for anything.

We shortly found ourselves in the Old Town Square where we immediately ran into a huge crowd of tourists. It was half past eleven and people were already lining up for the Astronomical Clock to turn on the hour. Due to our proximity to the Town Square, we decided to pass on waiting for the clock this time since we would probably run into the show eventually. After all, we were going to spend over 48 hours in Prague.

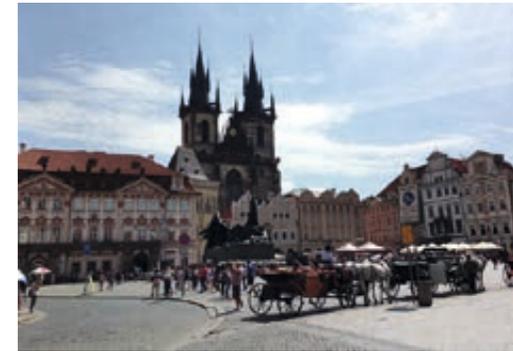
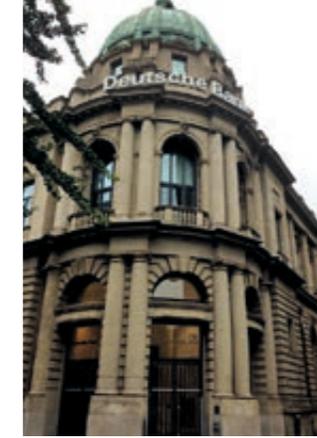
We made our way through crowded streets where people always seemed to be selling something – music, food, souvenirs, you name it. Eventually, after walking down several dead end alleys, we made it the famous Charles Bridge. This bridge, like the Town Square and old town area, was also lined with vendors, but this time, they seemed to specialize in caricatures. They all advertised: “5 euro or 150 Czech Korunas for caricature in 5 minutes!” Surprisingly, they were all filled and people lined up to get their portraits drawn.

After crossing, we arrived in the neighborhood of Hrad any, the castle district of Prague. We opted for walking instead of the tram up the mountain to the castle and soon found ourselves climbing huge flights of stairs to reach the top. We were exhausted when we reached the top, but reasoned that it was a good workout and as a reward for our efforts, we would be shameless in indulging ourselves in delicious food and beer when we returned from the castle at night.

We walked through the Saint Vitus Cathedral, Old Royal Palace, Basilica of Saint George, and Golden Lane. I have been to so many cathedrals, churches, and basilicas in Europe now that they are all starting to blur together, so the most interesting part of the castle for me was Royal Palace. In particular, we were most amused by seeing the actual window where the Defenestration of Prague (the story summarized is that someone got thrown out of a window and a war started afterwards) happened.

That night, we joined a few students from our hostel and went on a Pub Crawl. There were over 150 people in it and we went to three pubs and a club that night. Everyone was incredibly eager to talk about their adventures and we had no problem meeting different groups of people – especially Scots, which made for some interesting conversations about life, Europe and culture.

The next day, we timed our visit to the town square perfectly, as this time we got to see the Astronomical Clock turn on the hour. To be honest, I didn’t really understand what the fuss was about. It turns out the show was really just a few seconds of sound and spinning dolls in the clock tower. Afterwards, we pushed our way through the crowd and made our way to the Lobkowitz Palace where we planned on catching their midday classical music concert. We ended up going to the wrong Lobkowitz Palace. As it turns out the German Embassy was also called that and soon found ourselves on the wrong side of town with 15 minutes before the concert was to start! We located the actual palace on our map, only to realize it was in the castle at the



top of the mountain we had climbed the day before. We ran through town and sprinted up the mountain and made it just in time for the concert to begin.

After the concert, we went through the Wallenstein Palace Gardens, John Lennon Wall, and Wenceslas Square. All of them were fun to see, but not trip changers like the town square of castle in my opinion.

That night, we split up for different concerts at the Municipal House. I ended up going to Prague Prom’s performance of Carmina Burana (it contains the piece “O Fortuna”) with the Czech National Symphony Orchestra and Czech Philharmonic Choir. It turned that it was actually a black tie event as everyone there was in a fancy dress or dinner

jacket, but I was in the t-shirt and shorts I wore earlier that day, so you could say I definitely felt out of place. Nevertheless, I had an amazing time seeing the most epic musical performance of my life, and probably the highlight of my entire Prague trip. We finished the night at the Prague Beer Museum – a pub where we sampled numerous Czech beers.

The next and final day in Prague, we mostly relaxed in the town square and people watched on the Charles Bridge. With hundreds of pictures on my phone and even more memories, I boarded my flight back to Dortmund for a much needed night of rest before another week of work and adventures.

# Week 7

Youjin Chung

Hello, this is Youjin from Week 2 and I will give some updates before diving into this week's stories.

My internship started on July 1st at KPMG Düsseldorf and due to the long distance/commute, I moved to an apartment in Düsseldorf-Bilk with David, another Ruhr fellow who works in Düsseldorf. As I work during the normal business hours, I travelled mostly on weekends – so far, visited Amsterdam, Aachen, Hamburg, and Stuttgart. This week, I will share some of my perspectives on German work culture and policies and the visit to Stuttgart and Schwangau where I saw the famous Schloss Neuschwanstein.

## Internship at KPMG Düsseldorf

Since the beginning of this month, I have been working in the Deal Advisory department as a member of Transaction Service team. Most of my projects initially seemed a bit foreign as this was my first internship experience at an accounting firm, however, I learned much beyond my assigned tasks.

Like in the US, typical (full-time) working hours are eight hours per day and 40 hours per week (unless it's at an investment bank). However, in Germany the exact starting and ending times are more flexible. Some people come in as early as six in the morning (and may leave earlier than

others) and some come later and will leave as late as ten at night. There is a heavy emphasis on completing the work on time, so each day may look different depending on one's workload. Still, workers are actually paid for overtime or given attractive vacation options, so most workers will willingly stay longer to get the job done – as long as the working hours are compliant with German law.

In learning about Germany's renowned public policies, laws regarding maternity-leave surprised me. If I remember correctly, a female employee is required to stop working six weeks prior to the expected birth date and eight weeks after giving birth. The employee is paid during the 14 week leave (about 70 %, if not 100 %) and guaranteed the same position in the company if she decides to come back afterwards. In addition, there is an optional paternity leave where fathers take two months to look after their newborn baby, which many dads actually take to get to know the baby and spend time with their family. Growing up in a patriarchal society, I was amazed by how female employees are protected by both law and company, and also by how this society tries to achieve gender equality through both maternity and paternity leave. Despite these policies, however, I was also

informed that many mothers come back as part-time employee because there is a societal expectation for women to take care of their children. Unless it's financially necessary for both parents to work, women often stay home. This situation applies to many countries, I think, as the social role of women has been family-oriented for a long time. I respect many of Germany's policies and how family-oriented they are; I believe that the people's genuine care about social welfare makes Germany an attractive place to live.

Lastly, people speak German in the workplace even though they are mostly fluent in English. I actually have a funny story about this topic: On the second day of work, I had to visit the IT department to get my ID picture taken. Since everyone spoke German in the office, I politely asked "Sprechen Sie Englisch?" (Do you speak English?), and the assistant said "a little." But soon I realized "a little" means "I can speak English fluently but a bit slower than a native." He did not have any problem understanding what I asked and responded to my questions in full, even complicated, sentences. I have had this experience quite a few times when people say "a little" but they can actually speak English very well. German is, however, the language used among colleagues, so if anyone

is concerned about practicing his/her German during their internship, there should be no worries!

## Stuttgart

Not surprisingly, the trip to Stuttgart did not start as I expected. Remi, a Ruhr fellow, and I decided to take an overnight bus to Stuttgart on Friday night, however, all trains toward and out of Düsseldorf had to stop. My train to the HBF stopped all the sudden (with the power completely off) and I got off looking very confused. A kind English-speaking Spanish guy then saved me by walking me to the HBF. He was also not sure of what exactly happened but speculated that a person jumped onto one of the tracks and no train could not enter the station consequently. While this information was confirmed later in the day, Remi could not make the bus due to the indefinite delay of her train from Duisburg (and maybe due to my confusing body language to the bus driver who did not wait for her).

I arrived at 6:30 am on Saturday and attempted to meet up with Felix, my "couch-surfing" host. (Note: Couch-surfing is a website where you can find a host who lets you stay at his/her place, and though it requires persistence and luck,

you often get additional insights about the city from the host as well as some nice talks). Despite the detailed directions provided by Felix, my terrible direction skills led to an hour-long detour. Felix, who has hosted over a hundred couch surfers, welcomed me into his place when I finally arrived and we shared interesting life stories until I headed to the HBF later on. I met RuhrFellows Tony and Madhav around 9:45 am and we started a city walking tour. Of course we got lost (even with a map) but the city was not too crowded or big. The tour only took about two or three hours, which gave us plenty of time to explore different parts of the central area. There was a family festival that weekend, so I got to look around a couple stands (i. e. the Pokemon ones) and took pictures of cool activities (i. e. the Pokemon games). The highlight of the day was visiting two famous museums: Porsche and Mercedes-Benz museums. Although I am pretty ignorant about cars and am not a big fan of them (mainly because I don't drive), I really appreciated how both museums incorporated history and art into the tour so that everyone could enjoy. I learned that Mercedes was not the person who actually made the car and Benz actually produces various forms of transportation including airplanes. We ended up spending the entire afternoon there, which was still not enough, and bought souvenirs from Porsche, which sold the most expensive T-Shirt I've ever seen (a

white t-shirt with Porsche logo costs more than 35 Euro ..). I definitely would recommend a visit to these museums!

### Schloss Neuschwanstein

Schloss Neuschwanstein was ultimately the purpose of this weekend trip, so we attempted to prepare by planning in advance and ending the day Saturday early. Despite our efforts, we weren't able to go inside of the castle. We found a sign that read "no tours for Neuschwanstein castle until 5", and we arrived around noon. We thought that we would at least be able to look inside, so we waited in line for 40 minutes and then found out we weren't allowed inside the castle without the guided tour. Instead we booked a tour for Schloss Hohenschwangau (the earliest tour for this castle was also three) and went to the bridge next to the Neuschwanstein castle to at least celebrate our visit.

The view made me speechless. The castle looked completely isolated from the rest of the world as if no one could leave the castle once inside. It was integrated into the surrounding nature so well that the view seemed surreal. While I heard the castle was incomplete, it was still as gorgeous as could be. BUT, the most important concern for me was, the view from the castle did not look like the one I saw from Disney movies. Madhav told me that this castle was from the movie



Cinderella and (the side view from the bridge) is shown in the beginning of every Disney movie. I could not tell whether it was from Cinderella, yet the side was definitely NOT the same. Based on my research after the trip, the castle was featured in Sleeping Beauty and the FRONT view was used for the Disney castle.

Hohenschwangau castle was reconstructed after Napoleon's invasion of the area and was a summer vacation place for a royal family member in the 19th century. The tour guide explained the historical significance of each painting and quickly finished his tour in thirty minutes. Although it was not easy understanding some of his explanations, I found some interesting points about the king and queen's rooms along with the fantastic view of the outside. If you get a chance to visit Neuschwanstein castle, I would also recommend that you take a tour of this castle!

# Week 8

Chatarin Wangsanuwat

What an exciting two months it has been in Germany! I think I need to preface my second blog by saying no matter what I write or how well I write it in these short blogs, I cannot even come close to expressing all my emotions and experiences during my time here.

## RWE

Working at RWE has been an amazing experience. Besides meeting a lot of German co-workers and experiencing what it takes to work in a huge German company, I have learned a lot as well. A lot of my coworkers asked me what was different or similar to working in the U. S. I was not really sure what to say, since I have never worked in a company as large as RWE. The sheer size of the company impressed me; after seeing the hierarchy and business divisions of the company, I wondered how so many people could be organized efficiently into so many departments. Even though the company is huge, the floor I work on is set up almost like a small American startup. The entire floor is an open space, and the desks are interspersed throughout. Anyone can choose any desk he or she liked at the beginning of the day, and you can always see everyone working together. Of course, there are some private rooms if you

have a meeting or a call, but I really like the relaxed, inclusive atmosphere this setup provides.

I have been working independently on a new project RWE is about to introduce, performing analyses and preliminary evaluations of processing big data. I have been able to teach myself a lot just by researching and applying the topics. I also had the chance to sit in on some meetings and phone conferences, most of which, however, were in German. The German I learned last month could not prepare me for the technical terms and business jargon that the workers here rattle off quicker than I can pretend to understand. Nonetheless I like this a whole lot better than watching television on a couch with a pillow and potato chips.

## Schützenverein in Düsseldorf

On Thursday after work, I went with a few other RuhrFellows to see the Schützenverein in Düsseldorf, which basically turned out to be an amusement park with the feel of a county fair. There were roller coasters, games, stands, and a beer garden. Everything felt similar to a fair in the U. S. except for the beer garden. Besides having a giant tent crowded with people openly drinking alcoholic beverages, the garden had



a live rock band wearing cowhide and singing Bill Medley and Jennifer Warnes's "I've Had the Time of My Life," which definitely caused me to do a double-take. I also jumped on the roller coasters and rides, which turned out to be faster and "spinnier" than I thought but all the more thrilling. After practically inhaling a chocolate crepe, it was about time to head home and prepare for the weekend in Paris.

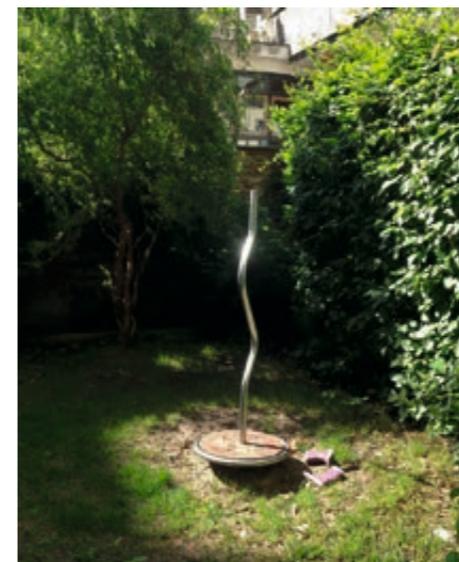
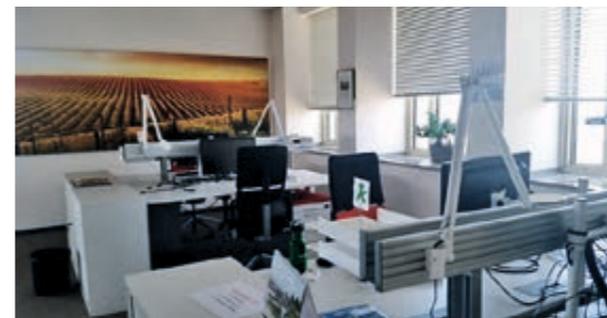
### Paris

After a bleary-eyed early flight to the Charles de Gaulle Airport Saturday morning, I walked around Paris with a few RuhrFellows, seeing most of the major sights, including Notre Dame, the outside of the Louvre, the Champs Elysees, the opera house, the Eiffel Tower, and the Luxembourg Gardens. I also had the chance to try an authentic macaron, a delightfully sweet pastry, as well as an authentic crepe; everything I ate in Paris tasted great.

We started off Sunday by waiting three hours to see the city's catacombs. I didn't really know what to expect, but in hindsight, knowing they were called "The Catacombs," I really should have had a clear idea of what was inside – namely, the remains of about six million people. There were literally piles of bones all along the tunnels, brought in a

while ago from other cemeteries. It was a sobering way to start the day, but our day cheered up when we went to see the finish of the Tour de France. With the rain sputtering in sporadically, we huddled by the path to the Arc de Triomphe and the finish line to see the cyclists vie for glory. It was pretty exciting for me, seeing an event I normally barely catch on television. Afterwards, we grabbed a warm meal to fend off the windy rain and saw the Eiffel Tower lit up at night. The spotlight at the top, supposedly the most powerful spotlight in the world, was a great giveaway that the tower was literally a beacon of the city. At midnight, the entire tower sparkled with extra lights, adding what felt like magic to the night.

After seeing the outside of the Eiffel Tower twice, we were determined to see the city from the top of it. Thus we started the cloudy Monday morning by taking the elevator to the top of the Eiffel Tower. It was extremely chilly and foggy at first, but when the sun came through the clouds and lit up the city, I was stunned by the view. I also went in the Louvre and felt like I could spend days in the museum and still not see everything it can offer. Highlights included the Mona Lisa, the Winged Victory (or Nike), the Venus de Milo, and hundreds of other paintings, including Vermeer's The



Lacemaker. Afterwards I saw La Basilique du Sacré Cœur, or the Basilica of the Sacred Heart, a beautiful, bright building with an impressive elevated view of the city. I also visited my friend from Harvard who is staying in France, but it was too soon when I had to find the airport and head back home.

### The Beginning of the End?

Starting my very last week in Europe and making preparations to leave, I cannot help but look back and struggle

to say goodbye to such an awesome area of the world. I cannot say it enough that I have had amazing experiences here, and it has only convinced me that I need to return someday. I have started filling my suitcase with souvenir coal from the Prosper-Haniel Coal Mine, Belgian chocolate, a BVB jersey, a piece of the Berlin Wall, a Tour de France T-shirt, and numerous other memorabilia. I have also racked up what has to be about a huge amount of photographs. After all, I have had the time of my life. Alles ist gut.

## Week 9



This is the last blog for this year with all bloggers give the final impressions of their RuhrFellowship to you.

### Sarah Toledano

"Was ist das?" Encountering confusing advertisements with several RuhrFellows in Berlin mirrored my experience of consistently running into situations without any idea of what is going on, leading me to consistently wonder "was ist das?" Whether it was an unexpected Deutsche Bahn delay, or ordering the vegetarian pizza at work only to find that it was a cheese covered hash brown, I have learned to laugh, embrace confusion and make the best of a situation. Beyond staying positive, I have also learned

that journeying outside your comfort zone can lead to new adventures. In my first week, I joined German students relaxing outside the Studentenwohnheim, practiced some German and made local friends with a shared passion for running and similar future ambitions. Aside from the incredible people I met this summer, I was inspired by the innovative engineering prominent in the Ruhr region. Particularly at BP, I was amazed by the proximity of policy leaders for fuel additives to the engineers and researchers developing these technologies. Their communication and results provided a powerful reminder of extent to which collaboration can accelerate progress. Favorite German word from work: Stickstoff (German for nitrogen)

### Wanda Lipps

These past two months in Germany and Europe have been some of the best in my life. I have so many moments and memories that will remain with me and have impacted my view of the world and other cultures. The highlight of my time here is a collection of moments that sprawl across the entire two months. Throughout the summer I have had many conversations with people of different nationalities - from the university students to my internship advisor,



to random strangers I met while traveling. Each time we swapped stories and compared cultures. I have had long talks with my advisor about current events, particularly immigration policy and history. I have talked to fellow travelers about the validity of cultural stereotypes for each of our homes. As someone who grew up where striking up small talk is fairly normal, it still does not compare to the meaningfulness of the small conversations I have had here. All in all, this summer has been culturally enriching and broadened my perspective of the world.

### Alex Bi

Until very recently, Budapest was but a pop song, Prague was a stereotype borne of old spy movies, Berlin was a Cold War hotspot from history class, and Bruges - is that even a real place? Having visited all these unique destinations within a short two months, I can say with certainty that exploring all these exotic locales with new friends from the Ruhr program was the highlight of my summer. While the weekends were exciting and eye-opening, the weekdays spent working at a German company, navigating with public transportation, and stumbling through life with broken German peppered with "Ich spreche nicht viel



Deutsch" were rewarding in their own way. With all the talk about "cultural immersion," I realized that it was often through the unassuming episodes of everyday life: a lunch conversation with colleagues or an impromptu chat with a stranger on the train, that I fine-tuned my feel for the pulse of this region and culture. These past two months, although fleeting, nevertheless have given me time to develop a deep respect and appreciation for the country's work-life balance, environmental awareness, and sense of regional community and identity. That and the quality beer.

### Andy O'Rourke

I could not be happier to have been a RuhrFellow this summer. The Fellowship has so many exciting aspects to it: meeting other interesting American as well as German students, German language instruction, German culture immersion, company visits to learn about Ruhr area industry, an internship to experience engineering working life in Germany, and living in an incredible location for travel on weekends. And less directly: improving my cooking skills - at some point pasta loses its flare. Having never been to Europe before, I was expecting a culture shock but that was not the case. Sure, the cars are all smaller, nobody



J-walks, and outside of the university I sometimes had to mime things as my German language skills are minimal, but overall I felt comfortable here immediately. Most Germans that I met spoke great English, which helped a lot.

I interned with Evonik Industries in the software and computer simulation department where chemical and computer engineers simulate chemical production processes to determine the most efficient strategies. I had no experience in the area (I study biomechanical engineering), but my bosses were very patient and helpful. We were free to travel on most weekends as well, allowing us to experience the perks of being so central (Paris, Brussels, Amsterdam, Prague, Berlin, Munich, and London all just a cheap, short flight/ride away). One highlight for me was going 1.5 km into the earth during the coal mine excursion, some culture to take home: Currywurst and Döner, and music by Cro. My favorite word: Streichholzschachtel (matchbox), because it is impossible to say.

#### Aakash Agarwal

I did many enjoyable things this summer but my favorite, by far, was being able to travel so easily on the weekends. During the past few semesters of college, I found it difficult



to leave Berkeley even when I didn't have deadlines looming. Whereas there I would be in the same environment for weeks at a time, this summer I have traveled to a new place nearly every weekend. I have been as far west as Barcelona and as far east as Budapest, just by taking a quick flight or quick train ride from Dortmund. I chose the Ruhr-Fellowship because it combined everything I wanted to do this summer: sharpen my German skills, have an internship within my major, and travel frequently and extensively through Europe. I can gladly say I was not let down.

#### Jerald Han

At the beginning of my internship I was asked if I preferred to communicate in English or German. Although I was technically in the advanced course, I chose English because I felt that I was not yet ready to converse and contribute to the team as efficiently with my limited German language skills. Along the way however, I decided that I should use this golden opportunity to fully immerse myself in the environment and pick up useful colloquial phrases that were difficult to come across in the classroom. It takes a considerable amount of additional effort required to listen, process, understand, and reply in a language that you



did not grow up hearing and have had such limited exposure to in the past. As the month went by, I did not realize how much faster I spoke and understood the language until I realized that I no longer had to begin with the phrase "Sprechen Sie Englisch?" whenever I wanted to book tickets at the Reisezentrum (Travel Office), or when I went to the Sparkasse to close my account, or when I called my Hausmeister to arrange for a moving-out appointment. That is one of the biggest achievements I have made this summer.

#### Chatarin Wangsanuwat

It is hard for me to decide which experience is my personal highlight for the summer but if I were to pick one, it would probably be my weekend trip to Paris. Mainly because Paris is a really nice city and I enjoyed the company of some of the RuhrFellows who I knew well. The combination of a good city with good people holds true! Regarding my internship, I think it is really fulfilling to use the knowledge I have learned in college and apply it to an actual project. I also learned quite a bit about the programs Aspen Custom Modeler and Aspen Plus, which I will use next semester, so that will be really helpful. Overall I really enjoyed how nice people are here in Europe. People in Germany generally do



not get upset when I force them to speak English and sometimes they are even apologetic about their English (even though their English is more or less near perfect), which makes me feel bad for not trying hard enough to learn German. One thing that I definitely want to take home with me is the attitude of people here in Germany of not being afraid and being more open to speaking a foreign language.

#### Charles Du

The highlight of my summer was when I took a solo journey across Germany to Hamburg, Frankfurt, and Heidelberg during the 7th week of the program. After travelling with other RuhrFellows every weekend previously, this was my first time travelling alone. I was nervous at first, however my confidence increased as time passed and by the end of it all I felt like a seasoned "solo traveler." Over the three days I met tons of new people, tried new things, and got to do exactly what I wanted to do in each city. As a cherry on top, I communicated almost exclusively using the German skills I had acquired from the RuhrFellowship when it came to ordering food and finding different places during my solo adventure.



### Remi Mir

This summer taught me that the stereotype of Germans being cold and unfriendly is just plain wrong. I met many friendly, funny and patient Germans who made my experience a wonderful one. My personal highlight was celebrating my birthday in another country; it turns out I have the same birthday as my supervisor! Aside from hearing stories about everything from the Nordschleife race track to neat places near Neuschwanstein, it was interesting to sit in the middle of the Product Development office and listen to the sounds of people working together. I liked the way my colleague from Italy would say “ista”, with an ‘ee’ at the beginning and an ‘a’ worthy of a jaw drop at the end. I loved the conversations with my co-workers: I learned how one was a former athlete and now is into sunset fishing off the coast of Norway. Another has an affinity for fast cars and traveling, which came in handy for recommendations on where to go for the weekends. I also enjoyed my supervisor’s occasional philosophical conversations about life that gave me a break from work to think about the future. I would love to be able to take back with me the ability to ride public transportation for free with my student ID as well as summers that, for the most part,

are not hot. And the healthy work-life balance was very attractive. My favorite German words were: Sommersprossen, Kein Problem! And: Es gibt kein schlechtes Wetter, es gibt nur schlechte Kleidung. This one became particularly relevant the weekend I went to Amsterdam. Apparently, the Netherlands saw its heaviest summer storm since 1901! It is interesting to think that it was just a month that I was in the Ruhr Area because all the experiences seem to add up to something more than that, not only time-wise, but memory-wise.



# Farewell Dinner



# Partner

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

Vier Wochen lang haben sie den Studierenden 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 das Programm mit viel Herzblut unterstützt haben. Dies gilt im Besonderen auch für die Kolleginnen und Kollegen der UA Ruhr, die für die Realisierung des akademischen Teils verantwortlich waren.



## BP Europe SE

Die BP Europa SE nimmt mit einem Umsatz von mehr als 50 Milliarden Euro im Jahr 2014 (inklusive Energiesteuer) in Deutschland eine Spitzenposition unter den führenden Wirtschaftsunternehmen ein. Mit den Produkten und Dienstleistungen der Marken BP, Aral und Castrol erreicht das Unternehmen in Deutschland täglich Millionen Kunden.

Weltweit beschäftigt die BP Gruppe rund 84.000 Mitarbeiter in fast 80 Ländern und zählt damit zu den größten Konzernen der Welt. In Deutschland arbeiten mehr als 5.000 Mitarbeiter, das Tankstellengeschäft betreibt BP unter der Marke Aral und ist mit bundesweit rund 2.500 Tankstellen Marktführer. Eines von weltweit drei Kraftstoffzentren für Forschung und Entwicklung befindet sich in Bochum.

BP betreibt eines der größten Raffineriesysteme in Deutschland, und auch im Schmierstoffbereich nimmt das Unternehmen eine Spitzenposition ein und ist in allen wichtigen Marktsegmenten vertreten. Zudem gehört BP beim Vertrieb von Flüssiggas, Flugkraftstoff, Schiffdiesel und Bitumen zu den führenden Anbietern.



## Deutsche Bank AG

Die Deutsche Bank ist eine der führenden globalen Universalbanken. Ihre Geschäfte umfassen eine breite Palette von Aktivitäten im Kapitalmarktgeschäft und im Firmen- und Privatkundengeschäft sowie in der Vermögensverwaltung. Der Konzern ist in allen Regionen der Welt tätig. In unserem Heimatmarkt Deutschland sind wir Marktführer. In Europa, in Nordamerika und in wichtigen Wachstumsmärkten, insbesondere in Asien, verfügen wir über eine starke Wettbewerbsposition.

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 Wealth Management der Deutschen Bank entwickelt individuelle Lösungen für vermögende Privatpersonen, Familien und ausgewählte Institutionen.

Die Deutsche Bank feierte 2014 an Rhein und Ruhr ihr 100-jähriges Bestehen. 1914 hatte die Deutsche Bank die Bergisch Märkische Bank in Elberfeld mit ihrem dichten Filialnetz übernommen. Von diesem Zeitpunkt an trat die Deutsche Bank in einer ganzen Region erstmals unter eigenem Namen auf. Die Geschäftsregion West der Deutschen Bank umfasst ganz Nordrhein-Westfalen, ihr Leiter ist Martin Renker mit Sitz in Düsseldorf. Weitere Kernstandorte an Rhein und Ruhr sind Wuppertal, Essen und Köln, hinzu kommt Bielefeld. Mit rund 2 Millionen Privat- und Firmenkunden, mehr als 200 Filialen und bereichsübergreifend mehr als 7.200 Mitarbeitern trägt die Region West mit rund 29 Prozent zum Geschäftsergebnis der Inlandsbank bei.



### EMSCHERGENOSSENSCHAFT und LIPPEVERBAND

Seit vielen Jahrzehnten sind EMSCHERGENOSSENSCHAFT und LIPPEVERBAND im größten Ballungsgebiet Europas aktiv. Ihr gesetzlicher Auftrag ist es, ohne wirtschaftliches Eigeninteresse für die Daseinsvorsorge aller Bürger und zum Nutzen unserer Mitglieder zu arbeiten. Beide Unternehmen arbeiten für das Wiedererstehen lebendiger, artenreicher Flusslandschaften und geben Impulse für Stadtentwicklung und Strukturwandel.

Die EMSCHERGENOSSENSCHAFT wurde im Dezember 1899 als erster deutscher Wasserwirtschaftsverband gegründet. Zusammen mit dem 1926 gegründeten LIPPEVERBAND arbeiten beide Verbände seit mehr als 85 Jahren unter dem Dach einer einheitlichen Organisationsstruktur. Zusammen sind sie der größte Abwasserentsorger und Betreiber von Kläranlagen in Deutschland.

EMSCHERGENOSSENSCHAFT und LIPPEVERBAND übernehmen im größten Ballungsgebiet Europas zwischen Dortmund und Duisburg und der nördlich angrenzenden Lipperegion vielfältige Aufgaben: Abwasserreinigung, Pflege und Unterhaltung von Gewässern, naturnahe Umgestaltung offener Abwasserkanäle, Schutz vor Hochwasser, Regelung des Wasserabflusses und Bewirtschaftung von Grund- und Regenwasser. Die EMSCHERGENOSSENSCHAFT betreibt hier vier Groß-Kläranlagen sowie 128 Pumpwerke und betreut rund 340 Kilometer Gewässerläufe, davon über 310 Kilometer als geschlossene Abwasserkanäle.

Der LIPPEVERBAND betreibt rund um die Lippe 50 Kläranlagen, 148 Pumpwerke und betreut knapp 400 Kilometer Wasserläufe sowie 127 Kilometer geschlossene Abwasserkanäle.



### Evonik Industries AG

Evonik ist ein weltweit führendes Unternehmen der Spezialchemie. Profitables Wachstum, Effizienz und Werte sind die Elemente unserer Strategie zur nachhaltigen Steigerung des Unternehmenswertes. Rund 80 Prozent des Umsatzes erwirtschaften wir aus führenden Marktpositionen, die wir konsequent ausbauen. Dabei konzentrieren wir uns auf wachstumsstarke Megatrends – vor allem Gesundheit, Ernährung, Ressourceneffizienz und Globalisierung.

Evonik erzielte 2014 mit rund 33.000 Mitarbeitern einen Umsatz von 12,9 Milliarden Euro und ein operatives Ergebnis (bereinigtes EBITDA) von 1,9 Milliarden Euro. Überzeugender Beleg unseres globalen Geschäfts ist ein Umsatzanteil außerhalb Deutschlands von 78 Prozent.

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 Aktiengesellschaft

HOCHTIEF gehört zu den global bedeutendsten Baukonzernen. Der Schwerpunkt liegt auf komplexen Projekten in den Bereichen Verkehrs-, Energie-, soziale und urbane Infrastruktur sowie im Minengeschäft. Dabei profitieren das Unternehmen und seine Kunden gleichermaßen von der mehr als 140-jährigen HOCHTIEF-Erfahrung und seinen Kompetenzen im Entwickeln, Bauen und Betreiben. Durch sein globales Netzwerk ist HOCHTIEF auf wichtigen Märkten der Welt präsent.

Der Konzern mit Sitz in Essen und 53.000 Mitarbeitern erzielte im Geschäftsjahr 2014 Umsatzerlöse von mehr als 22 Milliarden Euro. Für seine Kunden ist HOCHTIEF ein langfristiger, zuverlässiger Partner, der für hohe Flexibilität, Innovationskraft sowie herausragende Qualität steht. Das Unternehmen entwickelt und realisiert überwiegend Unikate, und verwirklicht so individuelle Lösungen für seine Kunden.

HOCHTIEF bekennt sich zu Nachhaltigkeit als integralem Bestandteil seiner Unternehmensstrategie und fördert das Zusammenspiel zwischen Ökonomie, Ökologie und Sozialem. Mit seinem Beitrag zur nachhaltigen Gestaltung von Lebensräumen übernimmt das Unternehmen Verantwortung gegenüber Mensch und Umwelt – heute und in der Zukunft.



### ista International GmbH

ista hat sich heute in 25 Ländern weltweit auf die Erfassung, Abrechnung, Visualisierung und das Management von Energie, Wasser und anderen Hausnebenkosten spezialisiert. Als Grundlage dafür nutzt ista ein Portfolio von Hardwarekomponenten zur Energiedatenerfassung und -verarbeitung. Dazu gehören funkbasierte Heizkostenverteiler, Wasserzähler, Wärmezähler sowie entsprechende Montagesysteme.

Besonders zukunftsweisend ist das sogenannte ista Energiedatenmanagement. Dabei werden sämtliche Verbrauchsdaten mit Hilfe intelligenter Funktechnik in einem Online-Portal oder per App visualisiert und dem Nutzer monatlich zur Verfügung gestellt. So kann jeder aktiv seinen eigenen Verbrauch steuern und bei geringen Investitionskosten signifikant Energie einsparen. Abgerundet wird das Portfolio von ergänzenden Dienstleistungen wie dem Energie-Contracting, das ista gemeinsam mit starken Partnern betreibt. Im Bereich Mietersicherheit bietet ista Produkte und Dienstleistungen wie den ista Rauchwarnmelder oder die ista Trinkwasseranalyse an.



### KPMG

KPMG ist ein Firmennetzwerk mit mehr als 162.000 Mitarbeitern in 155 Ländern. Auch in Deutschland gehört KPMG zu den führenden Wirtschaftsprüfungs- und Beratungsunternehmen und ist mit rund 9.600 Mitarbeitern an mehr als 20 Standorten präsent. Unsere Leistungen sind in die Geschäftsbereiche Audit, Tax und Advisory gegliedert. Im Mittelpunkt von Audit steht die Prüfung von Konzern- und Jahresabschlüssen. Tax steht für die steuerberatende Tätigkeit von KPMG. Der Bereich Advisory bündelt unser hohes fachliches Know-how zu betriebswirtschaftlichen, regulatorischen und transaktionsorientierten Themen.

Für wesentliche Branchen unserer Wirtschaft haben wir eine geschäftsbereichsübergreifende Spezialisierung vorgenommen. Hier laufen die Erfahrungen unserer Experten weltweit zusammen und tragen zusätzlich zur Beratungsqualität bei.



### NATIONAL-BANK AG

Die NATIONAL-BANK ist eine der bundesweit führenden konzernfreien Regionalbanken für anspruchsvolle Privat- und Firmenkunden sowie mittelständische institutionelle Investoren. Die Aktien der Bank sind nicht börsennotiert. Das Institut finanziert sich nahezu ausschließlich durch Eigenkapital und Einlagen. Bei den rund 5.200 Anteilseignern entfallen 46 Prozent des Grundkapitals auf institutionelle und 54 Prozent auf private Investoren.

1921 in Berlin gegründet, ist die Bank seit 1922 in Essen beheimatet. Das Geschäftsgebiet ist Nordrhein-Westfalen, auch wenn der regionale Fokus auf den Regionen an Rhein und Ruhr sowie im Bergischen Land und Münsterland liegt.



### RAG Aktiengesellschaft

Die RAG steht für Energieversorgung, weltweit gefragtes Bergbau-Know-how und Wirtschaftskraft. Dem Strukturwandel in den Kohlerevieren geben wir Impulse durch die Nachnutzung bergbaulicher Infrastruktur, etwa zur Erzeugung erneuerbarer Energien. Wir denken und handeln über den Tag hinaus: nachhaltig und mit Blick auf kommende Generationen – wirtschaftlich, ökologisch und sozial. Zum Konzernverbund der RAG Aktiengesellschaft zählen auch die RAG Montan Immobilien GmbH, die RAG Mining Solutions GmbH und die RAG Verkauf GmbH.

Der Steinkohlenbergbau hat das Ruhrgebiet mehr als 150 Jahre lang geprägt. Wenn bis Ende 2018 die letzten noch aktiven Bergwerke die Kohlenförderung einstellen, endet ein Kapitel Industriegeschichte – nicht jedoch die Arbeit der RAG. Auf das Unternehmen kommen dauerhaft wichtige Aufgaben zu. Diese sogenannten Ewigkeitsaufgaben tragen dazu bei, den Wasserhaushalt in der Region unter und über Tage zu regulieren. Zu den Ewigkeitsaufgaben zählen die Grubenwasserhaltung, der Betrieb von Polderanlagen und das Grundwassermanagement. Oberstes Gebot sind dabei für die RAG der Trinkwasser- und der Umweltschutz. Gleichzeitig entwickelt das Unternehmen ehemalige Bergbauflächen weiter, so dass sie zukünftig Raum für Wohn- und Gewerbegebiete oder für Photovoltaik und Windkraftanlagen bieten.



### Ruhrverband

Der Ruhrverband ist ein öffentlich-rechtliches Wasserwirtschaftsunternehmen ohne Gewinnerzielungsabsichten. Sowohl beim Betrieb seiner Talsperren, die die Wasserversorgung von 4,6 Millionen Menschen sicherstellen, als auch bei der Abwasserreinigung für 60 Städte und Gemeinden im Einzugsgebiet von Ruhr und Lenne stehen Mensch und Umwelt im Zentrum seines Handelns, ohne dabei das Gebot der Wirtschaftlichkeit zu vernachlässigen. Die Ruhr und ihre Nebenflüsse werden unabhängig von politischen Verwaltungsgrenzen als Einheit betrachtet und bewirtschaftet. Dieses Flussgebietsmanagement schafft einen fairen Ausgleich zwischen den diversen Nutzungen und Interessen an den Flüssen und Seen. Das spart Kosten und dient, wie von der Europäischen Wasserrahmenrichtlinie gefordert, dem Umweltschutz und dem Allgemeinwohl.

Der Ruhrverband nimmt im 4.478 Quadratkilometer großen Flussgebiet der Ruhr folgende Aufgaben wahr:

- Wasser zur Trink- und Betriebswasserversorgung
- sowie zur Wasserkraftnutzung beschaffen und bereitstellen,
- Wasserabfluss regeln und ausgleichen,
- Hochwasserabfluss sichern,
- Abwässer reinigen,
- bei der Abwasserreinigung anfallende Rückstände entsorgen und verwerten,
- wasserwirtschaftliche Verhältnisse ermitteln.



### RWE Deutschland AG

Die RWE Deutschland AG bündelt die deutschen Aktivitäten des RWE-Konzerns in den Bereichen Netz, Vertrieb und Energieeffizienz und führt die deutschen Regionalgesellschaften. Das Unternehmen verfügt über rechtlich eigenständige Tochtergesellschaften für den Vertrieb sowie den Verteilnetzbetrieb, den Netzservice und die Gasspeicher. Weitere Töchter bestehen für die Aktivitäten zur Energieeffizienz einschließlich Elektromobilität sowie für die Entwicklung und den Betrieb intelligenter Geräte zur Messung des Energieverbrauchs.

Die RWE Deutschland ist die größte Beteiligungsgesellschaft im RWE-Konzern: Unter ihrem Dach finden sich die deutschen Regionalgesellschaften enviaM, LEW, Süwag und VSE. Die Gesellschaft ist darüber hinaus direkt an rund 70 regionalen und kommunalen Energieversorgern beteiligt.

Das Unternehmen räumt der Partnerschaft mit den Kommunen einen hohen Stellenwert ein. In rund 3.000 Städten und Gemeinden sorgt RWE Deutschland über Tochtergesellschaften für den sicheren und leistungsfähigen Betrieb der Verteilnetze für Strom, Gas und Wasser sowie in vielen Orten auch für die Straßenbeleuchtung. Der RWE-Konzern verfügt über rund 40.000 Arbeitsplätze und etwa 2.600 Ausbildungsplätze in Deutschland.



### Siemens AG

Die Siemens AG (Berlin und München) ist ein führender internationaler Technologiekonzern, der seit mehr als 165 Jahren für technische Leistungsfähigkeit, Innovation, Qualität, Zuverlässigkeit und Internationalität steht. Das Unternehmen ist in mehr als 190 Ländern aktiv, und zwar schwerpunktmäßig auf den Gebieten Elektrifizierung, Automatisierung und Digitalisierung. Siemens ist weltweit einer der größten Hersteller energieeffizienter ressourcenschonender Technologien. Mit rund 115.000 Mitarbeitern und einigen tausend Auszubildenden ist Siemens einer der größten deutschen privaten Arbeitgeber und Ausbildungsbetriebe.

Das Unternehmen ist Nummer eins im Offshore-Windanlagenbau, einer der führenden Anbieter von Gas- und Dampfturbinen für die Energieerzeugung sowie von Energieübertragungslösungen, Pionier bei Infrastrukturlösungen sowie bei Automatisierungs- und Softwarelösungen für die Industrie. Darüber hinaus ist das Unternehmen ein führender Anbieter bildgebender medizinischer Geräte wie Computertomographen und Magnetresonanztomographen sowie in der Labordiagnostik und klinischer IT.

Im Geschäftsjahr 2014, das am 30. September 2014 endete, erzielte Siemens auf fortgeführter Basis einen Umsatz von rund 71,9 Milliarden Euro und einen Gewinn nach Steuern von 5,5 Milliarden Euro. Ende September 2014 hatte das Unternehmen auf dieser fortgeführten Basis weltweit rund 343.000 Beschäftigte.



### SIGNAL IDUNA Gruppe

1999 fusionierten die 1907 gegründeten Dortmunder SIGNAL Versicherungen mit der Hamburger IDUNA NOVA Gruppe, gegründet 1906, zur SIGNAL IDUNA Gruppe. Der Deutsche Ring Krankenversicherungsverein, Hamburg, schloss sich 2009 dem Gleichordnungskonzern an.

Die Konzern-Obergesellschaften sind genossenschaftlich organisiert. Als Versicherungsvereine auf Gegenseitigkeit orientieren sie sich primär am Interesse ihrer Mitglieder, also der Versicherten. Die Gruppe ist damit selbstständig, unabhängig und an keine Aktionärsinteressen gebunden.

Unter dem Dach der SIGNAL IDUNA finden sich auch Spezialversicherer für den öffentlichen Dienst sowie ein komplettes Angebot an modernen Finanzdienstleistungen. Dazu gehören Bausparprodukte, Immobilienfinanzierungen, Investmentanlagen und Bankdienstleistungen. Die Kernkompetenz der Gruppe liegt in der Absicherung aller Lebensrisiken der privaten Haushalte und in der maßgerechten Risikodeckung für die Betriebe der mittelständischen Wirtschaft. Zudem sieht sich die SIGNAL IDUNA als Vermögensanlagepartner und -berater, insbesondere ihrer Versicherungskunden, sowie als Kapitalgeber für den gewerblichen Mittelstand.

Die SIGNAL IDUNA Gruppe erzielt Beitragseinnahmen von etwa 5,7 Milliarden Euro. Mit mehr als 62 Milliarden Euro Vermögensanlagen verfügt sie über eine beachtliche Finanzkraft. Sie betreut mehr als zwölf Millionen versicherte Personen und Verträge.



### SMS group GmbH

Mit weltweit mehr als 14.000 Mitarbeiterinnen und Mitarbeitern und einem Umsatz von rund 3,4 Milliarden Euro zählt die SMS group zu den größten Arbeitgebern im Anlagen- und Maschinenbau zur industriellen Verarbeitung von Stahl, Aluminium und NE-Metallen. Mit hochwertigen Anlagen und Maschinen und individuellen Servicepaketen bietet die SMS group die gesamte metallurgische Prozesskette flexibel und wirtschaftlich aus einer Hand – vom Erz bis zum fertigen Produkt.

Als typisch mittelständisch geprägtes und traditionsreiches Familienunternehmen wird in der SMS group großen Wert auf die Unternehmenskultur gelegt. Mitarbeiter aus über 40 Nationen arbeiten in einer Atmosphäre von Eigenverantwortung, Offenheit, Teamgeist und flachen Hierarchien miteinander. Und als Hochtechnologie-Unternehmen, das in vielen Märkten die Führungsposition hält, ist die Gruppe darauf angewiesen, überall die besten Köpfe für sich zu gewinnen. Denn nur mit gut ausgebildeten und hochqualifizierten Mitarbeitern kann sich die Unternehmensgruppe dauerhaft und erfolgreich im Wettbewerb behaupten. Qualifizierten Nachwuchs für den Bedarf an Fachkräften sicherzustellen, betrachtet das Unternehmen als einen wesentlichen Erfolgsfaktor für die Zukunft.



### Thyssengas GmbH

Die Thyssengas GmbH mit Sitz in Dortmund ist ein konzernunabhängiger Fernleitungsnetzbetreiber und zählt zu den führenden Erdgastransportgesellschaften in Deutschland. Das 1921 gegründete Unternehmen kann auf eine lange Tradition in der Erdgaslogistik zurückblicken und gilt als zukunftsweisender Pionier der Branche.

Heute betreibt die Gesellschaft ein modernes Leitungssystem von mehr als 4200 Kilometern Länge. Über dieses weitläufige Transportnetz werden jährlich bis zu 10 Milliarden Kubikmeter Erdgas umweltschonend zu Verteilnetzbetreibern, Industriebetrieben und Kraftwerken primär in das bevölkerungsreichste Bundesland Nordrhein-Westfalen transportiert.



### Vaillant Group

Die Vaillant Group ist ein international tätiges Unternehmen mit Hauptsitz in Remscheid, Deutschland, das in den Bereichen Heiz-, Lüftungs- und Klimatechnik tätig ist. Als einer der weltweiten Markt- und Technologieführer entwickelt und produziert die Vaillant Group maßgeschneiderte Produkte und Systeme und erbringt Dienstleistungen für Wohnkomfort. Das Produktportfolio reicht von effizienten Heizgeräten auf Basis herkömmlicher Energieträger bis hin zu Systemlösungen zur Nutzung regenerativer Energien.

Im Geschäftsjahr 2014 erzielte das Unternehmen, das sich seit seiner Gründung 1874 in Familienbesitz befindet, mit mehr als 12.000 Mitarbeitern einen Umsatz von rund 2,4 Milliarden Euro.



### Universitätsallianz Ruhr

Unter dem Motto „Gemeinsam besser“ haben sich die Ruhr-Universität Bochum, die Technische Universität Dortmund und die Universität Duisburg-Essen zur Universitätsallianz Ruhr (UA Ruhr, vormals UAMR) zusammengeschlossen. Seit 2007 bündeln die drei großen Ruhrgebietsuniversitäten ihre Kompetenzen und stärken damit ihre Leistungskraft.

Dabei vermitteln die reinen Zahlen nur einen ersten Eindruck der gemeinsamen Leistungsstärke: Vernetzt studieren und arbeiten an den drei Universitäten über 110.000 junge Menschen und mehr als 1300 Professoren sowie 8.000 wissenschaftlichen Mitarbeiter. Sie alle nutzen an den Partneruniversitäten diese neuen Synergien bereits intensiv in einem Fächerspektrum, das sämtliche Fachgebiete von den Geistes- und Gesellschaftswissenschaften über die Natur- und Ingenieurwissenschaften bis hin zur Medizin umfasst.

Auch international strebt die UA Ruhr eine starke Vernetzung mit weltweiten Partnern an. Über die drei Auslandsbüros in New York, Moskau und Rio de Janeiro / Sao Paulo, können interessierte Wissenschaftler und Wissenschaftlerinnen neue Forschungsk Kooperationen anstoßen und beim Auf- und Ausbau internationaler Kontakte auf Unterstützung zählen.

# Initiativkreis Ruhr

Knapp 70 Mitgliedsunternehmen mit insgesamt etwa 2,25 Millionen Beschäftigten und einem globalen Umsatz von rund 630 Milliarden Euro bilden eines der stärksten regionalen Wirtschaftsbündnisse Deutschlands. Der Initiativkreis Ruhr ist ein Motor des Wandels. Seine Mitglieder verbindet das Ziel, die Entwicklung des Ruhrgebiets voranzutreiben und seine Zukunfts- und Wettbewerbsfähigkeit nachhaltig zu stärken. Wesentliche Handlungsfelder sind Energie, Logistik, Bildung und Kultur. Aus diesem Antrieb heraus entstanden Leitprojekte mit Strahlkraft. InnovationCity Ruhr und das Klavier-Festival Ruhr sind nur zwei Beispiele. Der Initiativkreis Ruhr beseitigt Hemmnisse und baut Brücken – nicht nur innerhalb des Ruhrgebiets, sondern auch zwischen den Regionen. [www.i-r.de](http://www.i-r.de)

## Die Partnerunternehmen des Initiativkreises Ruhr

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Sandra Bindschus, grafikontor GmbH



**Initiativkreis Ruhr GmbH**

Alfred Herrhausen-Haus  
Brunnenstraße 8  
45128 Essen

Tel. +49 201 8966-60

Fax: +49 201 8966-675

E-Mail [info@i-r.de](mailto:info@i-r.de)

[www.i-r.de](http://www.i-r.de)