

# Ruhr-Fellowship 2014



Deutsche Bank 

 EVONIK  
INDUSTRIES





*ista*

klöckner & co  
multi metal distribution



  
WISSEN. HERZ. UNSER.

SIEMENS

SMS  group

*trimet*

VAILLANT GROUP

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

Special thanks go to all of the students who provided us with photos for this booklet, especially Jean Xin.

# Vorwort

2014 ging das Ruhr-Fellow-Programm in die dritte Runde. Auch in diesem Sommer sind wieder 14 hoch motivierte Studierende von US-amerikanischen Eliteuniversitäten ins Ruhrgebiet gekommen, um ihre Deutschkenntnisse zu verbessern, Industriepraktika zu absolvieren, eine Summer School an der Universität Duisburg-Essen zu besuchen und die Region als Wissenschafts- und Wirtschaftsstandort kennenzulernen. Das Programm wird seit 2012 durch den Initiativkreis Ruhr und die Universitätsallianz Ruhr (UA Ruhr) getragen und erfreut sich stetig wachsender Beliebtheit, so dass in diesem Jahr die Anzahl der Bewerberinnen und Bewerber die zur Verfügung stehenden Plätze bereits um das Fünffache überstieg.

## Ziel des Programms

Ziel dieses Programms ist es, das Image der Metropole Ruhr zu verbessern und begabte junge Menschen aus den USA für unsere Region zu interessieren, die außerhalb Deutschlands und Europas leider noch viel zu selten als Wissenschafts- und Wirtschaftsstandort bekannt ist. Unsere Vorstellung ist es, dass die Kontakte, die sich aus dem Programm entwickeln, für langfristige Forschungs- und Wirtschaftskooperationen zwischen dem Ruhrgebiet und den beteiligten amerikanischen Eliteuniversitäten genutzt werden. Auch eine spätere Beschäftigung in einem der Unternehmen dieser Region wäre aus unserer Sicht sehr willkommen. Während ihres Aufenthalts lernen die 14 Studierenden die Universitätsallianz Ruhr kennen und knüpfen erste Kontakte in die lokale Wirtschaft. Nach ihrer Rückkehr in die USA werden die Ruhr Fellows eng in das Alumni-Programm des UA Ruhr-Liaison Office in New York eingebunden. Sie sollen somit als Botschafterinnen und Botschafter den Forschungs- und Wirtschaftsstandort Ruhrgebiet an ihren Universitäten in Nordamerika bekannter machen und zukünftige Generationen von Ruhr Fellows für dieses einzigartige Programm begeistern.

## Ruhrgebiet: Look and see

Das Ruhr Fellow Programm teilte sich auch in diesem Jahr in zwei Phasen: In den ersten vier Wochen des Programms besuchten die Stipendiatinnen und Stipendiaten eine Summer School, inklusive eines intensiven Deutschkurses. Das akademische Programm organisierte in diesem Jahr die Universität Duisburg-Essen. Die Ruhr Fellows erhielten hierbei intensive Einblicke in die Lehre und Forschung der drei UA Ruhr-Universitäten: Ruhr-Universität Bochum, Technische Universität Dortmund und Universität Duisburg-Essen. Im zweiten Monat absolvierten die zehn Studentinnen und vier Studenten ein Praktikum bei Unternehmen des Initiativkreises Ruhr. Praktikumsplätze boten in

diesem Jahr BP Europa, Deutsche Bank, Evonik Industries, Ferrostaal, HOCHTIEF, ista, Klöckner & Co, RAG, Ruhrverband, Siemens, SMS group, TRIMET Aluminium und Vaillant Group an.

Zahlreiche Exkursionen führten zu Einrichtungen und Orten, die den Studierenden Einblicke in die wirtschaftliche Vielfalt und kulturelle Attraktivität der Region Ruhr ermöglichten. Unter anderem standen die Besichtigung des ThyssenKrupp Steel-Stahlwerks in Duisburg, eine Grubenfahrt bei der RAG in Bottrop sowie ein Besuch bei der Redaktion der Bild-Zeitung in Essen auf dem Programm. Bei einer Führung über die Zeche Zollverein, einem Besuch des Landschaftsparks Duisburg-Nord sowie der Veltins-Arena beim FC Schalke 04 lernten die Ruhr Fellows das industrielle Erbe, den Strukturwandel und auch die Fußballkultur im Revier kennen. Unvergesslich wird dabei wohl auch der Gewinn der Weltmeisterschaft durch die deutsche Fußballnationalmannschaft bleiben, den die Fellows hautnah in Deutschland miterleben konnten.

Eine Fortführung des Programms für die nächsten drei Jahre ist bereits angedacht, 2015 wieder mit einer Summer School beim UA Ruhr-Partner in Dortmund. Dann sollen bereits 15 bis 20 Studierende aus den USA die Unternehmens- und Wissenschaftslandschaft des Ruhrgebiets kennen und schätzen lernen können.

Mit einem herzlichen Glückauf!



  
**Dirk Opalka**  
Geschäftsführer der Initiativkreis Ruhr GmbH / Managing Director of the Initiativkreis Ruhr GmbH



  
**Prof. Dr. Ulrich Radtke**  
Rektor der Universität Duisburg-Essen / Vice Chancellor of the University of Duisburg-Essen

# Foreword

2014 saw the start of the third round of the Ruhr Fellow Program. This summer again, 14 highly motivated students from elite US universities came to the Ruhr area to improve their German language skills, take part in industrial internships, attend a Summer School at the University of Duisburg-Essen and acquaint themselves with the region as a science and business location. The program has been supported since 2012 by the Initiativkreis Ruhr and the University Alliance Ruhr (UA Ruhr) and enjoys growing popularity, so that this year the number of applicants exceeded the number of places available by five times.

## Aim of the program

The aim of the program is to improve the image of the Ruhr Metropolis and arouse the interest of talented young people from the USA in our region, which unfortunately is still scarcely known as a science and business location outside Germany and Europe. Our idea is that the contacts that develop from the program will be used for long-term research and business collaborations between the Ruhr area and the elite US American universities involved. Subsequent employment at one of the companies in this region would also be very welcome in our view. During their stay, the 14 students get to know the University Alliance Ruhr and can establish initial contacts with local businesses. After their return to the USA, the Ruhr Fellows will be closely integrated into the alumni program of the UA Ruhr Liaison Office in New York. The aim is that they should then act as ambassadors to make the Ruhr area better known as a research and business location at their universities in North America and motivate future generations of Ruhr Fellows for this unique program.

## The Ruhr area: look and see

Also this year, the Ruhr Fellow program was divided into two phases: during the first four weeks of the program, the scholarship students attended a Summer School, including an intensive German language course. The academic program was organized by the University of Duisburg-Essen this year. Here, the Ruhr Fellows were provided with extensive insights into the teaching and research at the three UA Ruhr Universities: the Ruhr University Bochum, the Technical University of Dortmund and the University of Duisburg-Essen. In the second month, the ten female and four male students completed an internship at companies of the Initiativkreis Ruhr. In this year, internships were offered by BP Europe, Deutsche Bank, Evonik Industries, Ferrostaal, HOCHTIEF, ista, Klöckner & Co, RAG, the Ruhrverband, Siemens, the SMS Group, TRIMET Aluminium and the Vaillant Group.

The students were taken on numerous excursions to institutions and places which enabled them to gain insights into the economic diversity and cultural attractiveness of the Ruhr region. These included, amongst others, a visit to the ThyssenKrupp Steelworks in Duisburg, a tour of a RAG mine in Bottrop and a visit to the editorial office of the Bild newspaper in Essen. During a guided tour of the Zollverein Colliery, a visit to the Duisburg-Nord Landscape Park and the Veltins Arena of FC Schalke 04, the Ruhr Fellows became acquainted with the industrial heritage, the structural changes and the soccer culture in the Ruhr area. One unforgettable event will certainly be that the German national soccer team won the Soccer World Cup, which the Fellows were able to experience at first-hand in Germany.

A continuation of the program over the next three years is already under discussion – in 2015 there will be another Summer School at the UA Ruhr partner in Dortmund. The aim is that then 15 to 20 students from the USA should get to know and come to appreciate the business and scientific landscape of the Ruhr area.

With the German miner's greeting "Glückauf" we wish you all the best!



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



  
**Prof. Dr. Ulrich Radtke**  
Rektor der Universität Duisburg-Essen /  
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Duisburg-Essen

# Phase 1 Summer School





The University of Duisburg-Essen organized this year's summer school for the Ruhr Fellowship. The summer school strengthened the Fellows language skills in a four-week intensive 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, Technical University Dortmund and the University of Duisburg-Essen.

Visits to the three universities enabled the Fellows to get an overview of the academic offering of the region and to experience student life in the Ruhr area. Furthermore, they gained an insight into the Ruhr Universities' excellent research activities by visiting UDE's research clusters in Nanoscience and Urban Systems and UDE's Faculty of Engineering.

Throughout the month of June, the Fellows visited the leading international companies ThyssenKrupp Steel Europe in Duisburg and Evonik at the Chempark Marl. At ThyssenKrupp Steel the fellows could see and feel how steel is produced, heated and formed. At Chempark Marl the Fellows visited "the third largest integrated industrial site in Germany and at the same time the biggest production site for Evonik" (<http://www.chemsite.de/chemsite-en/chemie-parks-industriestandorte/chemiepark-marl/index.php>). Furthermore, the Ruhr Fellows visited the publishing sector, going to the Bild

Newspaper print office in Essen and getting to know the editorial department and their work. As every year, the highlight of the company visits was the visit to RAG's mine Prosper Haniel. Going down more than 1000 meters below the earth, witnessing the work of the coal miners. Only few will get this experience in the future as German coalmines are going to close by 2018.

Another important part was also to give the Fellows an impression of the cultural heritage and present cultural life the Ruhr Area offers. Visiting the UNESCO World Heritage Zeche Zollverein on a guided tour gave the students an impression of how a mineworker's everyday life was. A visit to Landschaftspark Duisburg Nord showed the transformation of a former steel mill to a recreational park and location for cultural events. This, amongst other things, showed the past, present and future of the Ruhr Area. Visiting the Football Stadium of FC Schalke 04 gave a first taste of what football means to Germans and especially to the people from the Ruhr Area. This feeling was even more intense with Germany winning the Football World Cup.

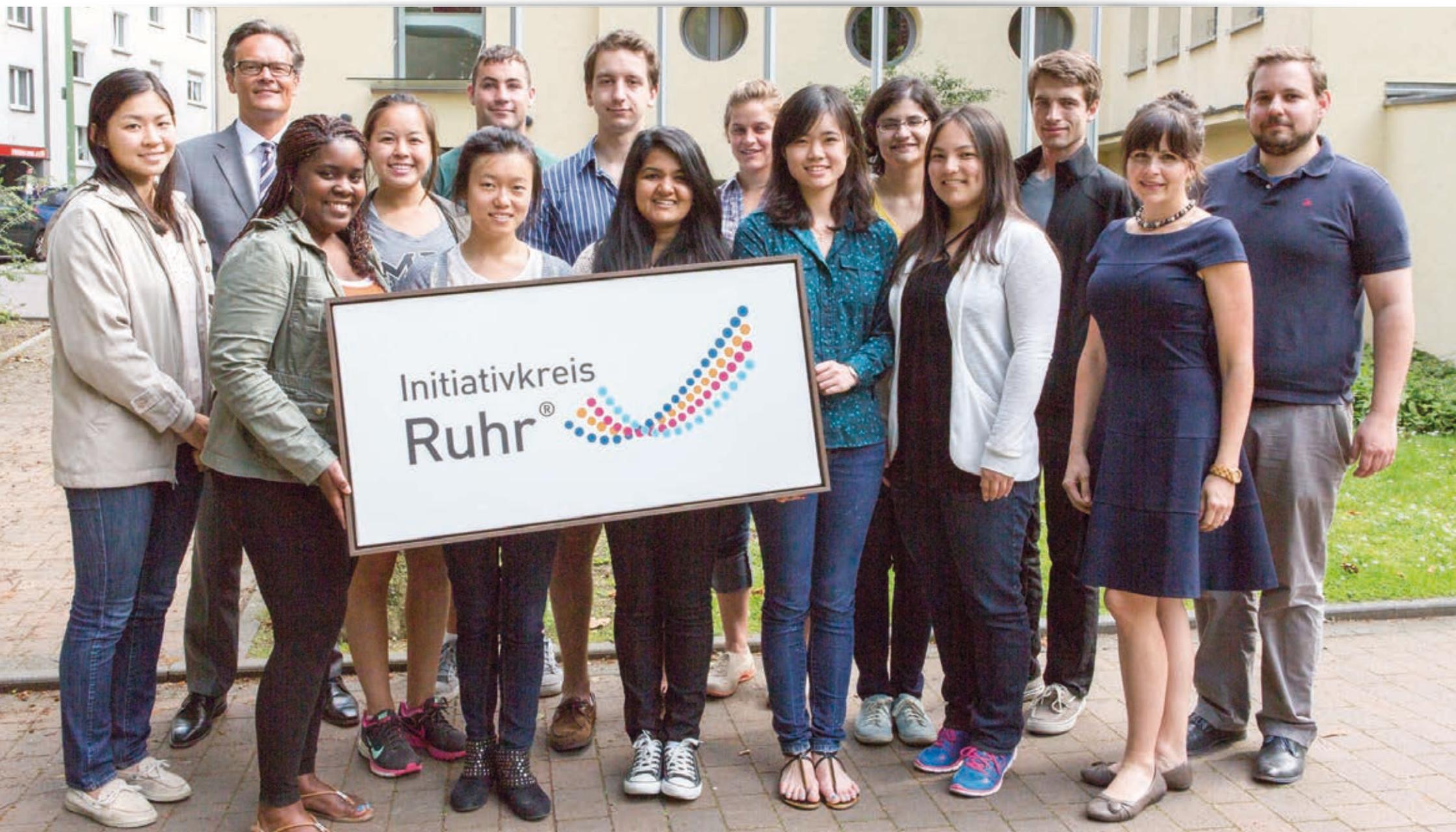
Language course, company and cultural visits were framed by UDE's buddy program, bringing together Ruhr Fellows and UDE students to experience intercultural communication, to help each other and simply to get to know Germany and Europe from different angles.

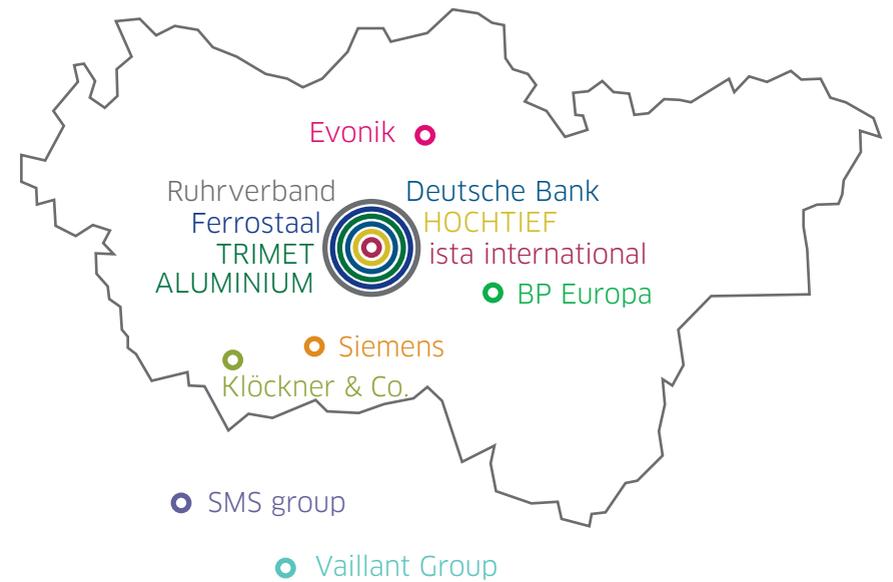
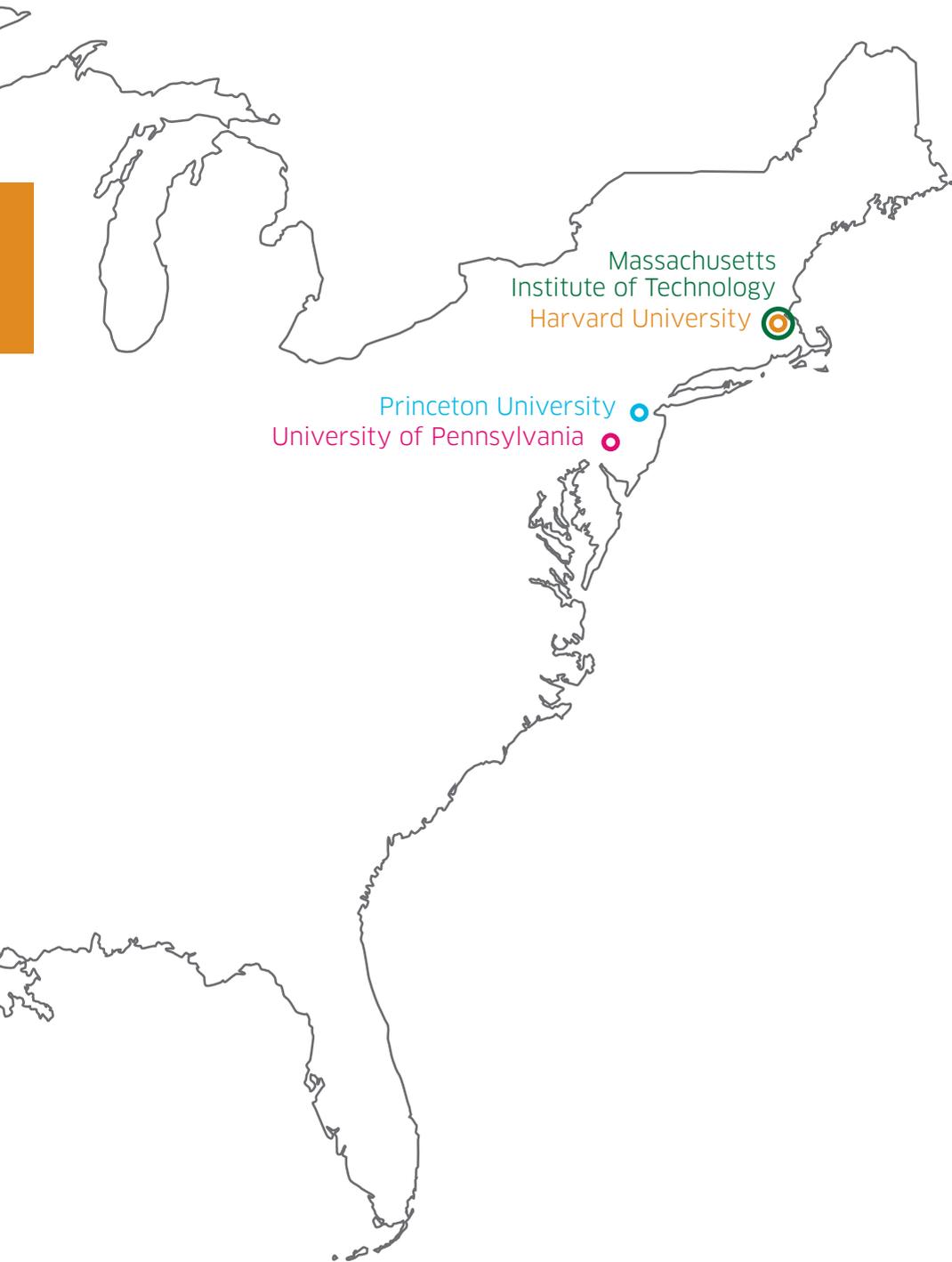
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
<b>Week 1</b>			<b>Week 1</b>				
						June 1	
						Pick up at Düsseldorf Airport - Wohnheim Essen	
<b>Week 2</b>			<b>Week 2</b>				
<b>June 2</b>	<b>June 3</b>	<b>June 4</b>	<b>June 5</b>	<b>June 6</b>	<b>June 7</b>	<b>June 8</b>	
Campus Visit, etc.	German Course	Chemiepark Marl	German Course	German Course			
Welcome at Initiativkreis Ruhr	Civil Engineering Workshop	German Course	NETZ (Nano Workshop)				
<b>Week 3</b>			<b>Week 3</b>				
<b>June 9</b>	<b>June 10</b>	<b>June 11</b>	<b>June 12</b>	<b>June 13</b>	<b>June 14</b>	<b>June 15</b>	
Holiday	German Course	German Course	German Course	Meeting of the Minds			
		Visit to Zeche Zollverein	Schalke Stadium Schalke Museum				
		International Student's Stammtisch					
<b>Week 4</b>			<b>Week 4</b>				
<b>June 16</b>	<b>June 17</b>	<b>June 18</b>	<b>June 19</b>	<b>June 20</b>	<b>June 21</b>	<b>June 22</b>	
TU Dortmund	German Course	Ruhr-Universität Bochum	Holiday	Spare Time			
Tour of the Dortmund Electron Accelerator (DELTA)	RAG (Group 1) Mine visit to Bergwerk Prosper Haniel				Campus Visit Visit at Faculty of Engineering		
Tour of the Institute of Forming and Lightweight Technologies					Summer Party at Ruhr- Universität Bochum		
Tour of the Chemical En- gineering Laboratories, Chair of Systems and Process Engineering							
Soccer World Cup in Brazil; Germany - Portugal					Meeting with Internship advisor (Group 2)		
<b>Week 5</b>			<b>Week 5</b>				
<b>June 23</b>	<b>June 24</b>	<b>June 25</b>	<b>June 26</b>	<b>June 27</b>	<b>June 28</b>	<b>June 29</b>	
German Course	German Course	German Course	German Course	ThyssenKrupp Steel Impressionen StahlTour	Extraschicht		
Engineering Workshop	Visit to BILD's printing house in Essen + BILD Newspaper	RAG (Group 2) Mine visit to Bergwerk Prosper Haniel	Urban Systems Workshop Campus Essen				
		Meeting with Internship advisor (Group 1)	Soccer World Cup in Brazil; USA - Germany				

- German classes
- Compulsive Excursions
- Compulsive Workshops
- Optional offers, to be organized on your own

# Übersicht der Teilnehmer

## Overview of Participants





Unternehmen	Name Studierende	Universität	Studienfach
Deutsche Bank	Matt Kozlowski	Harvard	Applied Math/Economics (+German)
Evonik Industries	Akshar Wunnava	MIT	Chemical Engineering/Economics (+Public Policy, Energy)
Evonik Industries	Jingwei Zhou	UPENN	Bioengineering/Engineering Entrepreneurship
HOCHTIEF	Jia Lin Jacqueline Li	Princeton	Architecture and Engineering
ista International	Matthew Pasquini	Harvard	Physics/Economics (+German)
SMS group	Austen Novis	Harvard	Electrical Engineering
TRIMET ALUMINIUM	Ashlee Anderson	UPENN	Mechanical Engineering/Applied Mechanics
Vaillant Group	Kira Schott	MIT	Mechanical Engineering (Electrical Engineering & Computer Science)
Ferrostaal	Kinjal Shah	UPENN	Economics
Klöckner & Co	Jean Xin	MIT	Management Science & Brain and Cognitive Sciences
Ruhrverband	Crystal Stowell	Harvard	Applied Math/Sustainable Development
BP Europa	Tina Kambil	MIT	Chemical Engineering
Siemens	Natasha Gunther	MIT	Mechanical Engineering
Siemens	Yi Zhong	MIT	Mechanical Engineering

# Resümees aus **Übersee**

## Résumés from **Overseas**



# Matt Kozlowski



Participating in the Ruhr Fellowship program this summer was a truly fantastic and once-in-a-lifetime experience, for so many reasons.

Firstly, during my stay in Germany I had the opportunity to receive intensive German language coaching from a native German tutor provided by the Ruhr program. Thanks to lessons held in small classes of only four students, my fluency in the German language, especially with regards to my pronunciation and comprehension skills, really improved over the summer.

Secondly, through excursions specially organized for the Ruhr fellows, I was able to gain a unique insight into German business, industry and culture. Trips and tours arranged for our group included visits to the headquarters and production plants of Initiativkreis Ruhr sponsor companies such as ThyssenKrupp Steel, Evonik and Europe's best-selling tabloid newspaper 'Bild', as well as to places of local cultural significance such as FC Schalke's football stadium. These trips offered me a great chance to learn about how different businesses and industries operate, and about how certain industries have helped to shape Germany's national identity.

One excursion that was particularly memorable for me was our visit to a coal mine run by the German mining industry's largest company, RAG. It was a truly incredible experience to venture 1159 meters underground and observe first-hand the cutting-edge engineering techniques that RAG uses. It was also really impressive to personally witness the conditions in which coal mining takes place, among the deafening roar of coal mining machinery, crumbling rock falling from above our heads, and jets of hot steam and dust spewing out from the mining machines around us, all at the same time.

Meanwhile, it was also very interesting to supplement our company and industrial excursions throughout the Fellowship with visits to the engineering departments of the Ruhr, TU Dortmund and UDE universities. Engineering seminar sessions that we attended, together with department visits, provided me with an excellent insight into why and how Germany holds such a renowned prowess in R&D and engineering. It was enlightening to observe how strong partnerships between German companies and university degree programs enable

outstanding pre-professional training as part of higher education in Germany.

During the second part of my Ruhr Fellowship, I participated in a rigorous and demanding internship at Deutsche Bank. At Deutsche Bank I enhanced my understanding of the financial industry, learned about credit risk management and financial analysis, and was able to further develop my interests in corporate finance through work on projects for large corporate clients including Dax30-companies.

As part of my internship I participated in a rotational program that offered me experience in the Global Credit Rating Team and Large Cap Coverage divisions, as well as in the Asset & Wealth Management and GTB- Trade Finance divisions through shorter insight placements.

The structure of my internship program not only offered me the opportunity to develop my financial skills and knowledge through more in-depth placements in the first two divisions, but also an excellent understanding and overview of the bank's different functions through shorter rotations in the latter two divisions. The rotational nature of the internship across different divisions also meant that I got the chance to attend training sessions in a number of different Deutsche Bank locations in Cologne, Düsseldorf and Essen, which was greatly educational and enabled me to travel and see a lot of the Ruhr region as part of my work.

I think it is important to mention that the attention I received from Deutsche Bank's employees in each of these different offices particularly stood out to me as a unique aspect of this internship. In every division and office that I visited, much of the training that I received was one-on-one with Deutsche Bank's experienced employees. With the aid of DB training materials for new employees, my colleagues would take the time to guide me step by step through an in-depth introduction to their division, then help me to develop my financial knowledge and skills through case studies, and then allow me to apply what I had learned to what they were currently working on or a project that I could contribute to.

In the Asset & Wealth Management and GTB-Trade Finance divisions this involved largely training and shadowing work due to my being in these divisions for only a few days each, but in the Large Cap and Global Credit Rating Team divisions where I had more extended

stays, I was able to apply my skills and develop my experience by working on significant projects for the teams that I was in.

For example, in the Global Credit Rating Team (GCRT) I had the opportunity to participate in ratings committee meetings, in which counterparty credit ratings were analyzed, reviewed and decided. Combined with my work that I was staffed on for the development of a credit rating report, which involved the spreading of financial statements, evaluation of macro- and micro-economic factors and interpretation of leverage, cash flow utilization and financial performance metrics, I was quickly able to gain a detailed insight into GCRT's work.

My placement in GCRT was also very interesting as I had the chance to listen-in on some fairly high-level discussions, including a Global Rating Confirmation Meeting for an entity that Deutsche Bank had a particularly large risk exposure to. It was fascinating to be able to learn through direct experience about what credit risk management involves, and to be able to learn about what a Deutsche Bank credit risk officer's work involves when evaluating risks of different counterparties.

Likewise, in the Large Cap coverage division I was able to develop my economic analysis, financial modeling, and soft skills through different projects that I got to work on. I was able to gain some great experience whilst working on a variety of projects and tasks, from performing SWOT and industry analysis into target clients, to developing pitching documents, financial models and PowerPoint presentations for new client projects.

A particular highlight of this was working on projects for and interacting with executives from the Large Cap division's clients. It was both really cool and very interesting to attend meetings at clients global headquarters in Bonn and Leverkusen respectively, and to experience and gain a better understanding of how client relationships are developed and managed.

Aside from developing my financial skills and knowledge, I also feel that operating with colleagues and clients in a German-language working environment enabled me to greatly improve my German language skills.

Lastly, apart from all the great training and activities organized as part of the Ruhr Fellowship and my internship at Deutsche Bank, a definite additional highlight of this summer was the opportunity to travel widely throughout Europe and Germany. Given the Ruhr region's central location in Europe, all the Ruhr fellows including myself made sure to take advantage of the great transport links within and beyond Germany to visit, in my case, Munich, Berlin, Amsterdam, Zurich and London. From visiting the Bundestag (German Parliament) in Berlin, to making a truly humbling visit to the Dachau concentration camp just outside Munich, to experiencing first-hand the differences between German and Swiss-German whilst visiting Zurich, every weekend away offered plenty of interesting and new experiences.

In conclusion, this summer has certainly been one of my most memorable to date and I am so grateful to have had the opportunity to spend my summer break as a Ruhr Fellow; the Ruhr Fellowship has broadened my cultural horizons, given me invaluable work experience, and helped me to substantially improve my German language skills. Thank you so much, Initiativkreis Ruhr!



# Akshar Wunnava



My primary academic and career interest is in the energy industry, from sustainability to energy development to energy storage. The interesting aspect of this field is that energy generation and consumption dynamics vary from country to country, geography to geography, and demographic to demographic. I have previous exposure to the energy landscape in North America, India, and a little in the Middle East. However, I had never been to the European Union, which has the highest sustainability and renewable energy standards in the world. As Germany is arguably at the forefront of technology and policy within the European Union, I wished to visit Germany the summer after I had graduated from MIT.

I was originally planning on doing a regular engineering internship in Germany, until I heard about the Ruhr Fellowship through the MIT Germany office. I had never heard of the Ruhr area, but given that it is one of the more industrial areas in Germany, I thought the Fellowship would be a great opportunity to be exposed to a variety of different industries, different universities, and German students. Given that the energy landscape is impacted by a variety of factors, I felt that I would gain more insight into German society

through this program, and I am very satisfied with my choice! There are three things I wish to reflect upon. The first is our first month of the fellowship, which included excursions and a German language course. The second is my internship at Evonik Industries. The third is my overall impression of the Ruhr area and of Germany.

## First Month

I arrived a week late due to MIT's graduation date being late. However, within two days, I felt completely integrated into the program, thanks to the friendliness of the other fellows, the enormous help of my buddy, Viola, and care of the program coordinators. The German class wasn't as useful as I had hoped. I had taken a one-month intensive course in German in January, so I already knew more than what was being taught in the beginner class, but was not advanced enough for the advanced class. So, I did not derive much use of the course.

The excursions to the university labs and seminars were wonderful. I especially enjoyed the tour of the labs at the university in Bochum. Also worth noting is the automotive/mechanical engineering lab at the university in Dortmund. I was very fascinated by the research that was taking place at the universities.

It was intensely applicable to current society, and was innately tied into industry needs. On the other hand, I feel that much of the research that takes place in the United States universities, especially at MIT, while equally applicable to society, are a bit more futuristic in thought and not as closely tied to industry requirements. However, I'm sure there is bias in my prognosis due to my limited exposure.

The industry excursions were also very insightful. I especially enjoyed the tour of the Bottrop coal mine, given that all the mines will close by 2018. Speaking to the miners about the industry dynamics was very insightful into this aspect of the German energy industry. I also liked visiting Thyssen-Krupp Steel, which had a very high volume of production, but only produced flat plates. This was very different from a plant I had seen in India, which had a lower volume, but higher variety of products. Finally, the Bild newspaper factory and editorial office was a very new experience and I'm glad it was included in our program.

## Internship

My internship was at Evonik Industries at their location in Chemiepark, Marl. The commute was an hour and a half each way, so I was lucky to have

another fellow accompany me to work every day. The facility was enormous and I was immediately impressed by the ability to have a facility comprising of sixteen different companies and many more different types of plants be so integrated.

My supervisor, Peter, was very engaging and we spoke a lot about how the German chemical industry works, how it's different from that of the United States, German politics, and a variety of different topics. He made it clear that Germany did not enjoy the same energy resources as other countries, especially the United States, which is why efficiency had to be a key factor since Germany's Industrial Revolution. The price of energy in Germany was much higher than in the United States, which is why plants had to be designed to reuse as much material as possible, which is the reason Chemiepark was built in the form in which it exists today. Unfortunately, my supervisor had to go on vacation for three weeks, which meant I only saw him for the first few and last few days of my internship.

My project definition was very vague. Evonik was exploring the possibility of implementing a data reconciliation strategy to reduce measurement error in their sensors, so that they had

more accurate measurements of how much material they were selling. My job was to see what I could put together in a month to help them decide whether or not to invest more time and resources in exploring this problem. Working with a client team, I put together a program that would read in sensor measurements, detect and identify measurement errors, and reconcile data. Seeing my final product, Evonik was convinced to put further resources on the project.

### Impressions

The two months I spent in Germany were unlike any I had experienced before. We traveled to a different city almost every weekend. I had the opportunity to visit Berlin, Munich, Düsseldorf, Cologne, Bonn, Münster, Aachen, Paris, Amsterdam, Delfts, and The Hague. Everywhere we visited, the people were so proud of their city/region. Almost every German I met was very good at what he/she does. However, work does not consume their lives. In the evening, people make it a priority to hang out with friends and family. I'm glad we had several opportunities to hang out with our buddies in an informal. I wish we could have done more of this during the first month, but the schedule was a bit too hectic. It is inte-

resting that Germans seem to be trained for a particular career and stick with that career for decades. This is quite different from the United States, where not as much emphasis is placed on the education/training itself, and people move from company to company and even industry to industry.

I find it inspiring that Germans place so much emphasis on their environment and sustainability. It is only through this mindset that the government can take measures to ensure a clean environment, especially over an area of industries such as the Ruhr area. Some examples include the dedicated bus lanes on the autobahn, which allow the bus to run on time, hence convincing more people to take the bus. Another example is the showers which need to be switched on every ten seconds, so that water is conserved. The lights in the hallways turn off when no one is in the hallways to conserve electricity. Even at Lidl, plastic bags cost money so that consumers are not wasteful with their consumption of plastic. There are many such infrastructure policies that the world can learn from. I was truly inspired by my summer in the Ruhr area and in Germany, and sincerely hope for the opportunity to be back and work in the context of energy policy.



# Jingwei Zhou



As a student from a high-pressure university in America, I was surrounded by peers who compulsively maximized every summer with prestigious internships, more academic courses or starting their own companies. Each summer was a precious line on a resume, a competitive advantage that adds varnish in an endless race.

The Ruhr Fellowship certainly fulfills the obvious criteria: 1. internship in well-known companies; 2. language program that adds value in a globalized economy; 3. cross-cultural experience that demonstrates maturity and independence. The above list did factor into my consideration in applying for this program, and another major factor was my desire to revisit Europe and live abroad.

However, the two months I spent living and working in the Ruhr region is so much more rewarding and enriching than resume building. It was a season of self-discovery, building relationships and learning to see the world with a freshness only available when immersed in a different culture.

## Life in Essen – North Rhine Westphalia – Germany

I had visited Germany before as a tourist, but my view of the country was still very two-dimensional and constructed of vague pre-conceptions. I saw history and art in Berlin and Oktoberfest in Munich. Words off the top of my mind associated with Germany were Hilti knives, punctuality and sausages. Living in one of the 16 states – North Rhine Westphalia – the Ruhr region, and the city of Essen immersed me in a German culture that I could not have imagined before but was fortunate enough to experience.

I shopped, recycled, took public transportation and most importantly, watched football like a local. Lidl, Aldi, Real familiarized me with German groceries. I added Quark and liver sausage spread to the list of German food that I enjoyed. The speed and efficiency demonstrated by cashiers were impressive: long lines in the store didn't mean a long wait. Compared to the U.S., German customs promoted more eco-friendly practices such as charging for grocery

bags and receiving cash back for recycling plastic bottles (Pfand = deposit). The cars here were smaller and more fuel efficient. Many people used public transport. When I rode through the city, I noticed how many roofs were equipped with solar panels.

I also could not have imagined the warmth and humor of our German buddies, coordinator Florian Vollweiler and Stephanie Wedy. They have been great resources and generous with their time throughout the program. The buddies invited us to public viewings of football in Germany. These occurred in parks, pubs, clubs and outdoor cafes. Friends and family gathered to cheer for the national team. When a game was won, kids ran on the streets with German flags as capes and girls danced with garlands of black, red and gold in their hair. My coworkers even left out a box of Haribo German flags to boost work morale. My buddy also taught me a lot about the German education system. In America, I had taken for granted the ability to remain fluid and switch majors or even careers. The German system seemed to funnel people into certain routes early on -- the different types of secondary education determined whether people could pursue and receive university education. Within the university, there's also a strong emphasis on finding a path early on. For example, my buddy directly pursued a medical education in her undergraduate years instead of having a four-year general education first. Near the end of my stay, my buddy also invited me to go on a road trip to Münster, a beautiful city in NRW.

When I began the fellowship, I envisioned my free time to be spent mostly traveling to different cities in Europe. I did not think that much about the people or imagine how much I would grow to value my relationships with the other fellows and the coordinator of the program. We bonded by sharing meals, swapping travel stories and talking about our respective schools and interests. Florian was always very patient with us as a group and would be willing to practice German with me although my conversational abilities are limited. Akshar filled our daily three-hour commute to work with laughs and good conversation. Crystal made it possible (actually necessary) to hitchhike in Schwarzwald (the Black Forest) when we went hiking. Natasha became my accomplice in hunting down Asian food in every European city we visited. Yi reconnected me to contemporary Chinese culture, equipping me with new vocabulary and funny poses for the camera. Ashley and Kinjal reminisced and



passed judgments on our days at Penn. Through these interactions, I was able to re-evaluate my world view and my approaches to doing things.

### Language Program & Excursions

The language course during the first month of the program was useful not only for getting basic vocabulary and sentence structure, but was also enriched with cultural tips and history lessons. I learned about where to get the best Eiscafe in town, how tipping works and more complex issues such as nationalism. Our teacher Lidia explained to us that it's a recent phenomenon for Germans to demonstrate public national pride given their complicated sense of history. She also mentioned it's usually not common to see German flags in public and this summer was an exception because of the World Cup (by the way: Germany won!). She recommended a visit to Haus der Geschichte in Bonn, one of my favorite museums that gave me a deeper sense of German identity.

The excursions during the first month were a good change of pace from university courses. Many of the engineering courses I had taken were theoretical and tied together by problem sets. During the engineering workshops of the program I instead focused on concepts and taking in the material with my senses. We had small group workshops in nanoengineering, my guide on plasma treatment was very passionate about the topic and showed us a lot of heavy-duty equipment he had constructed in order to perform his experiments. The department head for material science also led us on a very engaging tour through the fabrication lab. We played with different materials and learned about all sorts of manufacturing methods. It was also interesting to learn how the industry focus played such a big factor in university research projects.

The company visits were phenomenal. We visited one of three still-existing mines in the NRW region 1500 meters below ground. We saw giant tubs of molten ore used to make steel at ThyssenKrupp Steel. At Bild – the German newspaper – we saw the life cycle of news gathering, print production and delivery. The scale of these processes was truly impressive. Not only did I get to see how engineering principles are transferred to an industrial context, I also had a clearer picture of the larger web of economic agents that made these processes viable and profitable. NRW clearly embraced its industrial past, but economic, policy and environmental changes also meant the region is shifting to new areas of technology. I was impressed by how the region is investing in innovation, technology and design.

### Internship

During the second month of the program, I interned at Evonik – a global chemical company headquartered in Essen. Another Ruhr fellow and I were placed with the Process Technology Department, a team that assumed the role of internal engineering consulting. My supervisor assigned me two projects on industrial chemical

processes. I learned Aspen, a chemical simulation software, in order to design and model the processes. It was my first time using the program and I was glad to have an opportunity to pick up new engineering skills. A major parameter to optimize for in the design is the cost of energy usage. Energy costs much more in Germany than in the US. In order for a plant to remain economically competitive, energy usage had to be optimized.

I also had the opportunity to meet other German interns who were completing their Bachelor's and Master's thesis at Evonik. It again emphasized how university education here is very tailored to a specific career path. News coverage and editorials in the US often harp on the gap between university education and practical work experience that companies need, and cite that as a reason for youth unemployment. The system in Germany, where a student combines academic interest with an extended internship, is essentially a co-op system that bridges that gap. Co-ops are available at US universities as well. However in Germany, a Praktikum (internship) in companies is the norm, not an exception.

It was also interesting to see how each department would eat together and have its own table in the company dining area. Each department was a piece of a giant machine, doing its needed function to allow for smooth operations. The employees within the group also seemed content to stay within the group and with the company. Generally, I thought the trend paralleled the degrees of fluidity in the education system between US and Germany. In US companies, there is generally more internal mobility and people seem more willing to switch companies. At most of the dining tables, there were more men than women. This is not surprising considering the chemical industry and the engineering focus of the branch location. In the US, the statistics on gender in an engineering workplace are more or less similar. There are also similar efforts given to recruiting and maintaining women in an industrially focused workforce.

I had a really positive experience working at Evonik and appreciated the opportunity to get both a cultural experience as well as an engineering one. The company has some very innovative technology and business strategies lined up. Chemical engineering is a field that I had no prior experience in, but my supervisor was very generous and helpful in getting me started and giving me ownership in projects.

### Life after Ruhr

I walk away with fond memories and stories to commemorate the experiences and adventures of this two-month program. I refreshed my perspective and have a deeper understanding of Germany, engineering and my own personal and professional goals. I don't know when I will return in the future, but when I do, it will be with a sense of familiarity and appreciation, as this place was once home. Thank you to everyone who made this program possible and enjoyable!

# Jacqueline Li

This summer was a great learning experience for me because while I have visited Europe and Germany several times, I have never lived here for two whole months. I am really happy to have had the chance to immerse in the German culture and also to experience working here in industry. The city we lived in is Essen, in the Nordrhein-Westfalen region of Germany.

Our first month here included a series of German classes at the local university and company visits. Since I've had previous experience with German, I attended a higher level German class along with a few other students who already knew some German. This second level class was very helpful and really pushed me to develop my German skills. The company visits were also very rewarding. The large variety of disciplines provided a really comprehensive overview of the different industries of the Ruhr Region and gave me a sense of the historical and cultural background of the place.

The second month for me involved an internship with HOCHTIEF, Germany's largest construction consulting company and one of the leading ones in the world. The company has its headquarters in Essen, although it has branches and partners all over the world. This internship was a really exciting

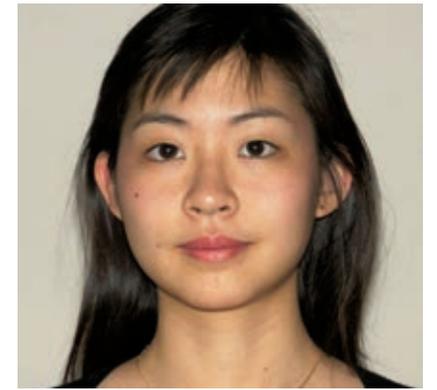
opportunity for me as I aspire to become a structural engineer. The department I worked in was Consult Infrastructure, and they are involved in a wide range of projects, from railway tunnels in Norway to expressways in Qatar and airports in Saudi Arabia. I was involved mainly in two projects and had two supervisors, one for each project. Both of them were extremely helpful, giving me the full background to the project and teaching me all the different thought processes that go into the designs. I also felt very welcomed by everyone in the office and felt free to ask anyone any questions on what they were working on and if they could teach me how to use the different design and calculation software.

The first couple of weeks of my internship I worked on the railway tunnel project in Norway, analyzing geological data to determine weakness zones in the rocks and performing calculations for the internal forces and deformations in the concrete tunnel linings. It was really exciting to work on such a project and to see the workings of the team behind the designs and calculations, as it is something that I would never have had the chance to experience while at university. There are so many things to consider that I have never even thought

existed. I learned about the different phases of a project, from the initial concept design to the final detailed design, the tender process, and the intricate calculations and considerations that go into even the smallest detail.

The next few weeks I worked on the expressway project in Qatar. This project involves an upgrade of an expressway connecting Doha and Al Khor, as well as a new bypass around the city of Al Khor. My main task was to assist the traffic infrastructure team with the preliminary and detailed design phase of the traffic management drawings. These drawings are important because they include the different construction phases of the highways as well as any temporary signage required during construction for the diversion of traffic. Again, this is a field that I have never been exposed to before and I was really glad to learn something about construction workflow management as well as practice my skills in AutoCAD and communicating with draftsmen. It was also really fascinating to learn from my supervisor, who visited Qatar several times, the mentality of the people there and further understand the project and many of the design decisions.

Outside of the classes, company visits and internship, all of us Ruhr Fellows had the opportunity to travel around the Ruhr Region and to other cities and countries. I had the chance to make several day trips to other cities in the Ruhr Region and the Nordrhein-Westfalen region. I visited the two other participating universities in Bochum and Dortmund, went to the beach in Duisburg, saw the Altstadt in Düsseldorf, hiked a couple mountains near Bonn and went to a light festival in Köln (Cologne). We also had several weekend-long trips to surrounding



cities and countries. Our first group excursion was a 3-day trip to Berlin, where we stayed in a hostel together and explored the many famous sights of the city, including Museum Island, the Jewish memorial and the Bundestag. The next weekend we visited Bremen with its Beck's brewery and some beer tasting and Hamburg, where we biked around the city. Many of us also visited Paris, Amsterdam, Rotterdam and Brussels. A really special experience for all of us doing this program in the summer of 2014 is the Football World Cup. Being in the country that eventually won the World Cup, we witnessed and experienced firsthand the incredible excitement and energy surrounding such an event. All over the country hundreds of thousands of people gathered at public viewing venues and city squares to watch the games together. After the final when Germany won, people celebrated – chanting, singing, waving their flags – all through the night, first in the pubs and bars and then on the trains and buses and in their cars all the way home.

All in all, the Ruhr Fellowship really was a once-in-a-lifetime experience, because of which I can now say that I have truly experienced Germany and explored the ways of living here.

# Matthew Pasquini



What drew me to the Ruhr Fellowship this summer was a strong sense of curiosity. I had never been to Europe (or even on a flight), I had never experienced another culture before, nor had I ever gotten the chance to see what real work in the industry sector would be like. Perhaps just as importantly, I was looking for a chance to put my Deutsch skills to use – I had taken two years of German prior to this program. In these respects, the Ruhr Fellowship truly excelled beyond my expectations. Though it wasn't perfect, it was perhaps one of the most enriching experiences of my life.

Arriving in Düsseldorf on day one, in awe from my first flight, I had no idea what to expect. But after we settled into our dorm, met our German buddies, got our bearings, and fought off the jetlag, everything seemed to be falling into place. The dorm itself was very comfortable and brand new, though its location was not exactly ideal. It was quite a way from the city center of Essen and from public transportation (which was free with our student ID), but nonetheless normally quiet and peaceful, which was important after the exciting and tiring days to come!

The first month included both a language course and excursions to businesses, industries and attractions in the Ruhr area. After some confusion about the language levels present in the Ruhr Fellow group, the class was finally split into two groups with four of us in the experienced section. Our teacher was phenomenal! She really gave us a lot of insight into the language with particular focus on applications like business etiquette, current events, and presentation skills (relevant to our individual areas of work in our coming internships). The only complaint I have about the language course is that I wish there had been more of it! It was really worthwhile, and all the conversation really helped improve our speaking abilities to the point where we could understand virtually everything that was being said in class.

The excursions in and around the Ruhrgebiet (Ruhr area) proved interesting. I especially enjoyed the trip to an active coalmine, where we got our hands quite literally very dirty, as well as to huge industrial complexes like ThyssenKrupp Steel. It really demonstrated the economic power of the region. Combined with trips to former sites converted to museums and public parks (like the Zeche Zollverein,

for example), we got a real sense of how the area has changed from a massive boiling pot of steel and coal to a balanced industrial-service economy with huge consideration of the environment (in fact, Essen was voted one of the greenest cities in Germany). One downside, however, to the excursions was that a lot of them were extremely narrow in subject matter, so the correspondence to our individual interests and knowledge bases proved variable at best. However, that is to be expected with such a large group of American students in the program with different backgrounds.

In addition to the course and the excursions, I had a chance to travel every weekend to different places in Germany, organized either in conjunction with the other Ruhr Fellows or on my own. I went all around Germany – to Berlin, Münster, München (Munich), Freiburg, and Bremen, as well as to the Netherlands, Belgium, and Austria. I really enjoyed the balance of having an intense program during the week with some free time to travel on weekends. Sometimes this left me a bit exhausted, but it was well worth it given that it was my first time in Europe. It was also a great way to see the different micro-cultures throughout the country (Munich and Berlin for example, are totally different places), to try new foods and drinks, and even get a chance to see Germany win game after game in the Weltmeisterschaft (world cup) in different cities around the nation.

Once the second month started, I felt my experience change from a rapid-paced overview of Germany and Europe to a very focused, deep investigation into the German technology industry. My internship was with a company called ista, which designs, produces, and sells devices that determine and control water, energy, and heat consumption in the real-estate industry. My project was focused on theoretical stages to the improvement of a water velocity meter, which uses ultrasonic pulses and the Doppler effect to determine water consumption rates. I was very glad to hear that my project would involve both intense work in physics and technology as well as an environmentally-concerned goal in the background. At first I felt a bit lost at the internship since my advisor was on vacation and I had not been given any specific tasks to complete. Rather, I was given the necessary background materials to gain an understanding of the technology and left to my own devices to determine sources of error that must be addressed and to solve the problems through my own initiative (unfortunately this took me a week or so to realize). Once I gained some momentum, I was

really impressed with the amount of progress I was able to complete, both with theoretical approaches, as well as MATLAB simulations and cost analysis. It was really a beautifully complete way to apply my prior knowledge of physics, mathematics, and even economics. Once my advisor returned from vacation, he gave me some additional focus areas, which needed work in the design, and I chose one that seemed interesting to me. In the last couple weeks of the internship I was successful in solving the chosen challenge, and I wrote up my work (in both German and English) in an essay and presentation format. Along the way I learned a lot about the process of technology development from my advisor, as well as some of the differences between this process in German and American firms - not to mention the fact that I now have a very strong contact for the future, which will hopefully give rise to further collaboration between my advisor and me.

During my time at ista I also got to thoroughly observe the working environment. With a slightly blurred lens due to the fact that I was working with my second language, I noted a strong collaborative feel to the lab I was in. Employees in the development department generally spent a lot of time working on similar projects and discussing the relationships, progress, and issues between them. Most of the employees and I ate lunch together and went for post-meal walks to maintain a healthy working environment. In general I enjoyed the feel of the lab, and I'd be happy to work at a place like ista again in the future. After the success of my internship and getting to know my advisor, it seems that this may be quite likely! The Ruhr Fellowship in total was a great experience. I think perhaps the most important thing I can take away from it, aside from the obvious benefit of an improvement in my German skills, is that I got a real taste of what life would be like as a scientist working for a technology firm. Even though there was a lot of "hand-holding" in the first month, I walk away from the second month with a real sense of accomplishment and focus on going forward into my future career.



# Austen Novis

I would like to begin by thanking Initiativkreis Ruhr and everyone else who made my time here in Germany as a Ruhr Fellow possible. I had such an amazing time and definitely felt that I learned a lot. I am so glad that I decided to become a Ruhr Fellow and I know that this experience will stay with me for a long time.

I had several goals that I hoped to attain this summer. One was to significantly improve my German language skills since I had taken a year at Harvard already and hoped taking languages classes and living in Germany would allow me to become fluent. The next reason for becoming a Ruhr Fellow was to gain experience working in an engineering firm and to see if I would enjoy doing this kind of work after college. Finally, the last goal that I set for myself after I decided to join the program was to visit as many places in Germany and Europe as possible and really get a good feel for the culture.

The first month of the program consisted of a combination of language classes and excursions to companies in the region. Having taken German previously I was able to be placed in the more advanced class, which turned out to be really beneficial for me. A few of the other

fellows had taken a year more of German than me and I was able to learn a lot from them in addition to the professor, who was amazing. We would do a variety of activities in class ranging from watching the news to making PowerPoint presentations. The only issue that I had was that it was hard to practice my German out of the classroom due to the fact that most of the other fellows had a limited German background, so to be inclusive we would always speak in English. However, I did find my German skills improve throughout my time in Germany especially during the internship.

The excursions that the Ruhr program organized were a great way to explore the region and learn a great deal about German industry. Among the highlights was the trip to a German newspaper company called Bild and a visit to a working coal mine. These trips were completely different, but both were extremely rewarding. In the coal mine we were taken down into the shafts that were around 1000 meters below the surface and learned about the role coal mining had in the history of the region. Then, during the Bild visit we learned all about current marketing strategies used by the newspaper and how much analytics is involved to maximize customer satisfaction.

In addition to company excursions we toured several nearby universities. We were able to talk with researchers and graduate students in many disciplines including nanotechnology and my major of electrical engineering. They really promoted their masters programs and explained how many opportunities there are for foreigners to study in Germany. The highlight of all of these university visits was the opportunity to walk around and learn about the particle acceleration at Dortmund University.

The second month of the program consisted of an engineering internship. I interned at SMS Siemag, a large company specializing in constructing steel production plants around the world. Specifically, I was working on application development in the Electronics and Automation Department. I had a wonderful time working at SMS as I got to know my coworkers very well and had the opportunity to collaborate on a project in Matlab to develop a crane scheduling algorithm to be used in the steel plants. I learned a lot about German life simply by having lunch with my coworkers every day and was able to gain engineering skills through working on my project that I will be able to apply later on as I continue to pursue engineering.

Living in Germany for 2 months was a great experience and taught me a lot about living on my own. This was my first time that I was forced to cook for myself and I am happy to report that I survived, albeit mainly on frozen pizzas, canned soup, eggs, and whatever leftovers the other fellows didn't eat. I learned that when I live on my own in the future I should definitely find roommates that enjoy and are able to cook well. Another thing I should have learned is that everything in Germany is closed on Sundays. I mean everything. Many Sundays I went to get food for dinner at the supermarket



and forgot it was closed. Luckily I always had an extra frozen pizza saved so I never went hungry.

I am also very pleased to have been able to achieve my goal of traveling throughout Germany and Europe this summer. Overall I was able to visit 7 countries and numerous cities in Germany during my two months in the program and 2 weeks backpacking afterwards. While in the program we had plenty of time to visit other cities in Germany including Munich and Hamburg and also neighboring counties such as France. What was really cool for me was the fact that all main cities in Europe had great bike sharing systems so I was able to rent bikes cheaply in every place I visited and really get a good feel for every city.

Overall I had a fantastic summer and only wish I could have stayed longer. The best memory of my trip is undoubtedly witnessing Germany win the World Cup. It was incredible to see how passionate the German fans were and it was impossible not to get caught up in the World Cup fever. I was able to watch the final in an open air viewing in Bochum with 15 thousand other Germans. It was an experience unlike any other and combined with everything else that I was able to do this summer, will stay with me the rest of my life.

# Ashlee Anderson



After traveling for almost 12 hours, arriving in Düsseldorf was a bit of a daze. As I walked into the arrivals hall, there stood a McDonalds and a couple of feet away a Starbucks, so it didn't quite feel like I was in a different country. It wasn't until I walked into a supermarket and realized that I couldn't understand anything that was being said or read anything that I saw, that it hit me – I was in Germany, and I was about to embark on one of the best experiences of my life!

By the first weekend I could tell that my time in Germany was going to be nothing short of extraordinary. I experienced a record-breaking heat wave, followed by a massive thunderstorm, the worst the region had seen in over twenty years. But that night as the rains fell and the winds blew I was too excited to be bogged down by the weather. In fact, watching the storm from my window was more intriguing than anything else. It seemed somehow like the lightning and the thunder were more impressive in Germany. And not to be disappointed, the marvel of German efficiency shone true over the next couple days as streets and railways were cleared in impeccable time and the city of Essen was back to normal in a matter of days!

As the month of June went on, the excitement of learning German, exploring the Ruhr

area, making new friends, and of course, being in Germany for the World Cup, grew with every passing day. I love languages so it was a joy going to our German class every day, learning the language and the culture, and seeing evidence of their efficiency everywhere, even in their grammar! The university tours, company visits and cultural excursions throughout the Ruhr area were equally as interesting. The Civil Engineering department at the University of Essen made the theory of stress and strain practical as we tested the yielding point of concrete samples; as a Mechanical Engineer I felt right at home during our tour of TU Dortmund's Institute of Forming and Lightweight Technologies; and the Ruhr University in Bochum knew that we wouldn't be able to resist delicious ice-cream made from liquid nitrogen! The company visits left me awestruck. The vastness of the ThyssenKrupp Steel manufacturing plant, the depth of the Prosper Haniel Coal Mine, and the simple genius of the Axel Springer printing press gave me a new appreciation for the manufacturing industry and a deeper understanding of why German products are so revered. And the cultural excursions were not to be outdone! Our visit to Zeche Zollverein, an old coalmine that has been refurbished into a museum, was a perfect example

of how old and new can co-exist; and the FC Schalke 04 football stadium was – in one word – impressive. Not surprisingly, one of the most impressive things about the stadium was the amount of beer sold on a typical match day, and subsequently, their ingenious beer distribution system that keeps their fans happy and refreshed. There was truly no better place to enjoy good beer and exciting football than in Germany this summer.

By the time July came around, German spirits were high as the national team advanced gallantly through the World Cup, and there was good weather for the lucky lot who were enjoying their three-week vacation. My high spirits however came from the excitement of starting my internship at TRIMET ALUMINUM SE Essen. At TRIMET, I was introduced to the primary manufacturing stage of aluminum, that is, the process of converting aluminum oxide (alumina) to molten aluminum via electrolysis. The molten aluminum is then transferred to the furnace, where various alloying elements are added based on customer specifications. Finally the liquid metal is casted into either slabs, ingots or billets, heat treated, and packaged for customer delivery.

I worked on two main projects in the R&D division while at TRI-

MET. The first was an independent project: a literature review on the use of aluminum alloys in crash boxes and crash management systems in the automotive industry. As a senior planning to pursue graduate studies in Automotive Engineering, this project was of particular interest to me. Though most of my initial days were spent sitting at my desk reading, I enjoyed it and from it I gained a wealth of knowledge I would not have otherwise encountered. In addition, it gave me time to become acquainted with the machines and processes throughout the labs and to get to know my coworkers without the pressure of a hectic project. The second project was collaboration between myself and another student intern investigating the feasibility of implementing a new casting method. This project was a lot more hands-on and I had the opportunity to be involved in each stage of the research and development process. Like the previous project, I started off reading a couple of papers and reports, but by the time lunch rolled around I had donned my safety gear, hard hat, steel-toed boots, glasses and all, and I was on my way to the casting house. One of the fascinating things about doing R&D at TRIMET was that there were dedicated R&D furnaces and casting pits right alongside the furnaces and casting pits used in production, so I



» I GUESS IT  
REALLY IS TRUE  
THAT TIME FLIES  
WHEN YOU'RE  
HAVING FUN!

truly felt as if I played a role in the entire process which was as important as the employee standing next to me. After setting up the casting table, adding the alloying elements to the furnace and casting the aluminum billets, we took some samples back to the lab where I was taught how to grind, polish and etch the aluminum samples in order to analyze the microstructure. Though I gained a lot of knowledge and practical skills in just a month, my experience at TRIMET would not have been the same without the people. The R&D division at TRIMET is a close-knit family and they welcomed me with open arms. The diligent handshakes each morning, the anticipated chorus of "Mahlzeit" (which translates to Mealttime) as we prepared for lunch, and the well needed coffee chats after lunch to give us that extra kick for the last couple hours of the day, each experience teaching me a little more about German culture and the warmth of the German people.

It seems that my time in Germany ended almost as soon as it began, but not without a few more memorable moments: Germany being crowned World Cup Champions 2014, fireworks along the Rhine in Cologne, the sunrise in Vondelpark, Amsterdam, and pub hopping in Brussels, just to name a few. I guess it really is true that time flies when you're having fun!

# Kira Schott



This summer spent abroad in Germany was one of the hardest things I've ever done, in a completely positive way. It was not a hard decision to take the opportunity once I was accepted and placed in the Ruhr Fellowship program. However, once I really thought about living abroad for two months, I started to realize how much of a huge deal it would be to be living, cooking, studying, and working outside of the country for two months, separated from my family by an ocean. Traveling and actually experiencing the day-to-day life of another culture made me realize how truly American I am, something I am normally not aware of.

On the whole, and what I tell people in the multitude of brief conversations I've had around campus, is that Germans are more gracious and welcoming as hosts than stereotypes might lead you to believe. I was welcomed everywhere—at the labs and companies we visited, by the buddies at the University of Duisburg Essen, by the train information officers we approached on our travels city-to-city. At my place of work, especially, I found the environment easy to acclimate to, despite our language barrier, because everyone was welcoming and helpful. I found that to be true of Germany overall: people are less consumed by their personal problems or concerns, as opposed to Americans, and therefore have a lot more time and willingness to talk to strangers and help out other people.

During the first month of study, I was fully engaged in the language course. I came in having worked with an app for a few weeks prior to that: learning some basic German nouns and phrases. Our teachers Lydia and Rudiger were incredibly patient with us, and the fluidity of our classes helped us cover a lot of material which provided a good base for building sentences and communicating with my coworkers in July.

Overall, my experience of the dorm was very pleasant. The facilities were beautiful and ideal! We each had individual rooms and bathrooms, and shared the cooking and eating area. Once we

learned how to get to school on the public transportation, we were also able to tool around Essen and the area a little bit, exploring different parts of the Ruhrgebiet (Ruhr area). It was very nice to have coordinated with the buddies upon first arriving. They showed us the amazing and amazingly efficient chain restaurant—Vapiano—and introduced us to the area.

During June I traveled with the other Ruhr fellows to Berlin, Prague, Hamburg, and Munich. The weekend explorations were where I learned the most about logistically what it takes to travel. Transportation was always difficult to navigate, but definitely easier to manage when we were all together. The best weekend I had was in Berlin, when all of the Ruhr fellows traveled and stayed together in a hostel. We got to see so much in just two days, and Berlin is one of the coolest cities!

July, for me, was the most rewarding part of the program itself. My homestay experience really made this opportunity what it was for me. I am so grateful that Vaillant was ultimately able to find me a couple to stay with, because that was where I learned the most German—which we used at dinner and around the house doing chores—and learned the most about German people. It was enriching to get to meet their families, meet their neighbors, and visit other places of work. One day during the month I went to work with my host father, and also attended a panel on Sustainable Energy in Bonn, hosted by my host father's brother.

Vaillant as a company, and especially my supervisor, made work a great place to be. I was immediately welcomed onto the team and invited to the company 5K the first weekend. It helped that the group I was working with in the Electronic Systems R+D department was made up mostly of students from the university nearby (Wuppertal University); many worked at Vaillant part-time, and some had recently graduated, transitioning into full-time positions. Working with this group, with students in particular, made my experience especially enriching. Together we watched the semi-final and final of the World Cup, explored Wuppertal and rode the Schwebbahn, ate döner, and played board games. On our last night together, we barbequed together after work.

Working with my supervisor Matthias Stursberg was fantastic because he introduced me to his other colleagues and encouraged

me to visit many different parts of the company. I was matched perfectly with the kind of coursework I had just finished in my sophomore spring in my major. The project to which I was assigned related directly to what was fresh in my mind after finals and it was an amazing feeling to see what I learned in the classroom relate directly to a relevant project for them.

On the whole, I had a great time in Germany. I say it was the hardest time of my life only because I didn't anticipate how tiring I would find it to be in a foreign country for an extended period of time. Ultimately you generate a sense of comfort, especially in a group of American students, however to get the most out of the experience really requires you to be constantly pushing that sense of comfort and challenging yourself. This definitely applies to trying to learn a new language and understand a different culture. One of my favorite keepsakes from the summer that I brought back from Germany is the book my coworkers gave me, signed by all of them: How to be German, in 50 easy steps. It's a pretty good summary of what I learned in two months about German people and German culture.

Overall I had a great summer and amazing exposure opportunities. For that, I could never thank the Ruhr Fellowship enough!



# Kinjal Shah



The experiences I had during the two-month Ruhr Fellowship program are some of the most impactful, educational, and unique experiences I have had during my college experience thus far. I immensely value everything I learned directly from the program, as well as all that I did not expect to learn by living in a new country.

As a sophomore at Penn, I had been eager to do something new, reach another level in my education, and gain an experience I would only be able to gain during the four short years I spend in college; I wanted to travel abroad. I was first attracted to this program because of its combination of German language and culture classes, company visits, and an internship. By merging the typical study abroad with the experience of working in a different country, the program enabled me to not only observe German student life but also the workplace environment – all while meeting a variety of new people. In addition to the unique nature of the program, I was also eager to come to Germany because of its rich history and reputation in the engineering world. Thus, with goals of immersing myself in German culture, broadening my engineering horizons, and building new relationships I eagerly embarked on my first international trip without my family.

When I first arrived in Germany, I finally got to meet our program coordinator, Florian and my German buddy Laura who helped me to track down our dorm in Essen on a small street fondly known as Eckenbergstraße. Most of my first day in this new exciting country was full of unpacking and eagerly meeting the other Ruhr fellows for the first time. We had the chance to explore a bit of Essen-Kray, the corner of Essen we would be living in, as well as the Essen city center, which was full of life and culture. Monday, we all finally officially met and got our first taste of German university life as we toured the Essen campus of the University of Duisburg-Essen. We also attended a welcome session held by Initiativkreis Ruhr, which introduced us more to the program. Tuesday, we jumped right into our month of German language courses, engineering workshops, and company visits; the Ruhr Fellowship had officially begun.

The German language and culture course was my first exposure to learning German. Our instructors were really helpful in teaching us to master the many different sounds and intonations that need to be used in order to speak the language, as well as helping us to master some basic vocabulary. The most difficult for me was definitely the sound associated with the ö as well as the “ch” sound. I appreciated how unlike a typical class, our class was very flexible and could be adapted to fit our needs. We learned how to order food, ask for directions, find out how much something costs, and other necessary terms and phrases. However, I underestimated how difficult the German language is to learn and after the month of classes, it still took me a while to formulate sentences with correct grammar; but, everyone from our teachers to restaurant owners to our German buddies seemed more than willing to help us learn!

In addition to the German course, throughout the program we attended a variety of workshops ranging from civil, mechanical, and nano engineering to urban systems. I appreciated being able to learn about a variety of engineering disciplines, some of which I had not been exposed to before, in addition to having the opportunity to tour many labs at the three universities part of the Ruhr Fellowship. My favorite workshop was the NETZ workshop where we were all given options to attend different seminars. I chose to attend a plasma treatment seminar which turned out to be the perfect option for me since the professor mostly discussed how he is using plasma treatments to coat medical devices with synthesized diamond. As a bioengineer, I found this workshop extremely interesting.

While we broadened our engineering knowledge through these workshops, we were also given the opportunity in June to go on many company site visits such as the Chemiepark Marl, Schalke Stadium, Zeche Zollverein, RAG Coal Mine, ThyssenKrupp Steel factory, among others. Each and every visit taught me something new and gave me an experience I had never had before. I saw a chemical plant for the first time at the Chemiepark and witnessed tons of molten steel being moved by a huge crane in a gigantic bucket at the steel factory. However, one of the most unique experiences I had during the month of June was going over 1 mile below the Earth’s surface into a fully functioning coal mine. Walking throughout the tunnels, taking small underground trains, and breaking coal off walls was a surreal experience.

Our packed schedules in June made the month seem to go by in the blink of an eye and in July we all began our internships. My internship perfectly aligned with my goals and interests for the summer. I was given the opportunity to work at Ferrostaal, an industrial services provider, in the Industrial Projects division. As someone interested in both engineering and business, my internship at Ferrostaal really allowed me to experience this combination since I was working on engineering projects from a business vantage point. I was able to conduct a market analysis of various products and global markets, help edit the corporate presentation, and learn about financial modeling and the global petrochemical industry. The entire month was full of constant learning since I had never been exposed to such industries or such intensive market research roles before. I learned how to develop presentations, formulate reports, and conduct thorough research among myriad other skills during my month at Ferrostaal. My supervisor and everyone in my department seemed excited to have me join the team and were eager to involve me in their projects and help me learn all that I could. In addition to the skills I gained through my internship, I also developed meaningful relationships with my coworkers who really made me feel welcome and at home at Ferrostaal. My supervisor showed me unique parts of Essen as well as introduced me to her favorite restaurants and cafes. I enjoyed working with my colleagues in addition to spending time outside of work getting to know them better over dinner parties and Essen explorations. It was during my internship that I was really thrown into German culture. Even though I was in an English-speaking department, most of my coworkers preferred to speak in German and by the end I found myself being able to understand more and more. It was also interesting to see the differences in the cultures between the US and Germany. Everyone definitely seemed to be more productive during the day, taking few breaks aside from lunch and then would leave promptly by 5:30. This further emphasized the punctuality and strict adherence to laws and rules that we had all come to notice as characteristic of German culture. The professional skills, network of colleagues and friends, and cultural exposure I gained through my internship have significantly influenced how I view my future career decisions.

Though our weeks throughout June and July were packed with classes, workshops, tours, and internships, we never slowed down on weekends and seized every opportunity to travel and experience new cities, foods, drinks, and cultures. I decided to stay mostly within Germany since there were so many cities I wanted to visit. Our first weekend in Germany, many of us decided to

experience life in the capital of Germany, Berlin. The history within that one city left me in awe and made Berlin one of my favorite trips of the entire two months. As I walked past remnants of the Berlin wall, the many Holocaust memorials, the historic buildings, and the majestic Brandenburg Gate, I was often left speechless as I pondered the magnitude of the history that had taken place on the ground I was walking on. My trip to Berlin left me excited about the many future travels throughout Germany. Our second weekend in Germany, I traveled to the beautiful cities of Bremen and Hamburg. Our second day there, we found out that a bicycle demonstration was taking place to promote biking within the city. Since a few of us were on bikes we ended up joining in and biked around the city with over 20,000 Hamburg locals. We realized that weekend that in Germany, biking was the way to really see each city. This came in handy the following weekend when I traveled to Munich. The beauty of Munich was inspiring and I was once again amazed by the history. The following three weekends I spent exploring cities in North Rhine-Westphalia such as Cologne, Bonn, Münster, and Düsseldorf where I really got to experience the beauty and quaint nature of smaller German cities. The last two weekends of the program I finally ventured outside of Germany and traveled to Brussels, Bruges, and Amsterdam where I got to see amazing sites, eat great food, especially the chocolate, and experience some Dutch culture.

In addition to having this amazing experience abroad, we were all fortunate enough to be in Germany during its 2014 FIFA World Cup victory. It was an unparalleled experience, seeing the entire country come together to support their team. We all loved watching each German game and joining the Germans in cheering each time a goal was scored. For the final, I went with a couple other Ruhr Fellows to a huge public viewing in Bochum with over 10,000 attendees. The atmosphere within that park is something I will never forget and the excitement and energy in the streets after the German victory was a once in a lifetime experience.

I will greatly miss my time in Germany. From the late nights I stayed up playing cards with the Ruhr Fellows, to the weekend adventures, to the skills I gained from the German classes and my internship, I have truly valued each and every aspect of this experience. During this summer abroad I have broadened my perspective and developed new goals to pursue further international travel. Though the summer has ended, the memories and friendships will last me a lifetime.

# Jean Xin



Last year, I asked my German manager what he wanted for lunch. He told me he really didn't care, as long as he could eat it with one hand in 5 minutes so he could finish editing our presentation with his other hand. The cafeteria was out of sandwiches, so I came back with a banana and two pre-peeled hard-boiled eggs. He said it was perfect.

Despite my somewhat frightening experience with German work ethic and ridiculously fast eating habits, I still listened to his advice and chose to participate in the Ruhr Fellows program the next year. I expected that I would have the opportunity to change—to discover new things I loved, to develop outside of the MIT bubble, to understand a different set of assumptions. I didn't expect anything radically life changing, but I did want to be challenged and have fun.

## Studying at the University of Essen

Mark Twain wrote, "Never knew before what eternity was made for. It is to give some of us a chance to learn German." Frankly, I'm inclined to agree—any native English speaker must be a bit overwhelmed by the many, many complexities of the German language. On the other hand, most young German people and professionals, especially if they went to university, seem to be completely fluent in English. Nevertheless, I put forth my best efforts in the classroom and managed to pick up a few phrases and an ability to speak about where I'm going, food, and colors (at least in the present tense).

After our classes, I enjoyed some very interesting excursions with the group. My favorites were the visit to the RAG coal mine and to ThyssenKrupp Steel, since they were really once-in-a-lifetime opportunities for me to see commodities production at scale. I also really enjoyed some of the more informal activities, such as going as a group to Landschaftspark and spending time with my buddy around Essen. The buddy program was fantastic, and I was so impressed with the buddies' eagerness to help and show us the best of the Ruhr region.

During my free time on the weekends, I explored the Ruhr region, including Münster, Mülheim, and Köln (Cologne), but I was also able to travel around. I visited Hamburg, Paris, Amsterdam, Berlin, and Stuttgart/Swabia! Despite the short amount of time I spent in each of these destinations, I tended to meet up with friends living in these cities or go alone, so I felt that I really managed to see and experience a lot over the course of a few days.

## Working at Klöckner & Co.

General Information (Source: [www.kloeckner.com](http://www.kloeckner.com))

Klöckner & Co. is the largest producer-independent distributor of steel and metal products and one of the leading steel service companies in the combined European and American markets. It provides a wide range of services—consulting, procurement, warehousing, processing, and distribution—and employs around 9700 people. While Klöckner is headquartered in Duisburg, Germany, it also has operations in the USA, Western Europe, Brazil, and China.

## Internship Description

Primarily, I was the accounting intern, and my job very directly drew upon many business classes I took in college. All of the case studies we did in class about fair value adjustments and derivative accounting became very relevant while at Klöckner. While there were certainly some adjustments needed to get from my GAAP-based education to IFRS reporting, I actually found that it was easy to perform my accounting duties. For my main project, I helped quality check the quarterly numbers by using Excel-based analysis to flag irregularities and worked with accounting teams from around the world to resolve them.

However, I finished my accounting project before my 4 weeks were finished, so I took on extra projects, including writing three case studies for Executive HR. My HR project allowed me to meet many incredible people within the company and blend my organizational and financial knowledge with creativity. I was even lucky enough to meet the CEO, and my conversation with him really helped me understand how companies must continually evolve their processes, strategy, and technology to keep up with the inevitable march of change and time. Overall, I was very impressed by the passion, proactivity, and awareness displayed by management.

### What I learned

Foremost, I learned much more than I expected at Klöckner and on the Ruhr Fellows excursions. This was my first exposure to heavy industry and manufacturing, with most of my experience being concentrated in tech and finance. The immediate impression I got when I visited the RAG Coal Mine was “Wow, this operation is gigantic.” The second impression was amazement at how people have harnessed technology on a grand scale to extract resources. Although commodities and natural resources form the backbone of our modern economy, I had never realized their complexity, power, or potential.

At Klöckner, I found a company struggling because of external forces—a decline in the price of steel, overcapacity in the market—but a very aware and proactive management team determined to modernize the company in all aspects and take advantage of the massive amount of untapped potential in the company and industry. This has fundamentally made me reconsider which industries I want to work in and opened my eyes to the huge unsolved technology and human capital needs of the modern company.

### Within the Community

Outside of my professional revelations, my biggest takeaway is that strangers are just one conversation away from becoming friends. On many weekends, I would come back with new friends and an invitation to visit them in their hometowns. Not only that, but the Ruhr Fellows German buddies, their significant others, and my colleagues were all so vibrant and welcoming. They took me to so many incredible food spots and places I would have never known about! I watched many sunrises with my new friends in Europe, soaking in the energy of being young and connecting with people from around the world.

Furthermore, in talking to all of the German students, I realized that despite being younger than them, I had a much more “real world” experience and mindset. Perhaps the German education system allows students to be students for longer, by ensuring that their education is paid for and eliminating the constant race to collect more impressive extracurricular activities and jobs for the resumes. On the other hand, university was just a place to study for most of them, not an all-encompassing lifestyle like it is at MIT, and I would never want to give up that quintessential American college experience.

### Lasting Impressions

I learned (well, more accurately, was reminded) that really connecting with people outside of the MIT/Ivy bubble is absolutely necessary for retaining a sense of perspective and generating new ideas. From this experience, I have a clearer idea of what I want to ultimately pursue and a better sense of what’s important to me. I rediscovered my courage to ask for a table for one at a two Michelin star restaurant just to savor the experience. On the other hand, I also discovered the joy and sense of homecoming that comes with meeting up with other MIT students across the world.

As cliché as it sounds, my biggest takeaway is be open to different sets of assumptions and perspectives. Everybody has a slightly different story and something to teach you.



# Crystal Stowell



This past summer was one that I dedicated to exploration. Exploration of Europe, exploration of job opportunities, and exploration of self.

Before this trip, I had never before been to any European country. In fact, most of my travel had been in China, where I speak the language and learned their customs before I was ever on my own there. This was my comfort zone. But there is so much that I want to see and do that the idea of returning to China yet again wasn't good enough. I wanted to go to Europe to immerse myself in the hundreds of years of history and culture from which the other half of my heritage derives. Germany in particular captured my interests because of their superiority in the field of environmental engineering, specifically alternative energy. At the time, this is what I thought I wanted to do. It wasn't until this past July that I realized where my true passions lie: I want to work with water. My experience with Ruhrverband was incredible from start to finish. My coordinator arranged an itinerary for nearly every day of my internship. On some days, I met with coworkers and lab technicians to learn what it is that they do. On other days, I would visit some of the company's off-site locations such as dams, fisheries, and purification plants. On others still, I would go on field trips with the biologists and engineers to assess the river health or to check up on recently-completed or currently-ongoing construction sites. These days were my favorites, and I'm pretty sure my stories from work made at least some of my roommates jealous.

On top of all these great experiences, the friendly people and the collaborative work environment at the company made the whole affair an even more enjoyable one. The company restaurant downstairs not only provided tasty food for a great price, but it also provided a place for coworkers to dine with one another. I found it really nice that people would knock on each other's doors before heading down to lunch together. It's the small things like this that really made me feel welcome here.

Of course, my time in Germany was not limited to my time working. In the dorms, I got to know thirteen other amazing people, most of whom are at school in Boston so I know I'll be seeing them again soon. Cooking together was perhaps one of the most rewar-

ding experiences. Everyone brought something to the table, and sharing techniques and habits with each other taught us all a lot. We always had a home-cooked dinner for under €2 per person, and it was always delicious.

Outside of the dorms, I got to explore the Ruhr Valley as well as the big cities in Germany and Benelux. In June, many of us bought a German Rail Pass which grants you x days of unlimited travel on DB trains for a fixed price. With this pass, I went to Berlin, Bremen, Hamburg, Frankfurt, Munich, Nuremberg, and Schwarzwald (the Black Forest). All of these places are beautiful in their own right, and the history I learned on tours and at museums quickly surpassed any history I thought I knew on the era.

In July, I made use of the student travel pass in North Rhine-Westphalia. With this, I got to explore a lot of the neighboring cities, including Cologne and Aachen. We also went on a great bike ride in the Münsterland countryside with Laura and Johanna. This is where Tina and I learned that we can bike 30 km in a little over an hour (go us!).

As I write this, the memories are starting to rush back and there's so much I want to tell you, but I know you'll have adventures of your own. I just want to use this opportunity to thank everyone who helped make this happen, because my summer and my career choices would not have been the same without you. I will always think back to this summer with great joy, and I look forward to when I can return.

Best,  
Crystal Stowell  
Harvard Class of 2015

# Tina Kambil



I hadn't heard of the Ruhr area before applying for the fellowship, and when I told others that I was going they either hadn't heard of it or would say something along the lines of, "Isn't that the ugly industrial part of Germany?" After spending two months there, I am going to need to go home and correct that perception – it may be industrial, but it's full of beautiful green spaces with a healthy serving of cool architecture. The Ruhr Fellowship is set up in such a way that I was able to learn enough German to communicate basic ideas and, more importantly, ask simple questions. We went on excursions to learn about the area and culture in the first month also, which made me more comfortable and confident before starting my internship with BP – and I'm sure saved me from a few embarrassing mistakes. We visited universities as well as companies, and I never knew quite what to expect from each day beyond a name, time, and location. I hadn't ever seen such big industrial parts before, and the massive jungle gym of pipes at Evonik and pouring of a truckload of molten steel at ThyssenKrupp Steel were mesmerizing.

As we settled in the first week, I realized learning German was going to be much harder than just reading a textbook (high school Latin) or clapping my hands and singing with a puppet (elementary school Spanish). German has all the rules of Latin, except you actually have to be able to speak it. Learning the language was almost like learning the culture – the many rules make it easy to read and fairly easy to understand as long as you know the rules. And there is a big emphasis on formal vs. informal – so depending how someone addresses you in conversation, you pretty much know what they think of you.

My conversational skills were not so good because I could mostly make "I" statements, which does not a conversation make. The teachers were quite good though, and we basically learned as we needed to. First there was travel language and food words, and when a particularly nasty storm hit the second week, we learned weather words (so when all else failed, I could talk about the weather). Traveling around Germany was also very easy, because like the language, there are many rules and everything is clear – unless there are hundreds of trees on the railway tracks as there were after the storm – everything runs, and almost on time.

Every weekend was a new adventure too, on top of the already exciting things happening during the week. Some of them I spent seeing other parts of Germany (Berlin, Hamburg/Bremen, and the Black Forest).

Others I spent in North Rhine-Westphalia and making good use of my student transport pass – my favorite place was actually Muenster, about an hour north of where we were staying. I got to go on bike rides around the area with the other Ruhr Fellows, which was really great because it's very flat and somehow the sun was always out on those days. It was interesting to see how industry and green space worked together, especially in Duisburg where I climbed large metal structures to look out over a large green area with smokestacks in the distance.

There was also a trip to Paris since it was nearby and I had never been, but it just really made me miss Germany's sensibility (and by this time, German sounded so much prettier than French to me that I couldn't fathom why people thought French was a romantic language). Wherever I went though, I would make sure to find a television in order to keep up with the World Cup – what unbelievable luck to be in Germany as they won!

In the second month I began my internship with BP. It was at the Global Fuels Technology center that is mainly a lab, but has other tests running as well. Turns out fuel is so much more than stuff we siphon into our cars and set fire to. I learned about different types and when to use what, as well as the impact of factors outside the fuel, like the type of car or weather conditions. In the first two weeks I was there my supervisors organized what were basically in-company excursions – kind of like what the Ruhr Fellowship organized for all of us – as an introduction and so I could have a greater understanding of how everything worked. I had never had an internship at a company before, so it was very interesting to see how a company functioned as I sat in on meetings, as well as the different jobs people were doing (some people doing detailed lab work, others running tests on chassis dynos to see how the different fuel mixtures performed, others doing big picture marketing/consulting-type things) all on one site!

My main projects in the short time I was there were compiling and reviewing data over several years from BP and competitors about the different compositions of fuel and test results, as well as working on method de-

velopment for investigating fuel injectors. I had two supervisors who were fun to work with and always patient with my questions. Everyone would eat lunch together or have coffee together, which meant I got to know some other people there as well. It was a pretty short train ride (plus a bus when I was feeling lazy) to get to work in Bochum from Essen. I was glad to be working in another city because I got to see another part with help from the people at work. They gave recommendations on a music festival that I went to after work one day, and another day about ten of us went out to see Transformers 4 for "Trash Movie Night" and it was cool to see that everyone is friends outside of work too. As an aside, movie theaters are pretty different in Germany - not air-conditioned, popcorn is sweet and unbuttered, and there is an 8-minute pause mid-movie for a bathroom break or ice cream, which I just thought spoke to German practicality.

I'm extremely grateful for this summer and all the opportunities to be exposed to things I never would have thought about. I met some great people and hope to keep in touch. I even now plan to take German class in the upcoming year, in the hopes of coming back and further understanding the culture.



# Natasha Gunther



When nervously planning to enter the reality of Summer 2014, I was prepared to, as the kids say these days, cut some losses. By means of many hours of goal-setting and life-planning, I came to the realization that I was irreversibly certain of only two things: one, that I wanted to travel, and two, that I wanted to work in industry as a mechanical engineer. However, the possibility of this becoming a reality seemed all but hopeless. An ideal combination of cultural and industrial exposure, language courses, an incredible internship, and even the inherent opportunity to travel to infinite European wonderlands... how could that possibly exist? Nope. Not possible. It'd be all too perfect. Certainly one of the two goals would be achieved, but it only seemed natural that with one, I would be sacrificing the other. Well, pre-Summer pessimistic Natasha, meet Ruhr Fellowship, the program that makes dreams come true.

Germany was interesting for my development in that it was always peripherally relevant. With my last name being something as obviously German as "Gunther", the fact that I'm much more apparently Asian seemed to raise a lot of questions. Nothing too bothersome of course, just enough to make me take note of the origins of my name. However, as a household, I would say German influence was nearly nonexistent. With my mom being born in China but raised in France, and my dad having been born in Korea but raised in Africa, I'd say there were quite a few cultures vying for dominance in the Gunther household. The fact that I got to explore such a rich culture that I'd unfortunately taken for granted for so many years is something I'm incredibly lucky to have done.

Anyways, I suppose I'll actually start speaking about the spectacular experience that is the Ruhr Fellowship. I'll move chronologically through the various segments of interest- the actual fellowship, after school/post work hours, and finally, travels.

After a sleepless flight, during which I measured time in the number of movies watched (four and a half), I arrived at Düsseldorf Airport simultaneously dazed and in awe. After only a few U-turns and a couple of pleas for directional assistance, I found my savior and magnificent Program Coordinator, Florian Vollweiler. Funnily enough, spotting him was more difficult than expected, because

though I was expecting for whatever reason a graying old German man, Florian was young and bearded and wearing a flannel. After equipping me with papers and travel instructions, I was met by my phenomenal buddy Clarissa. Clarissa turned out to be, quite literally, as in no exaggeration, as in full truth time, the best buddy in the world. Whether it be drives to the Apple Store when my mac essentially self-destructs, or ice cream dates to share experiences, or World Cup games to be both foes and friends (definitely not still bitter about the US loss to Germany), or even lessons on flunky ball, Clarissa always made it apparent that she was there for me, whatever I may have needed, and that was exactly the comfort and friend I needed in a place so unfamiliar. Anyways, as she guided me home, one thing I noticed was how incredibly green everything was. Every (consistently on-time) train was lined with lush forest, and even the bus lanes for the (consistently on-time) buses had long shoots of grass sprouting neatly between the paths cut out by the bus' wheels. It was beautiful.

After arriving at Eckenbergstrasse, the giant red block of a building set to be my home base for the next two months, I got to meet each of my fellow Ruhr Fellows as everyone trickled in. And without a single thing unpacked, we were off to our first dinner together, setting a wonderful precedent for the many dinners to be eaten together and laughed over in the future. Whether in Eckenbergstrasse or in any one of the other beautiful cities to be visited that summer, meals were always, inarguably my favorite moments. They brought together everyone over a common purpose, to satisfy hunger, while essentially "trapping" you there for long enough to have a meaningful conversation. It was often too easy to let the rush of travel sweep you from historic site to historic site, but some of the best times were really when we were just sitting down, wherever we were, and eating.

The first month was quite the frenzy of activity. We would go from German language class to cultural or industrial group excursion to home, where we would cook dinner and plan travels and try to unwind, and that was the week until the travels began on the weekends. The sheer amount we were able to accomplish in a mere two months was undeniably impressive. In the amount of time that we had after class, the things we were able to see were both thorough and fascinating. The most impressive consistency of all was that nothing, in terms of the quality of the excursion or the

accuracy with which activities were executed, felt as though it was sacrificed. This just meant for us that we were fortunate enough to get tours of the Schalke Stadium (a local professional soccer team), one of the last active coal mines, the famous Bild Newspaper factory and corporate building, the ThyssenKrupp Steel factory, and quite literally every college campus in the area. I must say, the impression one is left with after having watched some 200 tons of fiery molten steel being poured into a gaping hole from which only flames come forth is nothing short of awe-inspiring. However, I still can't decide if this experience overcomes the weight of 1500 m of earth hovering above us while we were underground amongst the last functioning coalmines of the Ruhr Area.

Oh, and did I mention that Germany happened to WIN THE WORLD CUP while we were there and lucky enough to vicariously live through the joy of national pride? Why yes, yes that did happen, and the public response to the victory was the grandest display of national ecstasy I'd ever had the fortune to witness. Moving on... The second month was my incredible experience of an internship. I was working at Siemens in their Research and Development Division for Low Pressure Steam Turbines in Mülheim. My task was to create a Python tool to automate a process that would assist in the

everyday analysis of the steam turbine's blade tip. I learned more than I could've hoped, and this was in large part due to the concerted attention my supervisor granted me. He was always entirely encouraging and open to questions, and though I could tell he was very involved with his own work due to preparing for paternity leave, his willingness to help me in anything was infallible, and for that, I could not be more grateful.

I'd like to now put aside (at least fractions of) my cheesiness so as to truly express my sincere gratitude to all those who made and make this program possible. For the rest of my life, I'll be left with the remnants of the kindness and privilege that I've been granted this past summer. It has been an experience that has indelibly changed the way I view the world, and what I know of it. It's hard to remain as sheltered a youth as before having traveled to Berlin, Munich, Hamburg, Frankfurt, Cologne, Amsterdam, Brussels, Vienna, and then post-program with family to Barcelona, Madrid, Athens, Santorini, and Paris. These experiences would have been neither possible nor imaginable, without the amazing Ruhr Fellowship. I will never cease to hold these experiences in my heart with warmth and all-enveloping gratefulness.



# Yi Zhong



This summer marked my first journey to Europe. I was born and raised in China, moved to America when I was twelve and have taken the twenty-hour international flight every summer. I traveled within the US and around Asia, but never to Europe, not even for transfers. It was nagging me, so when I was applying for internships, I only looked for the ones based in Europe. Fortunately I was admitted to the Ruhr Fellowship with an internship at Siemens, where I could learn German and work using the knowledge I learned at MIT as a mechanical engineering major.

One of the questions on the MIT's post-internship survey was, "Expectations before going." I was really stumped by this question. What were my expectations? I learned about the Ruhr area from the Ruhr Fellowship information session at MIT: it's big, it's industrial, and it's densely populated. And I came with zero knowledge of German and little knowledge of its culture. To my surprise, Essen is not that different from Boston. There were little things I had to get used to, for example a bus schedule actually exists and people actually follow

it. Other than that, I had no problem getting around, looking for places and not acting out of place. European culture, after all, is not that different from American culture. And that's how I survived.

I hope the other fellows will talk about their experience here in a more detail and chronological order, but I will resort to writing down the things that are the most memorable to me.

## The Storm

About two weeks into the program, I had pretty much familiarized myself with all the necessities for living: supermarket locations, good beer brands and types, bus routes back to Eckenbergstrasse, multiple ways from the cafeteria to our German class and read the giant yellow departures sheet in the Hauptbahnhof (central station). One afternoon, the sixth floor suite was cooking around 7:00 pm and we were amazed by the sunset. Later, the sky turned into layers of dark clouds and lightning started. Jean had just gone out for a run. At first we were all excited by the lightning and we soon realized this was not a normal summer storm. Blasting wind blew for half an hour, pushing the rain horizontally. And Jean was still outside. She later found a house to shelter in and made her way

back, but it wasn't till then that I realized what the storm did. Trees fell on railways, bus lanes, sidewalks and houses. I was from southern China, where a dozen typhoons would pass every summer. The storm seemed like a typical typhoon to me, but it was the worst storm the area had experienced in fifty years. The next week was a total disruption to my newly learned routine. Buses stopped for a day and trains stopped for a week. Few of our scheduled excursions were cancelled. It took nearly two weeks for everything to get back to normal, except I can still see traces of the storm around Essen even now, when I am writing this during the last day of my internship.

## The Excursions

Our afternoons in June consisted mainly of excursions to different laboratories and companies around the Ruhr Area. I will talk about two: the visit to Bild and the coal mine. We visited Bild's headquarter in Essen, a major newspaper in Germany. This was particularly refreshing because we had been visiting mainly engineering firms and labs. We were seated in a large conference room with various snacks and coffee, when the editor-in-chief came in to give us a short intro. I had little exposure to

the journalism industry in the US other than reading news from Flipboard. I had no idea that Bild would be setting up an office in LA so the LA office can follow up breaking news when the German office closes for the night. And that most of the time, the LA office will simply follow Kim Kardashian's latest news. The editor also talked about their new business model. News like a soccer player just got a new tattoo will be posted on their website, but only paid subscribers can see the tattoo and non-subscribers will only see the arm with large pixels. The editor said, "We didn't even know people would pay to see a tattoo, but they did."

The coal mine we visited was one of the three working coal mines in Germany; all are expected to close in 2018 due to termination of subsidies. I was part of the first group to visit and to be honest, I was scared. I heard about the heat and humidity down there, and the fact that we would be down there for three hours with a lot of walking. I won't go into details. The most memorable thing was we had to wear the miners' clothes given to us. And there was no female miner. We had to wear a man's jacket, a man's pants, a man's shirt, a man's tank top and a man's underwear. We had to wear knee

caps, shin guards, a helmet, a gigantic portable battery for our headlight and an air purification mask in case of emergency. A reporter from a local newspaper also came with us and together with the PR staff and a female security engineer, we went 1.3 km beneath the earth. We walked around for 3 hours but it was not as hot and humid as I anticipated, partly because the mining machine was not running. It was quite an experience, and we took two pieces of coal with us as souvenirs.

### **The Internship**

My commute to Siemens in Mülheim included a bus or train from Eckenbergstrasse to the Essen

Hauptbahnhof (central station), an S-Bahn (suburban train) or RE to Mülheim and then a U-Tram to Buchenberg, 40 minutes in total. It was quite an experience for me and I was truly amazed by how efficient everything was. I worked in the Energy Generation Division, on the Gas Turbine/Generator and specifically in the combustion department. I helped with gathering data and analyzing the NOx emissions of selected turbines with new detectors. I ran regressions in MINITAB to detect a trend or pattern that would be included in the new upgrade report. I also coded their data arrangement Excel workbook, redesigned the interface and reconstruct-

ted the code. Surprisingly I had had very limited experience in Visual Basics for Applications or coding before. My boss was very knowledgeable and amazing and my co-worker, a student worker from the University of Bochum, walked me through the process. In the end my boss gave me a little gift, a book on Germany's championship, an alcohol-free Weissbier from Erdinger, and a booklet on Siemens' turbine factory in Berlin.

### **Traveling**

I traveled every weekend, to Berlin, Hamburg, Munich, Bonn, Cologne, Vienna, Brussels and London. I only spent one weekend in the Ruhr area to travel

to Bonn and Cologne. If I had to talk about these, I would have to write five more pages. So I will only say this, traveling is fun and easy in Europe, but still watch out for your belongings even in Germany. My phone was stolen in the Fischmarkt in Hamburg. Other than that, travel around Europe! Spending your weekend in those big cities is the best way to avoid the boring Sundays when nothing is open.

I had a lot of fun in Germany; I saw and learned many things. Participating in this program as a sophomore really helped with my professional career, yet I still enjoyed a fun and relaxing summer.



# Liveblog

Jean Xin from MIT visits the UA Ruhr / Ruhr-Fellowship Program  
June-July 2014



I am surrounded by a sea of boxes and suitcases, and I'm pretty sure they're multiplying. As I do every year, I wonder how I managed to cram so much stuff into my small college room. But this summer, my suitcase is going somewhere completely new—Germany! My name is Jean Xin, and I am graduating in June from MIT with a double major in brain and cognitive sciences and management. I love traveling, but this is actually my first time in Germany, and unfortunately, the last time I studied German was when I was about 7 years old for an hour a day for two weeks at summer camp. I remember how to say “watermelon,” how to count to three, and how to greet someone (but only in the morning). Needless to say, this is highly embarrassing and not recommended. I intend to change this as quickly as possible when I arrive.

In between saying good-bye to the people that have made the past four years incredible, eating delicious celebratory, and jumping out of airplanes for our Senior Week skydiving, I've been thinking about why I'm going to UA Ruhr, how I can contribute to the Ruhr Fellows, and how to get the most of the experience.

So, why are we all here? For me, I realized that I live in a decidedly American, very MIT-shaped bubble, yet I believe that the world is flattening every day. To be relevant in tomorrow's world, you must think beyond borders. Teams cross cultures, and trade brings each country's goods around the globe. Therefore, I hope that going to Germany will force me out of my comfort zone and show me a different way of working and living. This summer starts a new chapter in my life, and when I saw the schedule for the Ruhr Fellows, I couldn't think of a better way to begin my explorations of the area.

# Week 1

## Settling in, exploring Mülheim, and The Storm

I arrived in Germany after a few hiccups and a week later than the other fellows because MIT has a late graduation. I missed my connection in Heathrow, and I arrived in Düsseldorf 15 hours after I left Boston. (Note: Never, ever try to make a connection without at least two hours of layover at Heathrow. The airport is gigantic, and no matter how much you sprint, you will not even come close to making your plane). However, my buddy and the course assistant were wonderful and met (a somewhat sweaty and exhausted) me at the airport after the world's easiest immigration process—I'm not entirely sure what the customs people are paid to do.

I was delighted to find trees and grass everywhere in Essen, especially after hearing about the industrial prowess of the Ruhr region. We rode the beautiful sky tram, a suspended train at Düsseldorf Airport, to the train station, where we boarded the train (after running up and down a few wrong ramps) to Essen Main Station. This is the beginning of the wonderful experience of German public transportation. For the sake of comparison, in Boston, the train arbitrarily stops for no apparent reason. The buses will not come for 30 min, and then three stacked up buses

arrive at once. Here, the trains actually do run on time, which is a source of endless enjoyment for me. Germans take their public transport quite seriously, and the buses have a special lane on the autobahn that ensures they will very rarely get delayed by traffic.

When we arrived at the dorm, I was in awe. The building itself was beautifully modern and recently renovated, and our rooms are so spacious. I'm living in a six-person suite with four other fellows and a very nice Master's student from Iran. We each have a private in-suite bathroom and shower, as well as a huge common area with windows everywhere and a great view. To say I am pleasantly surprised is a grave understatement.

Unfortunately, I had to miss the welcome reception from the *Initiativkreis Ruhr* (IR), where the Ruhr Fellows were warmly greeted by the Managing Director of the *Initiativkreises Ruhr*, Dirk Opalka over coffee and cake. However, I managed to get the highlights from some of my friends. He introduced them to the mission of the IR. Founded in 1989, the IR is a coalition of companies that meet to discuss best practices and strategies for the future of the Ruhr area. Initially, after the shrinking of the coal and steel industries, the Ruhr area needed to restructure



and refocus its energy on aligning its businesses to the economic realities of the 21st century. As the Ruhr region remains the economic powerhouse of Germany many years later, I believe that the IR have succeeded quite tremendously in their original goal. Now, as the Ruhr Fellows, we have the privilege and challenge of participating in industrial innovation and reinvention with some of the member companies as interns. Moreover, one of the coordinators encouraged the Fellows to fully immerse themselves in the region and explore. Though I wasn't able to be at the reception myself, I look forward to taking her advice and diving in headfirst!

I managed to survive the first 24 hours without much incident, other than having a cashier blink in disbelief at me when I couldn't figure out how to use the credit card machine. I even made it back from the train station to the dorm on my own without

getting lost. Most of the fellows had gone to Berlin for the weekend, but some of us that were in Essen decided to take a random train from the main station, since train transport is included in our student pass. We ended up in Mülheim, which was unusually quiet due to the public holiday. The downtown river area is strikingly beautiful, and I loved the combination of modern architecture with the old buildings, tied together by incredible gardens, fountains and greenery. After dinner that night, things got a little more interesting. I had intelligently decided to go on a run by myself since the rest of the fellows were exhausted from their adventure in Berlin. Unfortunately, I don't have the greatest sense of direction. I knew this, however, and recorded some of the other Ruhr Fellows' numbers on my phone to call if necessary. The beginning of my run was excellent, but I ended up running in the opposite direction to what I expected. Eventually, I



realize that I'm getting lost and call the other Ruhr Fellows.

Just as I call though, my sunny day quickly turns into torrential, pouring rain and whipping wind. Trees are starting to bend horizontally, and I am standing all alone with nothing but a phone without data, a room key, and some Euros, with no real idea of where I am. Meanwhile the wind is whipping harder and the booms of thunder get louder. I'm from Wisconsin, where huge summer storms come once a year, and I have seen the damage they can do. Thinking fast and weighing the chances that I will die in a storm versus I will knock on an axe murderer's house, I quickly sprinted to the first house with cars in front of it. A kind older German couple and their son answered. They had lived in this house for 30 years, and they spoke English well enough to communicate with me. I was lost, soaked, and the storm wasn't letting up.

None of the taxis would come and get me, and soon, even police couldn't get through. The wind whipped through the trees and many branches crashed down onto the ground with its force. Trees were uprooted and fell on cars and houses, and some power lines went down in the brutal fury of the wind. Finally, the rain and wind eased after an hour. The German couple very kindly provided me with a towel and water and I did my best to explain how I had landed in their living room while the man and his son tried to figure out how to get me back. They ultimately decided they would drive me home since no taxi would come. When we tried driving though, it became very clear why—I managed to go running in the worst storm in several decades.

Trees fell across entire roads and water was ½ meter deep in some areas, blocking off many roads to cars. After some deliberations, the son decided the only way to get back was to walk. Armed with two flashlights, his mother's oversized red jacket, and his son's iPhone, we set off. We waded through some puddles and climbed over some trees, but in 30 min, the bright red walls of Eckenbergstraße, our dorm, came into view and one of the other Ruhr Fellows came out to greet me.

I was home, alive and safe. I am so very thankful to the kind German strangers who took me in and helped me get home that night. Walking me back was far beyond the call of duty, and without them, I might not be writing this blog. I wish I had a better way to thank them, but they didn't give me their contact information. Though the freak storm was extremely unusual for the region and going running alone was certainly not the safest decision, the kindness of the random people who found me at the door truly stands out as an incredible travel experience.

## Week 2

### Getting by in Germany and Hamburg

Guten Tag! This week, I had my first two classes of German. I've realized that my German is absolutely abysmal, and I am seriously starting to regret not studying more German before coming here due to the pre-graduation craziness. In my free time in Essen, I've been watching some "Deutsch für Euch!" videos on YouTube (i.e. I spend lots of time with my mouth hanging open trying to get the sounds of the umlauts right and looking like a crazy person). Unfortunately, the first week here in Essen has been a little slow due to the storm. No trains have been running out of the Main Station for a week, causing my first day of class, Siemens excursion, and Meeting of the Minds to be cancelled. No worries though, I consider myself to be an avid investigator of cultures and stories (read: I enjoy people watching), so simply reflecting on some of the oddities of Germany has kept me very happy and entertained. A few thoughts:

### The Good (pardon my overuse of exclamation points)

- Food is so cheap! I love to cook from quality, fresh ingredients and they're unbelievably inexpensive here compared to the San Francisco Bay Area Whole Foods.

- The people! As my stories and this blog will reveal, I've found the Germans wonderfully open, friendly, and welcoming.
- The World Cup! Everybody is really excited and it makes for a great atmosphere at the pubs and cafés.
- Things run on time! The train stations have generally accurate measures of when the next bus or train is coming. This is a source of endless delight to me.
- Döner! Let's admit it, traditional German food isn't the



culinary masterpiece of the world, and no German person I have dined with has actually ever suggested getting German food. However, the Germans seem to have mastered the art of co-opting other cuisines, and the Turkish Döner, available as fast food or gourmet, might be the crowning achievement.

### The Bad

- They should really consider building air conditioning into gyms (or anywhere). Germany is arguably more technically advanced than the US, but apparently they don't believe in air conditioning things, not even places where people will already sweat.
- The German language is hard.
- Germans don't believe in still water and I am getting a little sick of sparkling everything.

### The Weird

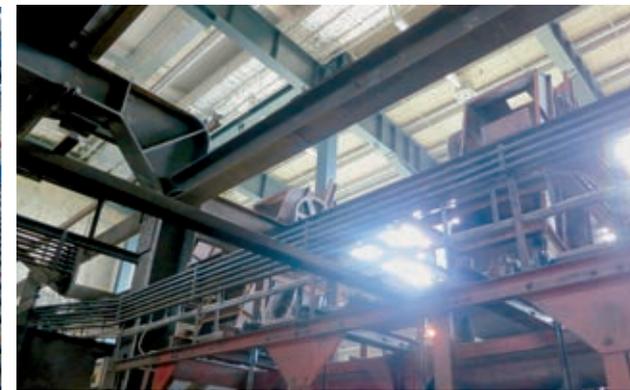
- Why is beer the same price as a soft drink, coffee, or water? Why is drink as expensive as the entire meal?
- Why is McDonald's more expensive than everything else and yet so much worse in quality?

Anyway, I digress. This week was great! We went on two fantastic excursions this week, and my buddy finally made it back from her parents' house after getting stranded by the storm. I loved hanging out with her and her boyfriend as we recounted travel tales and compared how growing up in Germany differed from America. Other fun fact: every German I've talked to thinks Americans are insane for letting kids drive cars at 16, buy guns at 18, but not drink until they're 21. I must say I have to agree.

### Excursion 1: Zeche Zollverein

Zeche Zollverein, a UNESCO world heritage site, is truly a one-of-a-kind Ruhr experience. As we entered its gates, a formidable rust-red tower loomed above. Beautiful and industrial, the winding tower of Shaft 12 declared "Zollverein." The old architecture of the mine blended surprisingly well with the modern Danish design of the museum interior.

Soon after, we were met by our extremely knowledgeable and affable guide, who explained the history of mining



in the area. Many peasants were brought to the Ruhr area to work in the backbreaking mines with the onset of the industrial revolution. Physically terrible and dangerous conditions quickly ruined the miners' health—joints, lungs, hearing, back—and the average life expectancy for a miner was only 45 in the 1960s. However, the miners were very proud of their hard work and the Ruhr region greatly contributed to Germany's postwar economic miracle, chugging out unfathomable amounts of coal and steel. As the economics changed in the latter half of the 20th century, the region fell into decline for awhile, but then shifted its industries remarkably well and greatly cleaned up the environment. The Zollverein monument

stands as a testament to the cultural heritage of the area. It was incredible to see many of the original machines in place, though no longer operating. In the cool, quiet, industrial glamour, it is difficult to imagine these huge pieces of equipment chugging away at 50° C temperatures with deafening noise as they turned raw rock into coal. Overall, this incredible, huge monument gave me a glimpse into the work that made the Ruhr region into an economic powerhouse.

### Schalke Stadium

I have to admit that I'm not the world's biggest fan of soccer, and outside of Germany don't watch it on a regular basis (Shh...don't tell, it's blasphemy!). However, seeing the inside of

the regional team stadium was really cool. The soccer pitch is actually movable so they can move it outside between games and use the space for other things, like concerts!

If huge moving grass pitches weren't enough, some fans love their team so much that the stadium even has a chapel so people can get married and baptize their children there. That's what I call team spirit. And, get this; there is a beer pipeline to ensure the fans are well hydrated during the game. The scale and the spirit of this stadium made me appreciate the dedication of the area to their home team, Schalke 04!

All in all a successful week, but I was starting to get concerned that I'd spend my time in Ger-

many mostly with Americans. That was going to change soon!

### Hamburg

Somehow, I can't believe I only spent about 24 hours in Hamburg; it feels as though I had so many fantastic conversations, explored beautiful streets, and got a taste of such a vibrant, multicultural city. But before I launch into how I ended up staying up to watch the sunrise from the Fischmarkt or trying to follow a conversation in Portuguese in a tiny shop far from the tourist destinations of Hamburg, let me digress a bit into my travel philosophy. As you may have guessed from the storm story, I'm not exactly shy, and I like to think I have reasonably good street smarts, at least in unfamiliar environments. I make friends easily, and one of my goals is to have a new story for you all and my friends every weekend that doesn't just read like the Trip-Advisor or Frommer's highlights of a place. Instead, I prefer to get to know a place through its people and their stories. I follow the advice of kind and interesting strangers and friends, going into tiny hole in the wall restaurants and quietly enjoying gelato on a park bench, blending into the city itself.

You see, as a child, I hated New York City. I thought it was boring, hot, and crowded. I remembered long lines and gazing upon things I didn't care about (few 10 year olds want to know what the DJIA closed at today). Meet me now, and I can't stop talking about how incredible New York is. What changed? The life of New York is not in the Statue of Liberty or in Wall Street and certainly not in that godforsaken tourist trap that is Times Square. The life of New York is in the streets, in the amazing \$6 bowl of noodles from the Chinese shop down the block, and in the dreams of its people. Ever since I got to college, each of my trips has involved some delightful detours, some considerably more dangerous than others, but now I always remember those stories. I try not to just sightsee. I feel, hear, smell, taste as well.

**\*\*Public Service Announcement:** safety is the most important thing, especially when traveling alone. I always ensure somebody knows where I am, and I try very hard to read people before joining them. Four years, and I am still safe and sound!\*\*

This is not a criticism of people who travel with hour-by-hour

itineraries and checklists. In fact, I'm one of the most Type A people in day-to-day life (I have an agenda for every meeting, and send a follow-up email with assigned next steps with deadlines), but when I travel, I almost morph into someone that is patient, listens often, and sees a chance encounter as an opportunity to make friends. My goal is to bring these qualities back home.

So what actually happened? First, a 6-hour bus ride to Hamburg. A rough start. After I got off the bus though, I knew I needed to explore. So I left the rest of the fellows who planned to see the harbor front, heading instead to the beautiful Alster Lakes, where locals and tourists alike enjoy watersports and the beautiful vistas along the lake. I was peacefully strolling, enjoying the happiness of the people and the lovely views when I realized that they were entirely too large to walk and went searching for the bike station. As I passed a very classy looking waterfront bar and café, a beautiful and fashionably dressed woman starts gesturing at me and speaking in German. This in and of itself is not so unusual, as I often get mistaken (miraculously) for a local when

I travel alone (I like to think this is the result of my ability to look calm even when I'm utterly lost), but it is awkward, since I sheepishly admit, "I'm sorry, I don't speak German."

This time though, instead of nodding and quickly moving on to ask someone else that actually knows the directions to somewhere, she was delighted. "Oh, where are you from?" she exclaimed, with a lilting accent—definitely not native German. After explaining I am from Boston, USA and born in Shanghai, China, I learn that she is originally Brazilian, even more delighted that I speak some Portuguese, and absolutely loves Asia and my dress. She invites me to have a drink, explaining that it is her son's friend's café and that I must meet her son, her baby. At this point, I laugh awkwardly—usually this sort of situation ends in me having an extremely awkward encounter with a gangly, dull teenager not nearly as handsome or smart as promised—when her "baby" walks out. In his late twenties, athletic, and with the smooth confidence of a salesman and entrepreneur, he is hardly a baby. He speaks English, German, and Portuguese completely fluently, and he





turns quite red as his mother fawns over him in not one, but three different languages. I learn that she married two German men that later passed away, and her husband was from Hamburg. They lived for 13 years in Singapore, and this exuberant woman strangely still considers Asia their home, even though she has lived in Hamburg for a couple decades. We talk for about 15 minutes discussing cultural differences of which they are uniquely aware. Finally, I'm about to take my leave after not one, but three, Brazilian cheek-kisses—a far cry from the German handshake—when I ask about my favorite subject, food. She decides I can't possibly go looking for food by myself though! Now, I must come to her house and look at her Asian artwork, and then her son will take me to the best places to eat in Hamburg. “Are you serious?” I exclaim, but she insists. Well, I did say I wanted to see the real Hamburg, right?

Her son and I set off into the neighborhoods of Hamburg, stopping by a small Portuguese shop to try the fish (they were out, but I have a standing invitation to return), jump start his other car, and eventually I wolf down the best food I have had in Germany at a small Turkish restaurant in a residential neighborhood. We discussed

German and American politics, and it seems that nobody in Germany can possibly fathom paying \$60,000/year for school. They also think it's crazy that we don't have universal health-care. And yes, the entire world is still angry about the phone tapping scandal. Oops.

Moreover, despite Hamburg's amazingly diverse demographic today, only a few decades ago, his black Brazilian mother endured racial slurs and being spat at in the streets. Though the contents of our entire conversation could fill a thesis on racial tensions in postwar Germany and the role of the state in a developed economy, what I really loved was getting to see Hamburg the way that its citizens live it.

He delivered me safely back to my hostel, but the night was still young! Another Ruhr Fellow and I headed out to the Reeperbahn, which is Hamburg's nightlife district, and as chance would have it, we sat down next to two ERASMUS (Europe's study abroad program) students from Switzerland and France, an international student from Turkey, and a Canadian studying for a semester abroad, all at the University of Hamburg. We joined in the raucous spirit of the crowd for drinks and the World Cup game, and had a hi-

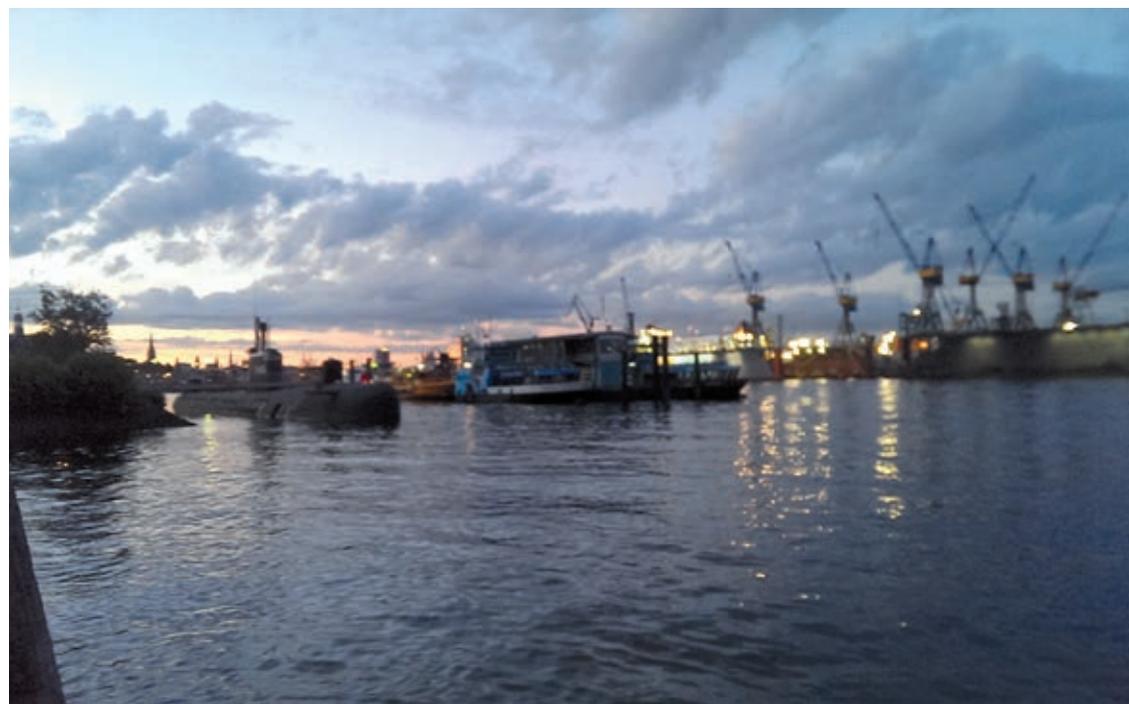
larious conversation that mostly consisted of trash talking each other's countries (something about Canada not just being the 51st state). My friend had to go home because she was tired, but I chose to stay out with our new friends, and discovered the very laid back and friendly nightlife of Europe. I enjoyed the atmosphere so much that I managed to stay awake for the quintessential Hamburg experience—staying out so long and walking to the Fischmarkt at 4 or 5 in the morning to see the vendors set up and have a fresh fish sandwich. To the odd chorus of happy after-partiers and merchants hawking their wares, I saw the most glorious sunrise over this beautiful, lively city with new friends and breathed deeply. I was simply happy, in a way I haven't been for a long time.

The next day, I woke up early enough to shower and check out of my hostel at 11 AM (no small feat when going to bed at 6 AM) and went to the incredible Minitaur Wunderland. Yes, it is models of cities. Yes, it sounds touristy and ridiculous, but it is INCREDIBLE. Go. My mouth was literally hanging open as I snapped as many pictures as I could take of the detailed

models. They don't miss a single thing. Pictures speak louder than words, but all I can tell you is that if you're in Hamburg, it's worth it.

Then, I happily ate my 1 Euro creamy gelato as I wandered to St. Michael's church, restored to its 1786 design. The church itself is absolutely gorgeous, but I especially enjoyed the expansive views of Hamburg from its tower (tip: don't walk up all the stairs like I did—just take the lift) and the history embodied in its crypt. I'll leave the detailed descriptions of its architecture to somebody that actually knows what they're talking about, but all I could say was a soft “wow,” as I walked into the cathedral. Hamburg is gorgeous. Then again, when I asked my friend what a beautiful building was, he just replied, “A church? What do you mean, it's nothing special.” I took a picture anyway while he laughed heartily. Maybe it's just a European thing.

As I munched on fast food currywurst for a late lunch before heading back, I couldn't believe how much fun I had had and what a beautiful city, so rich in history, Hamburg is. Mission accomplished.



# Week 3

## In College again and the trip to Paris

We only had a three-day week this week, but we toured two of the other Ruhr universities, and I found out what I will be doing this summer!

On Monday, we went to TU Dortmund and saw the electron accelerator (which is really cool that a university has one!), a mechanical engineering laboratory that worked on novel metal molding, and a chemical engineering laboratory that purified compounds for industry. At the accelerator, they gave us a tour, and it's actually pretty crazy to see magnets so big that they store and accelerate electrons to nearly the speed of light! Then, the mechanical engineering lab showed us so many new ways to get metals to form into shapes, far beyond conventional stamping. They used novel extrusion and hydraulics to make all sorts of lightweight, strong, and unusual shapes out of metals. There were several mechanical engineers in the group who looked mind-blown. I could see how these technologies that TU Dortmund was studying would dramatically increase the quality and strength of the products the metals were used to build. At the Chemical Engineering lab, they showed us how they had gotten fungi to grow the compound that smells

like strawberries, and then all of their different techniques to purify it. One especially entertaining one was a technology that uses foam to separate compounds that will bind into a foam and those that will not. As I toured all of these incredible labs, what I especially appreciated was the constant eye on applications, which reminded me a lot of MIT.

On Tuesday, after German class, I went to my internship at Klöckner & Co. and discovered that I would be working with some very high-ranking and very nice people. I immediately liked the company when I saw signs with arrows pointing toward their office in the train station, allowing me (and clients) to quickly and easily navigate. I love how Germans actually think these things through. Klöckner is a global multimetals distributor (which means they sell 6.4 million tons of steel a year) that operates in 15 countries. After meeting with my contact, who works in executive HR, and signing the infamous German paperwork and contracts, I met with global accounting. I will be there as they close their quarter, consolidate all their global subsidiaries, and wrangle with complicated IFRS rules. Looks like I will actually be putting some of that accounting knowledge I learned into



practice as we work with every messy and interesting thing—fair value, hedge accounting, etc. I'm legitimately quite excited, and the people there couldn't have been more welcoming. Yay, I'm looking forward to July! Finally, on Wednesday, we had a relaxed day at the Ruhr-Universität Bochum, in which they proceeded to feed us a great deal, and show us some really interesting engineering demonstrations. First, we saw a plasma lab where they applied plasma (the fourth state of matter—when a gas is ionized and behaves like a metal) to medical technologies! We saw how plasma could be used to sterilize plastic implants (which cannot effectively be sterilized by autoclave), aid in minimally invasive surgery, and cut tissue and reduce bleeding. Next, we saw some of the biggest machines I have ever seen in my life in a civil engineering lab. They are used to test structural soundness over the course of huge forces and multiple load cycles. Finally, chemical engineering clearly knew the way to our hearts as we made liquid nitrogen ice cream with frozen smoothie dippin' dot beads! Now, you have to realize that at MIT, liquid nitrogen ice cream is a go-to event, just because it's MIT. But the smoothies at Bochum? They make all the difference.

Finally, we got to see a taste of student life at Bochum, which was fantastic! It was their summer festival and there was live music, food, and drink everywhere. I even rode a mechanical bull (and crushed my pinky doing it, but it was worth it.) It's one thing to see labs, but I know that student life really defined my own college experience even more than the academics, so it was great to see such a lively and happy crowd, comprised of students, faculty, and staff alike.



### The trip to Paris

Oh Paris. Countless movies and songs have been made about you. City of light, of incredible wine, of mind-blowingly good food, of love, of unfathomably thin women (seriously, how can one eat just butter and cheese and still be a size 00?), of terrible train systems, of strikes, and of the sort of dysfunction that makes me really wish I could create my own country that combines German efficiency and competence with French aesthetics and epicurism.

To illustrate, let's start with how I got to France. The train ride seemed a bit long and the plane was a comparable price, so another Ruhr Fellow and I decided to save ourselves some time. Ha. I believe an average train from Essen to Paris is about 5 hours, and the plane ride was around 1 hour. However, any time we made up in flying, we wasted in trying to get into the city. Our plane arrives on time, and we make our way through to the RER B train, which should take us to Chatelêt, one transfer and one stop away from the station near our hostel, Gare du Lyon. I joked, "the Germans would be appalled," as we navigated purposeless metal poles in front of the ticket-controlled door. Even worse, doors marked go were broken with no indication, causing people to constantly backtrack. Well, it was just a joke then, but it quickly became "too real." As we finally reached Gare du Nord, the stop before Chatelêt, the train stopped and stood there for a good 15 minutes. We assumed that there was some bad train traffic and stuck it out. After all, there were other people waiting as well. I probably should have taken notice that many of them seemed to have suitcases. Just as I'm beginning to despair of the train moving again, it does. But backward. "Maybe it's just backing up a little to make room?" I ask hopefully, before



it accelerates back toward the airport with us still on it. Oops. We rush off at the next stop and try to figure out if we can get to Chatelêt with another train. Finally, completely unable to make any sense of the maps, I manage to find a representative from the public transport and through broken English, I piece together that there is a train strike (again), and none of the trains are running past Gare du Nord. We missed that memo. She explained how to transfer onto two separate trains to get to Chatelêt, but I was hoping not to have to pay another €10 to only go one stop. But not to worry, even though everyone was scanning their tickets and passes to get in and out, they had actually left an entire entrance wide open for confused people. Because that makes sense.

Finally, I arrived at the hostel, which was tiny and dingy, had one plug per room, and smelled strongly of mildew. Not an auspicious start. Undaunted, I set off on my own. As always in Paris, I quickly changed my opinion about the city as I bit into my first pastry. I then arrived at the Touleries, where I was greeted by a scene so typically Parisian, it could have

been out of a post card. Happy, gorgeous young couples and friends picnicked in the grass, stretching out in the sun and engaging in a level of PDA that only the French (and probably the Italians) could possibly be comfortable with. At every corner, another stunning building popped into view. There's the Louvre! The Musée d'Orsay! The Arc de Triomphe! Paris is so saturated in decadent Beaux Arts buildings, beautiful statues, intricate chapels, quaint winding streets, and gilt monuments that the banks and bridges of the Seine are a living postcard. Any one of the great landmarks, churches, or museums could be the highlight of another town, but quickly they all began to blend in Paris.

Sometimes, in the districts favored by tourists, it's difficult to believe that Paris is a modern city, even with all of its skyscrapers in the background, especially when one considers its questionable urban hygiene methods. I continued on to the Champs-Elysees and pulled over to enjoy a generous glass of red Côtes du Rhône, escargot, and an assortment of cheese. As I bit into a buttery, flavorful, tender snail, I decided that Paris was pretty great. Well, it was

great until I was running late to watch the sunset with my MIT friends from steps of Sacré Coeur, a baroque cathedral on a hill that overlooks Paris. Of course, in further transportation struggles, I couldn't get back home without a taxi and without getting screamed at for no reason, despite it being a nightlife-heavy neighborhood.

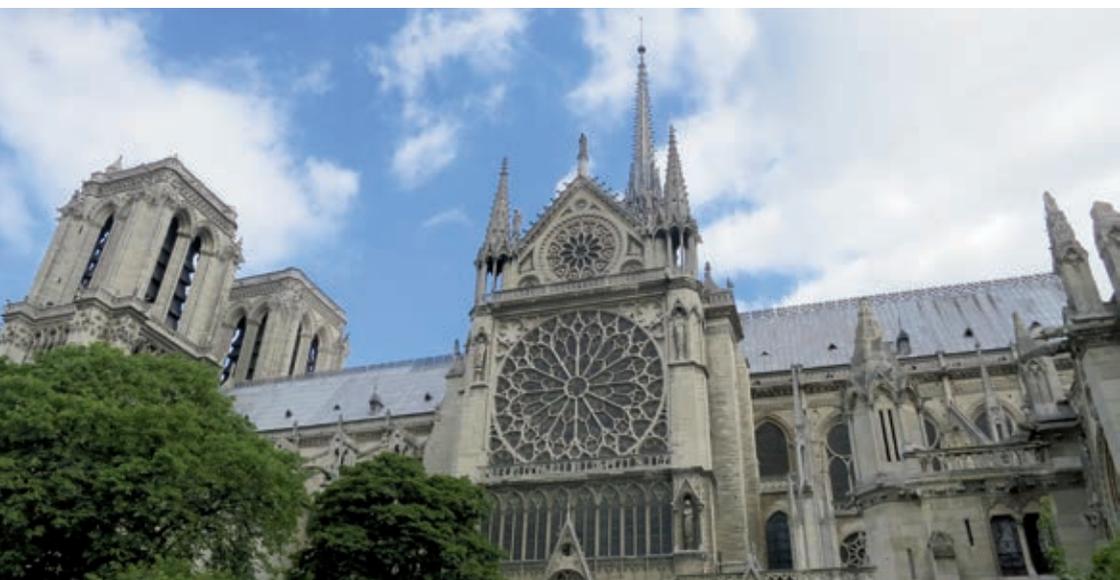
The next day I set out to see all of the sights, starting at Saint Chapelle and ending at the Eiffel Tower. The weather was perfect and I happily strolled along the Seine, buzzed on the first of probably six espressos for the day. Then I actually got to Saint Chapelle and the Notre Dame. Oops. I had forgotten how many tourists swarm Paris' sights. Deciding that I wasn't going to waste this lovely day by standing in line, I took an absurd number of pictures of the exteriors and carried on my merry way, window-shopping in the Latin Quarter and buying a lovely oil painting of Paris from student artists. Then came a highlight of my Paris experience—my treat to myself. You see, I love food, especially the kind of superb food available at very expensive restaurants with impeccable service and Michelin stars. Some people have clothes, jewelry, cars—I have food. So I made a reservation for one at 12:30 at Relais Louis XIII (2 Michelin Stars, if you're curious).

I stepped into the restaurant (supposedly the king used to eat there, but this is a very far cry from a tourist spot, generally being favored by wealthy Parisians which means no English menus) and immediately the hustle and bustle of Paris' streets dimmed into soft classical music, candles, and stained glass windows. My raptures about the food could go on for hours, so I will let the photos speak for themselves, save to say that all other foie gras has now been ruined for me—nothing will



compare to the lobster and foie gras ravioli at Relais Louis XIII. If you're ever in France, I highly recommend it.

I continued my tour along the Seine, finally ending up in front of the Eiffel Tower where hordes of tourists snapped pictures. I admit that I'm guilty, but nowhere near the two girls that spent literally an entire hour taking photos of themselves posing in front of it...did they forget what they looked like in the past hour? I ended up talking with a teacher who taught German in Paris, only for me to realize that I speak neither German nor French. However, we had a lovely picnic of baguettes, camembert, and moscato (which happen to be the only cheap things in Paris, weirdly) for a





few hours, and he explained how he enjoyed working about 20 hours a week so he could do things like this. As I lay in the shade of the tree underneath the Tower, I couldn't blame him. Then again, I personally seem to be uncomfortable with working fewer than 60 hours per week. Hm.

Finally, later that night, I went to the top of Montparnasse Tower and saw the sun drop behind the gorgeous Paris skyline. A truly magical experience, marred by some very irritating preteens and teens on some field trip, but for photos like this, who can complain?

### Versailles

Yes, the Chateau Versailles is everything you would expect it to be and then some. I managed to avoid the truly tremendous line at the beginning of the day by seeing the gardens first, saving the Palace for later in the day. Truthfully, the perfectly manicured gardens and Marie Antoinette's hamlet were my favorite parts. I came on the day

of the musical fountain show, where the stunning fountains spouted in sync with the music. Walking in the footsteps of French Royalty (hopefully not to the guillotine), I felt a sense of warm happiness wash over me as the sun shone softly on the perfect beauty of the French and English gardens.

The Palace itself is indescribably opulent, ostentatious, and helps you understand why the French Revolution happened. Everything is encrusted in marble, gold, and silk. There are so many exquisite details (and tourists) that I didn't know where to look. That said, Versailles was an absolutely amazing trip, and in all of my travels, I've never seen anything like it. Though I'm personally a bigger fan of natural beauty, Versailles might be one of the most beautiful things that people have ever crafted.

### Fête de la Musique

After I got back from Versailles, I met up with another group of MIT students and alums with some difficulty. We were all

excited about the Fête de la Musique, which is a huge Parisian street festival dedicated to celebrating music of all types. However, it created huge delays, and I stood on top of a bench at Notre Dame, desperately calling and trying to figure out global data roaming. Neither worked, but we managed to unite eventually. The other group of Ruhr Fellows, though, was nowhere to be found, and when I called, they were extremely lost. That would be the general mode for the rest of the night, unfortunately.

We set off onto the streets of Paris, joining hundreds picnicking on the banks of the Seine. The first person that we asked for a corkscrew immediately produced one—typical. We continued our night by listening to whatever music we could stumble upon—salsa, classical, hip hop, and rock—as we ricocheted from one neighborhood to another.

By 2:30 in the morning, our energy wore down and I att-

empted to find my way home. Unfortunately, Paris decided to cancel all of their night buses and run trains instead, except that nobody knew what trains were actually running. Instead of including an actual map of the night trains, they included a fake map of musical instruments instead. Helpful. 3 hours, 3 trains, and several scary moments later, I made it to Charles de Gaulle safe and sound just in time to see my second sunrise for this trip. Paris was a mixed bag, but hey, it's still Paris.



# Week 4

## To the gates of a not actually hellish hell and my trip to Amsterdam

This was a pretty busy week for the Ruhr Fellows, packed with classes and some incredible tours. With the aid of German classes and the Duolingo app, my German has improved to the point where I can talk about food, animals, and occasionally where I travel, as long as you give me a lot of time and forgive the fact that I seem to constantly talk in the present tense.

### Virtual Driving

The first thing we did on our Monday engineering workshop was crash into a lot of buildings and cars. Well, simulated buildings and cars, fortunately. The University of Duisburg-Essen has a driving simulator where students that work with the auto industry can test their designs on real users. Though I don't have as much of a love affair with driving as many Germans seem to (and I can't drive stick shift, which both German and American men find appalling), it was pretty nice to be behind the wheel. Afterwards, we got into full clean room gear (we kind of looked like aliens!) to tour a semiconductor lab.

### Bild

The next day, we had an awesome tour of the Bild, a tabloid, facility. Even though publishing may seem to be an old industry, the technology Bild uses is phenomenal. Robots, that seem almost humanlike, navigate around automatically, carrying rolls of paper just in time to the fully automated presses. It's hard to describe until you see it, but the machines produce hundreds of newspapers a second all on their own—the people are there only to troubleshoot issues and check quality. The scale and efficiency of the process is astounding. Afterwards, we got to meet the very dynamic editors and watch how they choose the content of the paper and even crowd-source their news through freelance journalists and bystanders. They track user response in real time and can quickly change the presentation of the stories on their web site to best reflect what interests users (sometimes what works is very odd—like the wildly successful story on what famous wrestlers are doing now). Overall, I was amazed to see what a high-tech and dynamic industry publishing could be.

### Down to the Mine

The RAG coal mine tour was one of the most memorable tours of my life. We suited up in full miner's gear (they even provided the under-



wear!). I thought the shirts, jackets, pants, shoes, socks, knee pads, glasses, belt, respirator, mouth cover, helmet, light, and ear plugs seemed a little unnecessary, but I quickly changed my mind once we got down to the mine. Mining is also still a definitively male industry, so I was decidedly swimming in my clothes and having trouble getting the heavy respirator belt to stay on. Nonetheless, I was ready!

We descended a kilometer underground remarkably quickly in a lift cut through the Earth, and we emerged into a new world filled with gargantuan machines that automatically adjust to keep the mine from collapsing in on itself, endless tunnels with dim lights, the loud hum of trains and mining equipment, and ever-present heat. We took a train for 4.5 km in the darkness with our tour guides before arriving at the mining site. Then, we walked for another 1.5 kilometers over wires, machines, and rocks until we closed in on the mine face. Our guides instructed us to put on our gloves, masks, glasses, and ear plugs before walking forward. Suddenly, I was hit with a blast of hot air and dust. Both my safety goggles and glasses fogged

up instantaneously, and I could see nothing. Considering that I was descending into a small tunnel covered in heavy machinery with uneven walls and floors, this was highly suboptimal. Someone led me to the other side where I took off my glasses for a split second to clear them before my eyes met an onslaught of harsh coal dust. Rapidly blinking, I put everything back on, very thankful for my goggles and dust mask, and moved onward. The first thing I noticed was the sweltering heat, probably bordering on 90–100° F as we crawled along the narrow tunnel that exposed a seam of coal at the mine face. A very loud roar ripped through the tunnel. The coal mining machine (best way I can describe it is a giant metal claw with spikes that scrapes the coal off as it runs along the coal face at high speed) approached us. The heat and the noise grew and chunks of coal flew off as the machine excavated the coal. These huge machines literally took apart the Earth.

After we managed to get ourselves out of the mine face to a large, cool tunnel again, we sat down for a drink of water and tried some miner's snuff (tobacco with a lot of menthol—you don't want to be lighting a fire in a mine!) to catch our breath. Well, now I had a much better appreciation for safety! Then, I made a childhood dream come true at the miner's conveyor belt. My parents both started their careers as chemical engineers working on a manufacturing line, and I remember my dad bringing me to the control room once when I was a child. For some reason, I was determined to ride the conveyor belt and obviously could not. 17 years later, I hopped onto the belt at RAG, lay down, and took a fantastic, slightly bumpy ride back to our train. We finished off the day with our faces blackened and clothes covered in coal dust. Without cleaning up first, we eagerly dug into a hearty miner's meal of lentil soup with sausage and bread—I'm pretty sure lentil soup never tasted so good. Though it took two showers to get all the coal dust off, this was certainly one of the most memorable times of my life.

### Urban Systems Workshop

On Thursday, the Ruhr Fellows did something a little different and engaged with the Urban Systems group at Essen. I personally love this sort of work, at the intersection of science, engineering, and humanities, requiring complex solutions and a different perspective. The head of the group even has a literature background. I saw a more intellectual side of the Ruhr Fellows as we discussed the challenges of planning a city without tying future generations to our follies and the role of social housing in creating a more equal society.

Stimulated by the lively discussion, we were happy to kick back with some of our buddies as we watched the USA-Germany match (many of our after school activities center around soccer) at the DELTA music club. Toes in the sand, the Ruhr Fellows all stood to sing the Star Spangled Banner, although the rest of the fans did not follow suit when the German anthem played. Given the trouble German nationalism has caused in the past (i.e. WWII and all of its catastrophes), my buddy explained to me that Germans tended to prefer to tone down the patriotism a bit, except when it came to football. There, Deutschland needed to win. Despite their less flamboyant patriotism, there was plenty of celebrating to be had when the Germans won against the US. Then again, the US moved on too, so it could be worse.

### Molten Steel at ThyssenKrupp Steel

Heavy industry, like mining and steel, is big. Like really big. This was my first impression as we boarded a bus to go around ThyssenKrupp

Steel's huge campus in Duisburg. Too large to walk around, we saw the steelmaking process from beginning to end. Thousands of tons of raw iron ore and coal are shipped in from around the world on huge ships that can only sail on the river when the water is high enough. The coal is converted to coke, which is almost all carbon, by heating it to an extremely high temperature and cooling it quickly, and this coke powder is layered with iron ore pellets in a blast furnace. This mixture is heated to about 1400° C, and after some time, the iron ore becomes a stream of hot, liquid metal.

Now, of course I've seen pictures and movies of liquid metal, but nothing can quite prepare you for the glow and the heat of it as it pours out of the blast furnace in rivers, seemingly taken from the center of the Earth. It almost looked like we stood at the gates of hell as the river of molten iron was transported into the steel processing plant. A huge crane, which kind of operated like a giant candy claw, picked up giant, multi-ton vats of steel and poured them into the processing chamber like a big pot of soup. The room filled with the characteristic orange glow of molten metal and we fell silent. It was really incredible to see these large-scale feats of human industry, and I'm very glad I had the opportunity. Finally, after a mad rush back to the dorm, I was off to Amsterdam for the weekend!

### Amsterdam

Amsterdam might be one of the most welcoming cities on Earth. The wonderfully tolerant and happy Dutch have allowed their city to become a welcoming haven for expatriates and tourists alike, and in the process, turned it into a wealthy and exciting place. After the high stress travel environment of Paris last week, Amsterdam was a welcome reprieve. Not only that, but people seemed mildly insulted and tended to reply with "Of course," when I asked them if they spoke English.

My journey did not start off particularly well, as I for some reason asked a group of teenage girls for directions. They didn't know how



to get to Oberhausen. However, a train arrived at the right time on the right platform and I heard something over the loudspeaker that said Oberhausen, so I got on it. We passed the first stop when they asked me, “Oh, are you trying to go to Oberhausen?” “Yes...” “Well, you needed to get off at the last stop and switch trains.” Great, thanks for telling me that now.

I rush off the train and backtrack, but as luck would have it, when I finally arrived at Oberhausen, the ICE train was 15 minutes delayed. I made a run for it, and I got on my extremely crowded train to Amsterdam. Unfortunately, by the time it actually got to Amsterdam, it was an hour delayed. I got on the next train to Delft, the place where my friend B. from MIT is staying. Brilliantly, the Dutch trains also have WiFi, which kept me entertained for the next hour.

Delft is a picturesque old town built on canals. We walked to her student apartment (which is way nicer than our dorms) across the most frighteningly green moat, and I feasted on a reheated quesadilla that she and her roommates made. I love a lot of things about the Dutch, but one of them is the incredible sense of community they have. All of the roommates get together every night to cook and share a meal with each other, which seems so much healthier than the American habit of TV dinners and eating in the car.

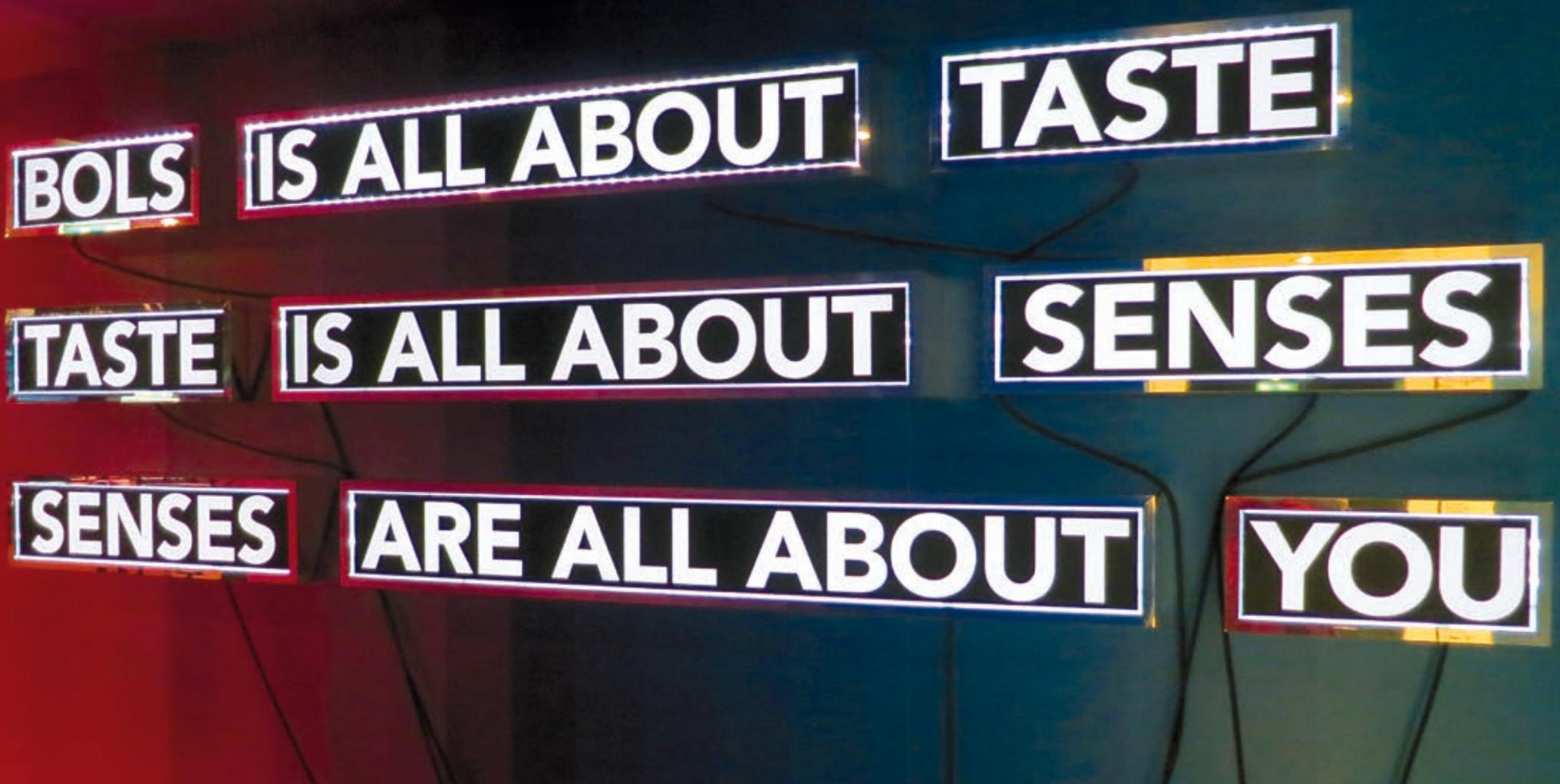
We spent a quiet night in Delft, enjoying the pretty views, having a “cocktail” that was actually a milkshake, and making fun of the fact that the Dutch seem to think the word “cheese” is synonymous with “gouda.”

The next morning, I wrangled her bike onto the train to Amsterdam. In the process, I discovered how difficult cheap bikes are to carry, after the handlebars smacked me square across the jaw as I carried it up the steps. On the train, I serendipitously met a group of very funny Scottish guys, and we made plans to meet up later. Then, I set off like a local with a bike that cost my friend 10 Euros. This was an excellent choice. In the Netherlands, all of the bikers take all the same rights as the cars, but follow none of the traffic rules. Cars and pedestrians alike always yield to bikers. I kind of liked it.

I set off on the recommended Frommer’s bike tour, which was surprisingly unmarred by other tourists. I biked from the main station to the famous Magere Burg (skinny bridge) and all the way along the Amstel River until I reached Ouderkerk aan de Amstel, an idyllic village along the river. At a leisurely pace, it took me about 2 hours each way (including lots of wandering). I passed the incredible Amstelpark, gorgeous rolling countryside (for some reason the Netherlands doesn’t really do suburbs), and many cows and sheep. Again, a simple bliss washed over me as I biked alone through such a pristine landscape. After enjoying a nice lunch, I made my way back to Amsterdam, trying to ignore how sore my butt was.

I wandered aimlessly along two of the loveliest districts of Amsterdam, strolling along picturesque canals and houseboats for awhile, tasting Gouda and taking too many pictures. Though it’s hard to explain exactly why, I felt comfortable there, discovering the city at my own pace while other people simply let me be. I met up (about three hours later than expected) with my Scottish friends at the Bulldog, a bar/coffee shop. We chatted and enjoyed the game, and swapped life stories. One of my favorite parts of travelling is hearing everybody’s history, which always seems so much more exciting





than my own. We all ended up chatting for hours, and now I have an invitation to see more cows and sheep in Edinburgh.

Unfortunately, my phone dies as we're watching an incredible street performer outside of the bar, and I need a way to find my MIT friends. Not only that, now I'm babysitting my group of somewhat dysfunctional Scottish friends. Putting on my Jean voice, I put together a plan, and we first made an extremely disorganized and embarrassing trip to the grocery store for snacks. Unfortunately, I am not a Dutch girl, so riding sidesaddle on a bicycle does not at all come naturally to me. Nor can I text, call, or cuddle while on a bike. I ended up riding to their hostel alone, but all was well. I get all set to charge my phone when we realize that they brought three UK to US converters, not UK to EU. Oops. One of the guys lets me use his phone and I learned that my friends went to the bar where I was, and I hightail it back there as soon as possible.

My MIT friends aren't in much of a party mood, and after checking out a little bit of the nightlife, we decided it's time to go back. Good thing though, since the night train takes an hour and only comes once every hour. For some reason, there are a shocking number of dead sober people well over the age of 30 on the train at 3 in the morning. It's yet another thing I love about the Dutch—the older people don't seem to realize that they're "old." I see them as active

as everyone else, biking and walking around the country, going out to the club, and taking trains back home at 2 in the morning. I want to be like that when I'm 50.

The next morning, I rode around Delft, took photos of its iconic canals and gates, brought back some delicious bagels, and packed up for Amsterdam. However, when I arrived at the main station, there was a bit of a problem. All of the lockers at the main station, where I planned to store my luggage, were full and there was a line well out the door for them. Oh dear. I tried contacting my Scottish friends to no avail, and after bumming around the train station for an hour and talking to every information desk, I decided to take matters into my own hands. Maybe I could leave my bags at a museum, and if nothing else, at least the guys' hotel was close. But then, on the tram, it dawned on me. Why not just leave it with the concierge?

So, in one of my more courageous moves thus far (especially considering I'm a terrible liar), I walked confidently into a random Marriott. My dad is a gold member, and it wouldn't surprise me if, in a year, I had platinum status, so I felt less guilty—we've spent enough money there. I explained how I "missed my train to Düsseldorf" after checking out that morning, and the concierge happily took my bag. After assuring them that I would manage to get another train, they helpfully suggested a good place for lunch, gave me a map, and sent



me on my way. Mission accomplished. :) Another travel lesson—if you look like you belong, people assume that you do.

I stopped in front of the Van Gogh museum—ah, the revered Dutch master! The only problem was that I wasn't in the mood to look at art. As I crossed the street, though, I noticed another very familiar name—Bols, the maker of so many liquors that its product line could fill a fruit stand. More familiar to me, though, were its famous porcelain houses. When I was a child, my father used to fly business class on KLM constantly as he traveled back and forth from the US to Amsterdam and Kiev. On each flight, they gave him a little porcelain house filled with Bols Genever, and we have a collection of about 30 of them sitting on shelves in our kitchen. My parents actually told me they were filled with vodka, and though I was sorely tempted as a teenager, I never actually opened any of the bottles. The curiosity of what was inside got the better of me, and I walked in.

Is it a little sad that of all the museums in Amsterdam, I decided to go to a cocktail museum? Yes. Was it worth it? Most definitely. I love good design, and the interior decor and design of this museum was downright sexy. It focused on taste and smell and how those all combined in the perfect cocktail or in Amsterdam's centuries old Genever. The English couldn't figure out how to make genever, so they created gin instead. I sniffed 25 different liquors, guessing at the flavor of each, and at the end of the entire experience, I had a fabulous cocktail and tasted two of the liquors. In the words of some expats I met there, "This is our favorite museum."

Finally, it was time for the public viewing of the Netherlands-Mexico game. A sea of orange descended down upon the field. There was even more orange than usual, which is saying something in a country where you can find fresh squeezed orange juice anywhere—including the gas station. My friends were, of course, nowhere to be found. After an hour of attempting to deal with shoddy wi-fi connections and a crowd of thousands, I gave up and planted myself

at the edge of an extremely tall and orange crowd. The experience was a bit marred by the fact I was trying to constantly connect to Wi-Fi and find my friends, but it was awesome nonetheless. The energy of the crowd was palpable and during the amazing last minute goals that carried the Netherlands to victory, I swear you could hear the entire country roar as everyone jumped and shouted in unison.

After that, it was time to go home. Unfortunately, Deutsche Bahn seems to be really struggling with the Amsterdam route and I missed the last ICE connection in Arnhem back to Düsseldorf. I don't really believe in karma, but maybe this was the universe's way of calling me out on my little white lie at the Marriott. Stranded and a little panicky because I was supposed to be at work in a suit by 9 AM the next morning, I approached a Dutch train information person. There was no way for me to get back to Duisburg that night, but then he went far above the call of duty and pulled out his personal cell phone to search for a cheap hotel that I could crash in. I was in luck—the Best Western across the street had a room available for only 50 Euros.

When I got there, though, I learned the cheaper rate was only the online rate, not the desk rate, so the receptionist allowed me to use the lobby computer to save 40 Euros. Have I mentioned how kind Dutch people are yet? Crashing after a long day, I emailed my HR contact at my internship, but it turns out that he was on vacation, so I emailed his boss. Unfortunately, his boss is head of Executive HR & Talent Management so I felt extremely silly explaining that I was going to be somewhat late and that all I had to wear were jeans, a blouse, and sandals. Oh well. Tomorrow was a new day.

Tomorrow was a new day in which the ICE train that was supposed to leave at 8:06 did not leave until 9, causing me to be an hour late. Maybe it was the fantastic weekend or maybe it's the feeling of going with the flow that comes with travelling, but I couldn't even bring myself to freak out about it.

# Week 5

## First Work Week and my trip to Berlin

With the work week off to a pretty rough start (because who doesn't want to meet with the head of Executive HR in jeans and sandals?), I was introduced to the accounting team at Klöckner. The office is definitely more traditional than I'm used to. Then again, I have previously worked in tech startups and consulting, so my office experiences have involved more foosball than most people. Still, everyone was very nice and patient with my many, many questions.

For a little bit of background, Klöckner is a multinational steel and metal distributor and steel service provider headquartered in Duisburg, Germany. It sells about 6.4 million tons of metals each year across 15 countries. For the accounting and finance departments in Duisburg, that means that all of its subsidiaries' finances need to be consolidated and checked at the global level. Klöckner is publically traded so we follow the International Financial Reporting Standards, which are the rules for preparing financial statements across the EU.

The first week was a little slow, because the subsidiaries' quarterly numbers were not due in until the second week of

my internship. Instead I familiarized myself with the company by reading the annual report, writing up a guideline to IAS 7 (cash flows), and working on updating the cash flow blueprint. While I did this, I also worked on editing the English of the financials in the annual report. I have decided that the German language itself has greatly increased the working memory capacity of Germans. For some reason, this language not only allows for ridiculously long words, but also extremely long sentences that put clauses within other clauses with seemingly no limitation. For example, despite the audit firms' affinity for short names (e.g. KPMG, PWC, EY), the German word for "audit firm" is "Wirtschaftsprüfungsgesellschaft." Pithy, no? Similarly, as if annual reports aren't already difficult enough to understand, I found myself breaking up 5 line long sentences. I'm kind of in awe of the average German person's ability to keep things straight, even though I highly doubt the usefulness of creating such long sentences. That said, I can barely create even a simple sentence in German, so I can hardly complain about their English.

Overall, the office reminds me of many American offices, with a few differences. In the US, I've always been one of the earlier

people in the office, as I prefer to arrive between 8 and 9 AM, but at Klöckner at least, everyone manages to be there before me. Also, I have yet to master the lunch break, either eating way too slowly and having everybody waiting around for me or eating way too quickly and inhaling my food. Moreover, our cafeteria, "The Red Box," serves the oddest combinations of things (e.g. grilled vegetables over salad with a very generous sprinkling of parmesan cheese) and feels the need to slather everything in BBQ sauce. My colleagues assure me this is not a German thing, just a Red Box thing.

It's a little different than I'm used to atmosphere-wise as well, especially since I'm working with more senior people. Most of my colleagues are at least 20 years older than me, and the environment is much quieter than I'm used to—which is actually quite nice, as my previous work environments often involved blasting my music to tune out discussions of last Friday night's party. I also question exactly what the HR representative meant by "business casual," because so far all of the men wear suit and tie every day but Friday. Maybe he meant a grey suit instead of black or navy? I feel that I have a somewhat different work style, due to the



culture gap and the generation gap. Everyone thinks it's so strange that I don't print things out and insist on using my monitor and laptop as a double monitor. The good news is that lots of Excel experience has allowed me to automate many things that I've been helping on, such as comparing numbers in our two systems, by using advanced Excel functions and writing VBA code when I have to repeat the analysis for many different subsidiaries.

That said, my officemate and I get along wonderfully, and I have started an excellent collection of his quotes. The accounting team and I eat lunch together every day, and I'm even getting a little taste of the Asian food I've been missing in our weekly Thai excursion. We'll see how the next week goes when the numbers come in, but so far, I haven't destroyed anything yet!

Berlin, du bist so wunderbar  
Unfortunately, I didn't get to catch a sunrise in Amsterdam, but I made up for it with two sunrises in Berlin. Consecutively. The amount my body protests now suggests that I am way too old for this.

I left a little early to catch the 3 PM train to Berlin, since I was expecting to meet my Scottish friends from Amsterdam for dinner. As I should have expected, that didn't happen. It turns out that seven guys and one shower takes even longer than seven girls and a shower since everything needs to be a bit of debate. However, my host (a friend from MIT) Y. and I had my first Mexican food since I arrived, and I didn't know bad nachos could taste so good after not having them for so long. Finally, the boys managed to get out the door, and I arranged to meet them at a sketchy train station in East Berlin. Brilliant idea. As soon as I descended the steps, I started to get harassed by some drunk guys, so I hightailed it back up to the train platform where my friend, C., met me after I sent a pretty freaked out Facebook message (they were just on the other side).

After walking down a sketchy, dimly lit alleyway to a rusted metal door with barbed wire everywhere—a very typical German underground club scene—we reached Griessmühle. Of course, the boys realized that they forgot cash. After a 45-minute sprint/cab ride around looking for an ATM in god-knows-where East Berlin with me asking middle-aged men “Geldautomat?!” we manage to get back to the club, after wasting a bunch of time and money. Forethought isn't really a thing with these guys. We stave off the tiredness with drinks involving too much red bull (I feel like I'm 19 again), and I'm

excited about Berlin's famous underground scene.

One slight issue--I remember that I'm not actually a big fan of house music, and I'm used to American clubs. This means that I am overdressed and I'm not entirely sure what to do. On the other hand, this place is awesome and unlike anything you would see in the US (especially since barbed wire is usually frowned upon) with a very music-centric and friendly vibe. American clubs tend to have men and women dancing all over each other to the latest club remixes of pop hits, and many men grab (and I mean literally grab) a girl immediately as if there's no possible way she would rather just dance by herself or be, gasp, asked to dance first. Here though, there seem to be large groups of guys standing totally separately from girls and everyone is sort of just bobbing up and down. It looks awkward at first, because head nodding isn't really my thing. Then I realize most people look completely content and happy despite the lack of real movement. I shrug and go with it.

What I love about this place is there are three rooms of music, lounges everywhere, and this awesome outdoor space that reminds me a little bit of East Campus at MIT. Once we leave the dance floor, a huge Styrofoam connect four board stood proudly next to a tree house like objects made of unvarnished 4" x 2"s and rusty, corrugated metal. After hanging out with friends for a bit, a few of us found a space in one of these platforms, and we launched into one of those discussions that all too rarely happen between strangers and even friends. We chatted about love, life, and the future as we enjoyed the buzz of being young in Berlin at 3 in the morning. I'm not sure how long we sat there just enjoying





each others' company, but my brain was completely engaged in the present. In some ways I barely remember what we were chatting about, but it reminded me of the freedom that travel affords you. The freedom to say what's actually on your mind, to muse about heavy things you know so little about, and to laugh it all off and get another drink when you can't think of anything else to say about it.

Eventually, we decided we needed another round, but instead of climbing down the stairs like a normal person, one of the guys decided he needed to demonstrate his upper body strength in case we couldn't all already tell that he had seen the inside of a gym lately. He proceeds to drop down about 8 feet whilst doing a pull up on the rafters from our platform, but he doesn't realize there is a booth underneath us. He knocks this poor guy's beer squarely into his lap. Boys. My friend of course apologizes profusely and offers to buy them a new one, and they're pretty chill, which is a testament to the atmosphere of this place.

We join the group down by the canal, where we all just lie in the dirt, energy flagging. The fluorescent light from the club filtered the trees, and if I took a picture of the scene—young couples cuddling, and happy friends—I would have thought it came from a cigarette commercial.

Unfortunately, one of their German friends has a rather, er, opinionated 27 year old Italian girlfriend, despite being only 22 himself. Upon spotting the other German couple with us, she notes the girl's beauty and

starts exclaiming, "You must always treat your woman like a queen! Look at her, she looks like an angel! She must be your princess. You must always open the door and buy her some flowers. What's it to you, only 5 Euro, but to her, it is the world! Women live for romance..." and she goes on ad nauseum. I'm trying very hard to bite my tongue, but my patience is being very sorely tested. Fortunately, one of the guys sums it up in a perfectly deadpan voice with typical Scottish humor, "She has been talking utter crap for the past thirty minutes."

We decide to just leave her to her opinions, and C. and I head out onto the train, fighting the break of dawn and our own tiredness. After some very bleary navigating of Berlin's train station map, we manage to get on a train going in the right direction and I pick out a random stop that I think is close to something. To Berlin's credit, trains run all night according to schedule, and as long as you're with someone, it's fairly safe. I managed to navigate us down to the river and we walked along a gorgeous path until we saw the sun rise behind the Bode Museum. It takes my breath away as a soft "wow" falls from my lips. Unfortunately, both of our phones were long dead, but sometimes the best photos are memories. The morning breeze rippled around us in the pre-dawn silence and the soft sunrise lit the sky in a dazzling array of pink and purple—it's hard to forget moments like that. My god, Berlin, you are so beautiful.

Of course, I nearly got locked out when I tried to get back into YJ's apartment, but as I drifted

asleep in the glaring bright sunlight, I knew it was worth it.

When I woke up three and a half hours later, I was significantly less amused. Unfortunately, Y. doesn't seem to believe in curtains, and I don't sleep terribly well in light, despite my eyeshades. Giving up on further sleep, I roused myself to shower and see Berlin. I set out first to the Eastside Gallery, a section of the Berlin wall that has been converted to murals by artists, and sprayed with graffiti by some significantly less artistic people. Berlin is not a pretty city in the way Amsterdam or especially Paris is pretty, but it has flavor. Especially in the East, hipster murals and huge wall paintings spice up the scenery. It's a stunning mix of the most modern architecture and restored old buildings, which, like MIT, don't really always go together well aesthetically, but show the colors of the city underneath.

I wandered along, snapping pictures of art and bridges and weird things (which are quite easy to come by in Berlin) before it was time to meet with my friend A. For the sake of his privacy, I won't go into too much detail about what he does (also because I'm still not entirely sure what his job entails), but he started a successful business and has a few articles in Forbes and the New York Times about him. I didn't know him super well before Berlin, but we got along well, since we share a witty sense of humor and enjoy mixing intensity about work with irreverence and a good sense of adventure. We talked markets, motivations, and revenue structures over traditional bratwurst, potato soup, and



beers, which made for an odd contrast. After, I headed off to the Tiergarten, a huge park in Berlin.

To add to my ridiculous pick up line collection (which has been growing across Europe and ranges everywhere from "I think I'm a little bit in love with you," to "You are very handsome"), an attractive guy comes up to me out of the blue as I'm trying to buy tickets to the train. "Du bist sehr schön," he says slowly in German that is about as equally good as mine. "Thank you, but I speak English." I reply, smirking a little. My personal philosophy is you should generally restrict pick up lines to languages that you actually speak, but most men seem to disagree. "Oh!" he says, looking both confused and

relieved at the same time. "Er, I said, 'You are very beautiful.'" "Haha, thank you!" I smile back. An awkward silence ensues. His friend is the world's worst wingman, because he straight up calls out his friend, "Where do you even go in a conversation from there?"

Indeed. Nonetheless, getting hit on by an American in German is actually quite entertaining. Maybe we could have a conversation about food and colors together completely in the present tense. Fortunately, my train arrives, and I duck out as gracefully as possible.

I wandered for hours on my own, seeing the Brandenburg Gate and the Victory Tower on my way, but mostly soaking up

the atmosphere. The Berlin fan mile is set up and all of the food stands are around, but Germany isn't playing so it was quite tame that night. Eventually, I end up meeting A. again and we enjoy a few drinks and many laughs in the "oasis" which consists of beach chairs and fake sand in the middle of Berlin. Go figure.

Finally, Y. and her boy (maybe) friend drove up and we wandered around a bit until we managed to find a dive bar showing the game near the club they want to go to. By this time, I was already so tired, having barely slept the night before, but the World Cup game would just not end. Finally the Netherlands lost to Argentina on penalties at 1 AM. By this point, I was really



ready to go to bed, but my friends clearly had other plans. I was coerced into going to the club next door which had an “Asian”-themed party, which was much less Asian than most MIT parties. I hadn’t had a chance to go home and change, so I was still wearing a cotton sundress and \$10 Payless shoes foam flip flops, but we miraculously got in.

After more Red Bull-based drinks that my friends placed in my tired hands, the night was young again. Despite the constant shards of glass that were

getting stuck in my flip flops (not great), we enjoyed dancing to German non-house club music. This is code for ridiculous music from about 1985-2005. At some point, they even played the Macarena. What the hell, Germany. Apparently, the music here comes in two flavors: tranced out house or middle school dance. Think RUN-DMC.

Eventually, despite the amount of fun we were having, it got too hot to stand and we headed out. The rest of them were voting for more Red Bull, but I managed to convince them to

get in a cab with me back to Y’s apartment where I promptly collapsed in bed. I have no idea how they pulled this off, but Y. and A. finally came back at about 8:00 AM after they all wandered off again. Despite the fact that A. had a hotel, we ended up all crashing in her apartment in the wicked heat compounded by bright, bright light. I used to bulk order 24 packs of Red Bull from Amazon Prime to keep up with the rigors of Junior year, and I have no idea how I survived.

Yet again, I quickly gave up on sleeping after about three hours for the second night in a row, and I went to Mauerpark to get some food and see the flea market. If anything, it reminds me a lot of Brooklyn Flea. I started off the trip with a delicious and restorative waffle and coffee, before wandering around stands of handmade jewelry, antiques, hand-printed souvenirs, vegan food, and cool designs. Somehow though, it managed to rival Brooklyn in hipsterness. That’s pretty impressive (and ridiculous). Afterwards, I was already crashing so I headed back to rest before setting off again.

Determined to do something besides party in Berlin, I went to Museum Island and took photos of landmarks since most of them were closed. I then embarked on an excruciatingly long journey on foot to the neighborhood of Kreuzberg to check out more of hipster Berlin, which rivals the Mission in SF. When I got there though, I decided to stand in the infamous line for Mustafa’s Döner, the Berlin version of the 53rd and 6th Halal Guys of Manhattan.

More than 30 minutes pass as I stand in the humid heat, and I end up striking up a conversation with the guy in front of me, who is actually from Dortmund

and got his masters in Sweden and interned in Shanghai for IBM. I’ve noticed that German students with more international experience tend to think more entrepreneurially whereas most students coming from the universities would rather find a good, stable job. With his fluent English and very good Chinese, he planned to go into international business but was also very interested in starting his own business soon. It was strange to get back into the MIT mode of talking, but it’s also exciting to see German students get excited about innovating.

Oh, and the döner? Totally worth it. Filled with delicious chicken, a wide assortment of fresh and perfectly grilled veggies, three sauces, and fresh feta, it’s a completely different beast than the normal street food. A good analogy is Dominique Ansel’s Cronut compared to Krispy Kreme. Both are good, but one takes it to the next level, though you need to stand in an annoyingly long line.

On our way back, we stopped by Checkpoint Charlie, the famous US-guarded crossing between East and West Berlin. I actually love history and spent a year kneedeep in the wars of Europe, but I had chosen, for better or worse, not to steep myself in that crucial and sad chapter of human history during my trip. Another time, I will visit the museums and concentration camps, yes, but today I let Checkpoint Charlie serve a somber reminder of the exuberant city’s not-so-distant past.

As I finally collapsed into a heap on the train back, my body reminded me I should only have weekends like this once in a while, but my soul was happy. Berlin had definitely lived up to all the hype.

# Week 6

## Back to Work and my trip to Stuttgart

Just before I headed to Berlin early on a Friday last week, the director of accounting stopped by my office with a pet project—helping him understand how to account for the sale and partial leaseback of a property. I'll spare you the details of why this was complicated and the many IFRS memos I sorted through, but I was glad to be put to use on a challenging and unprecedented problem. Since I was unable to find an answer before I left on Friday, I hit the ground running on Monday morning. Eventually, I found my answer by interpreting the “spirit of IAS 17” and using the clearer guidelines and examples found in US GAAP. Despite the thickness of the IFRS manual, there is actually no real guidance on this. I realize that my fascination with this may be a good example of the quote “accountants aren't boring people, they just get excited about boring things”, but I was very happy to have a real problem to solve.

The next day, the subsidiaries closed their books, while our office called across the world to make sure they actually did it on time and correctly. Everyone in the office is responsible for a certain reporting unit, so they didn't have much attention to spare for me, but using a few

sample reports, I got to work on designing a rough statistical analysis that would pick up on any unusual fluctuations in the data. Quickly, I realized that I would have to do this 18 more times so I opened up the macro editor and started writing VBA code. I taught myself VBA, which is a ridiculous language, in one very boring day at a startup I used to work at, so I'm always amazed when things work the way they're supposed to. Nonetheless, Excel skills came to my rescue again and all of the reporting units were quickly summarized and formatted. I flagged anything weird across the different units and followed up with their counterparts and ended up chasing down a few loose ends across time zones in the Americas.

However, this also meant that I was done with what should have been a main project in much less time than expected, and I ended up with charters of accounts to

look over. I think I'm becoming fluent in Denglisch though, and it has become increasingly easier to navigate long sentences with copious amounts of accounting jargon. More challenging, though, was the 6500 row charter for SAP that was written not only in German, but abbreviated German. That means I ended up with super clear explanations like “Ertr.Aufl.Wertber.auf Waren wg.korr.Aufwandsgegen” which miraculously translates to “Income from reversal of bad debt allowance for merchandise due to corrections of expense postings” Oh well.

HR took me out to a delicious lunch, and we had a great conversation about how the Ruhr Fellows program was working out, how best to attract talent to the region, and how to get people within a business to think differently. Eventually, we got to talking about a leadership program (something I'm way, way too familiar with) and how best

to instill a sense of proactivity and accountability among employees at all levels. I actually really love thinking about organization, so I dove into the conversation headfirst. This not only caused our lunch to run really late (this was compounded by slow American eating), but also scored me an opportunity to work on a portion of the program. So now I was the accounting/HR/translation intern and quite happy about it.

Outside of work, I've mostly been working on stuff for my job back home, which I am constantly about two weeks behind on, cooking, exercising, and hanging out with the Ruhr Fellows when I have time. We watched the now-infamous Germany-Brazil 7-1 game together at a very friendly local restaurant/pub, and it was insane! When they scored 3 times in six minutes, some of us weren't even fully watching because we thought they were playing replays. We couldn't





believe what was happening, and neither could the rest of the world. There was jubilant celebration mixed with a tinge of relief that Brazil scored at least once at the 90 minute mark before the referee ended the game early in a coup de grace. Super Deutschland! Our Brazilian colleagues weren't in the greatest mood the next morning though.

That time I became really, really German - Trip to Stuttgart  
After the craziness of last weekend, I decided to take it a little easier as I went to the German countryside in the southwest. When I was in seventh and eighth grade, I had a friend, S. who was from Germany. We were super cool and on the math team together.

S. seems to have forgotten about my seventh grade struggles and went way out of his way to gauge my interests, planned everything around them, and put together a well-researched and google mapped itinerary. Impressive. I packed my bag and set off for the most stress-free weekend trip.

First, I wanted to see the storied Heidelberg, which is 100% as pretty as it looks in pictures, even when it's foggy. My friend A. from MIT lives there, and after a lot of fumbling around, I managed to meet her in Bismarckplatz.

We sent off to the old town, and I looked like a massive tourist, wearing my backpack with all my clothes for the weekend and pausing to take a photo every five minutes. Heidelberg was just too pretty not to indulge myself. At every corner, it looked like a town out of a storybook, and the tall mountains, winding Neckar River, and picturesque homes and castle provided for a postcard backdrop. We explored the old town and caught up, and I really enjoyed hearing her perspective on travelling. In some ways, we are both more seasoned than the average student our age and occasionally feel frustrated by the naiveté of those around us. However, we did it in opposite ways and are less than impressed with different things. She has solo-traveled, lived in foreign countries, and relished the single vagabond life. I have a resume that boasts big names, big cities, and a life lived with a lot of structure and goals. We got into a surprisingly intense and really good discussion despite the fact that we didn't get along terribly well at MIT.

A. took me to the Schloss Heidelberg, which is perched on top of a mountain just a kilometer from the city and affords a stunning view of not only the castle, but the city itself. The view took my breath away and I felt absolutely ridiculous as I snapped photos



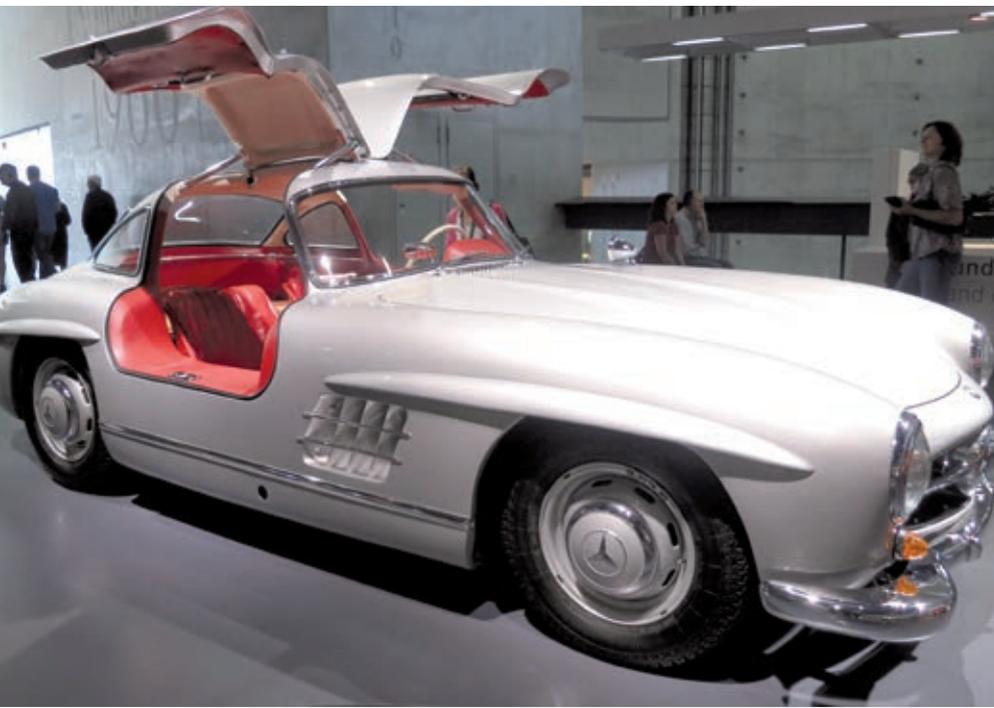
everywhere and squealed a little. Unfortunately, dinner took a bit longer than expected, as did the walk back, and I missed the ICE to Stuttgart, where S. was supposed to pick me up. However, I managed to take an IC to Karlsruhe, and he drove some 200+ kmh down the autobahn to meet me there.

It's really strange to see old friends after a long time has passed, and to top it all off, my contacts were blurry, and I almost walked straight past S. Turns out that he ended up being like 6'2" and discovered a gym since middle school. He played soccer on our team in Middle School and now plays American football here. Go figure. I tackle hugged him excitedly.

We went back to his house and talked and drank beer for several hours, catching up on the many things that had transpired since I was 13. The next morning, after about 5 hours of sleep, we set off in his dad's very nice company car. German men are weirdly obsessed with these things, since the luxury of your car increases with your stature in the company. I certainly wasn't going to complain, since we had a really nice ride with free gas. The first thing I noticed about this car is it tends to sort of hug you whenever you go around a sharp curve, the sides of the seats bending

inwards and increasing their pressure to keep you in place as inertia moved you against them. Not only that, it was a really awesome massage chair function. Want.

Anyway, we set off along the bucolic landscape of the Swabian Alps (Schwäbische Alb), with rolling hills, traditional German architecture and lots of cows. Fortunately, S. is a great driver and handled the mountain roads with ease, so I was free to lean out of the window taking photos as we swapped ridiculous party stories and laughed at my favorite article about Germans, "Nothing for the Ungood." Apparently, everybody likes to make fun of the accent here, and S. proceeded to crack up at a reference to a Swabian guy inventing the word "Handy" (which means cell phone for unknown reasons). No non-German understands this joke, and you should just not even attempt to understand, apparently. When I heard there was the largest pasta factory, Alb Gold, in this region, I made him do a U-turn so we could visit and I could feast my eyes (and get hungry, despite the lavish spread S.'s mom set out for breakfast) on not only as many Italian pastas as Eataly, but also huge bags of spätzle, a traditional Swabian egg pasta. After I bought a bag to make my own käsespätzle (like



Mac n' Cheese, just better, as long as you can figure out how to pronounce it), we set off again.

After more picturesque landscapes, we ended up at Schloss Sigmaringen, one of the many, many castles in the area. It belonged to the Sigmaringen branch of the Hohenzollern dynasty, and looks exactly like you think a baroque castle should, with intimidating stone walls and gorgeous tapestries. We went on a guided tour through the beautiful rooms (much less ornate than Versailles, which made looking at them a little easier), but the highlight was a very, very impressive historical weapons collection, including very rare suits of armor and swords of every type. People had a truly stunning range of ways to try to kill each other even before the advent of modern weaponry. From there, we stopped at a little town (street?) in god knows where for really great, authentic German food—tender schnitzel, perfect potato salad, and rich käsespätzle. Maybe it's the Wisconsin girl in me, but I think German food is awesome, though many of my friends, particularly vegetarians and fans of foods

with other strong seasonings and spices, ardently disagree.

Finally, after detouring to his apartment and visiting S.'s business school, Zeppelin University, (the small town where it's located was home to the inventor of the zeppelin so there is zeppelin freaking everything) we made it down to Lake Constance (Bodensee), the largest lake in Germany, bordered also by Austria and Switzerland. The gorgeous, huge lake stretched on for many kilometers, though it's pretty normal sized by American Great Lakes standards. Cute tourist towns lined its banks, and we picked up delicious ice cream and coffee. The crowd provided a bit of an odd contrast, as we spotted small children on paddle boats and bachelorette parties selling slightly not-exactly-PG party favors. Unfortunately, the weather was a bit too cold to do much in the water, and we were already a bit tired so we didn't stay for too long.

On our way back, I learned that I really do like speeding down the autobahn. We followed the jerk in the Audi flashing his lights at everyone doing 240 kmh down

the autobahn doing 230 kmh. Perfect. All the fun without being that guy. We ended up stopping by IKEA for his mother. S. informed me of this great new activity called "Friday Night at IKEA." The idea is that you bring a bag of popcorn and watch the drama erupt. All of the young couples, not quite used to each other yet, who furnish their new apartments for the first time together start disagreeing, and barely contained "Don't you think this color would be better?" erupt into full blown shouting matches. When I asked my buddy and her boyfriend of six years how this worked out for them, we realized that her boyfriend had found the solution, "Oh, I just agreed with everything she said. It was easier."

Finally, we arrived back at their home for a fantastic home-cooked barbecue (German food is awesome, just trust me) and settled into a night of watching the Netherlands-Argentina game and discussing all that had elapsed in the years past and business in different countries with his entire family. Unfortunately, S. had to leave early for Karlsruhe for a football

game that would guarantee their position in the playoffs, but his parents served me a lovely breakfast and got me on my way to Stuttgart the next day.

Unfortunately, most things in Stuttgart are closed on Sunday, and I was already exhausted and hot. However, I managed to spend around 5 hours at the Mercedes Benz museum, and it was absolutely fantastic! Clearly, Germany is rubbing off on me. I paid money to look at cars for half of a day. What is happening?!

The museum is split into two parallel halls and housed in a gorgeous curved glass, chrome, and steel building. To the credit of Mercedes Benz design, I would have gone to the museum to look at the gleaming interior design and architecture alone, even without the cars. But my God, there were cars. The floors were organized in winding spirals, and the first hall showcased the history of Mercedes-Benz, starting with the invention of the new engines and the first motorbikes and cars by Daimler and Benz. The exhibit tracked the rapid progress through the

roaring 20s when the smash hit racing car, the Mercedes, was first introduced. The Mercedes is actually named after a prominent businessman's daughter. Floor after floor glittered with antique luxury vehicles gleaming with the aesthetic and opulence of an era gone by. I traced the evolution of the company through the tough war years all the way through the present day. Even though I don't know much about cars, the care and engineering put into these vehicles and this museum was evident in every detail.

In the second hall, they showcased Mercedes vehicles of all types, from touring cars to utility vehicles, and even a giant replica of the Deutschland soccer bus. A big highlight, though, was lunch. Unlike most museums, which sell reheated, overpriced food, the Mercedes Museum has a stunning cafeteria that serves a menu of very high quality, local food made in a kitchen on site. I bit into a very generous portion of maultaschen, which resemble giant raviolis filled with pork and spinach, served with beef bouillon, fresh bread, and the best potato salad. With my eyes and stomach very happy, I strolled around Stuttgart before getting on a train back to Essen—I couldn't wait for the public viewing of the world cup final.



### Super Deutschland!

This was it. A nation waited with bated breath as the hour of the world cup final drew closer. I made my way to Bochum directly from the Stuttgart Hbf to meet some of the other Ruhr Fellows for the public viewing. After getting hung up on and not being able to find each other and phone dying fiasco #53, I finally managed to find them while maneuvering around more unreasonably tall people to see the screen. A good summary of the game for those of you living in non-soccer-obsessed countries was: he shoots! Everyone starts cheering! He doesn't score! On both sides. Since nobody wants a game to be won on penalties, the ref called for extra time and Germany scored with only a few minutes to spare! The crowd went wild as chants of Super Deutschland roared through the stadium and beer sprayed everywhere.

When Germany won 1-0 some minutes later, the never-ending chorus commenced. We went through spontaneous and endless refrains of Super Deutschland, the world cup anthem, and for some reason, an excellent rendition of Queen's "We are the champions."

I went to school in Boston and lived very close by Fenway Park, home of the Boston Red Sox. This means that I have seen every kind of unnecessarily violent riot after literally any major Boston sporting event happens. A huge police barricade and motorcade shows up annually for the Stanley Cup final or the World Series Final. When the Red Sox won the Series at home, I endured renditions of "Sweet Caroline" until 4:30 in the morning. As a testament to German discipline, everybody was equally excited as Bostonians but managed not to kill or injure anyone or destroy hundreds of thousands of dollars worth of property. The worst we saw in



the orderly filing out of the park was some guy that was taunting a security guard by walking on grass you weren't supposed to. He quickly cut it out when the police told him to get off.

The streets were more raucous as pedestrians filled them, people leaned out of cars, and honking filled the air. German flags proudly flew everywhere as people climbed on top of every available surface. The energy was contagious, my tiredness abated as an entire country poured forth in celebration. At the Hauptbahnhof, excited people led mass chants and rocked cars back and forth (again, miracu-

lously managing not to cause ridiculous damage to property). We joined in until it was time to get on the very, very slow and crowded train back. Unfortunately, I quickly crashed, especially when I remembered I had a 10 AM meeting with the CEO. Finally, I made it back around 3 AM and fell asleep immediately.

The next day brought me to the men who ran German sales and European operations. I felt a little silly asking them pretty basic questions such as, "so what does a branch manager actually do?" but I guess this was what you get when Executive HR puts you in touch with people.

However, it was a great opportunity for me since they're all required to speak English, and I got to hear even more perspectives on company strategy and change management. The rest of my week was spent working on some accounting, some pixel aligning, and a lot of adding color to my cases. It was a great demonstration of flexibility and focus on people development from the company side and the power of taking initiative and talking to people on mine. Win-win.

I found the people at Klöckner uniquely open to listening, asserting their opinion, and working toward the best solution, even

more so than companies that claim this trait all over the "company culture" statement.

Another highlight was the Ruhr Fellows Farewell Dinner at a wonderful restaurant in Essen on Thursday night. The teams from the Initiativkreis Ruhr and the universities, the mentors from some of the host families, and the Ruhr Fellows gathered for a cocktail hour and a delicious buffet dinner. We recapped our experiences, thanked everyone for this incredible opportunity, and said our goodbyes. Though I still have one more week, I don't like saying goodbye just yet—there still seems to be so much to discover. I think many of us have grown outside of our comfort zone in Germany, but all of the hard work that went into this program made it a lot easier for us to make the Ruhr Area our home.

To cap it all off, my office mate, who I have been getting along fabulously with, took me in his car to Villa Hügel, the huge mansion and estate of the Krupp family. Now I didn't know much about the company, but throughout the 19th and 20th centuries, it reigned as a behemoth of industry and manufacturing. Krupp made everything from war machines to washing machines in Essen. They provided the workers with homes, stores, and everything right here, and all of this wealth was beautifully demonstrated in the family home, now turned into a museum and headquarters for the Krupp Foundation. Finally, we made our way to Lake Baldeney and the seaside beach club. To be fair, they just put down a lot of sand on the banks of a manmade lake that you're not allowed to swim in, but still, it was a pretty great time. We discussed accounting and career and life in Essen until the heat finally wore us down. We finished off the evening with a quick driving tour of the nicest houses in Essen. I was surprised



some of them were so modern in a continent that tends to celebrate old things, but it was really cool to finally see the rest of Essen, instead of just our dorm or the Hbf (central station). All in all, a very successful week at work.

### One Last Time

They say time flies when you're having fun, and somehow it's my last week in Germany. In some ways, my brain can barely comprehend this, but the increasing flood of emails about training next week reminds me that try as I might, I can't stop time. My last week was mostly dedicated to wrapping up loose ends at work and saying goodbye to friends.

Unfortunately, many of my accounting coworkers and office-mates were off on vacation this week (and by that, I mean the entire continent of Europe is on vacation more or less between July and August). However, I enjoyed several delicious lunches with the wonderful people in HR and sales. Finally, I turned over my cases and said my goodbyes to a great team. I was actually surprised at how much I learned over the course of the Klöckner internship—it opened up my eyes to the potential for modernizing the industries that form the backbone of our economy. The experience really reinforced my conviction that all learning happens outside of your comfort zone.

Outside of work, the Ruhr Fellows went on one last excursion to the Landschafts Park with our fearless organizers and buddies. It was definitely one of the coolest parks I've ever seen, as they converted some of the old ThyssenKrupp Steel facilities into a park where you can explore. Although I struggled to ensure no wardrobe malfunctions occurred while I struggled my way up many steps of a blast furnace in a business casual pencil skirt, the view of the surrounding

area made it well worth it. Also, in a stroke of post-industrialist genius, the park creators even installed a huge rock-climbing center along the old walls and put a slide through one of them. It was so unique, and we happily wrapped up the perfect summer night with delicious snacks and drinks at the biergarten.

Finally, for my last night, my buddy, her boyfriend, and another Ruhr Fellow decided to go out to Düsseldorf. After an attempt at making watermelon gin fizzes without a blender (yay watermelon smashing), we proceeded to miss the first bus to the Hbf, which made us decide that it was no longer worth it to go to Duisburg. We then proceeded to miss a night bus to the Rüttscheid and took a cab. When we got to the club that everyone buzzes about, it was absolutely dead with only about 8 people standing by the bar. However, Germany has this odd thing where you pay when you leave, and even though we didn't even make it all the way down the steps before we decided to go, they wanted us to pay 10 Euros for the privilege of stepping in for three minutes and stepping out. I then proceeded to amaze my buddy with a show of American stubbornness and willingness to bend the rules. I don't particularly enjoy disagreeing with people, but this was just silly. My buddy was so unreasonably impressed that I managed to get us out without paying. Unfortunately, we then missed the third bus of the night back to the Hbf, so we ended up at a club called Hotel Shanghai.

Now, I'm actually Shanghainese and the Germans kind of struggle with what's actually Asian and occasionally differentiating the different countries (So far I've gotten Korean, Thai, Filipino, Japanese...all after explaining that I was American), but the décor here was awesome. Hundreds

of paper canes hung from the ceiling flashed in the pulsing rhythm of the strobe lights, and the balcony was covered in a "paper cutout," complete with koi and pandas, but rainbow lights danced behind it. Seems like we found our place.

The rest of the night was spent dancing and having a great time with friends, and as the other Ruhr Fellow and I wound down in my room around 4 AM, we realized that despite all the bus mishaps tonight and travel mishaps overall, we had a really, really good time here.

The next day, I packed my last bag and got on a plane back to Boston, so I guess this is the end of my blog. Before I go, though, let me take a moment to share what I've learned:

### Top 10 Things I learned as a Ruhr Fellow

1. Finding new experiences and meeting people is all about mindset. When you keep an open mind and an adventurous heart, you can have a fantastic experience in almost any city. Maybe even your hometown.
2. Sitting at home and just passing the time is a waste of time, especially if you're in a new place. Get out there and see what you can discover.
3. Germans do some things really, really well. Their engineering is top notch, their quality control aims for 100%. This efficiency can come at a price of risk aversion and slowness to innovate. The German work culture and mindset is neither inherently good nor bad—it depends on the market conditions and industry—but the best thing that you can do with any culture is find what you like and keep that, integrating those practices into your own career and life.
4. There is such a thing as too many castle visits. Trust me, they start to blend.
5. Your pictures never look as good as the real thing. Take pictures, for sure, but don't let trying to get ridiculous shots make you forget to capture the moment in your memory instead. Plus, the less time you spend with your DSLR or iPhone, the less you look like an annoying tourist.



6. You learn outside your comfort zone both professionally and personally. Moreover, you will often learn about the “professional” while trying to explore the “personal” or vice versa. Basically, if you totally know what you’re doing, it might be time to try something new.
7. Know when to sleep and when to stay out all night. You miss fewer trains, lose fewer things, and don’t get things stolen when you get rest. That said, a good sunrise is so, so worth it. Just don’t stay out doing nothing.
8. Speaking English natively is a blessing and a curse. Most people that don’t speak English are required to at least try to learn it at some point. Most well-educated people in the developed world will speak it pretty fluently. This means that you can absolutely travel developed countries without learning difficult languages like German. Yet, the flip side is that it makes all languages more difficult to learn, because you never really practice.
9. Make friends across the world and keep in touch with them. I managed to stay with so many of my friends from MIT and meet some great new ones as well. I met someone I haven’t seen in a decade. You never know where you’ll end up and who will be there. Those reunions are awesome.
10. Pay attention and ask questions. If you like something or hate something, ask why. Whether you end up moving abroad or just going back home, you can only learn if you’re actually reflecting on your experiences.

### Top 10 Best Things about Germany/The Ruhr Area

1. Functionality. Things work the way you’d expect them too. Public agencies are helpful. It’s clean. It’s great.
2. The people. I think they’re very fun to talk to and friendly. Germans get a bad rep for being unfriendly, but I think it’s more “reserved.” Most people aren’t particularly inclined to talk to strangers (then again, are

you?), but if you’re introduced or even if you introduce yourself, I found it very easy to make friends.

3. Nature. There are phenomenal parks and forests and hikes in or just an easy train ride away from most major cities. Germany has done a really stupendous job of preserving its green spaces, and I think it makes the country so much more livable.
4. Safety. For its prominence and population, Germany is still very safe. Yes, I got a wallet stolen, but 95% of the time I felt at ease and I rarely feared for my personal safety.
5. Food and drink. Beer, pretzels, döner, bread, pork, and every kind of sausage ever. I have given up on eating these things outside of Germany. That said, dear God, it’s hard to get a non-fizzy drink here.
6. German engineering and manufacturing. There’s a reason German products are synonymous with precision and quality.

7. Public transport. As in, it actually goes places you want to go and people use it often.
8. Work/life balance. There’s a much cleaner distinction between work and life here than in the US. People get things done, but work isn’t glorified to the same degree and it isn’t supposed to take over your whole life. In my opinion, this is much healthier.
9. The sites. You can’t go and climb up a decommissioned blast furnace in America. Not only that, but there are more castles here than you ever wanted to see. It’s awesome.
10. The autobahn and German cars. Seriously, what is even the point of getting a super fast car in America?



# Partner

Wir danken an dieser Stelle ganz herzlich allen Unternehmen, die sich für das Programm engagiert und Praktikumsplätze zur Verfügung gestellt haben. Vier Wochen lang haben sie den Studenten die Unternehmenslandschaft im Ruhrgebiet nähergebracht, ihnen zahlreiche spannende Einblicke und Gespräche ermöglicht und damit zu einer Verbesserung des Images der Region über deren Grenzen hinaus beigetragen.

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



## Universitätsallianz 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 7.000 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/innen neue Forschungsk Kooperationen anstoßen und beim Auf- und Ausbau internationaler Kontakte auf Unterstützung zählen.



## BP Europe SE

Die BP Europa SE umfasst das Geschäft der BP in Deutschland, der Schweiz, Belgien, Österreich, Polen, den Niederlanden und Ungarn.

Mit über 9.600 Mitarbeitern wurde 2013 ein Umsatz von rund 65 Milliarden Euro (inkl. Energiesteuer) erzielt. Das Unternehmen erreicht mit seinen Produkten und Dienstleistungen der Marken BP, Aral und Castrol allein in Deutschland täglich Millionen Kunden.

Hierzulande beschäftigt BP rund 5.000 Mitarbeiter. Das Tankstellengeschäft betreibt BP unter der Marke Aral und ist mit bundesweit rund 2.500 Tankstellen Marktführer. Zudem betreibt BP eines der großen Raffinerie- und Petrochemiesysteme in Europa. Auch im Schmierstoffbereich nimmt das Unternehmen eine Spitzenposition ein und ist in allen wichtigen Marktsegmenten vertreten. Zudem gehört BP beim Vertrieb von Flüssiggas, Flugkraftstoff, Schiffsdiesel und Bitumen zu den führenden Anbietern.

Weltweit beschäftigt die BP Gruppe mehr als 83.000 Mitarbeiter in rund 80 Ländern der Welt.

### 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.

### Evonik Industries AG

Evonik ist ein weltweit führendes Unternehmen der Spezialchemie. Profitables Wachstum und eine nachhaltige Steigerung des Unternehmenswerts stehen im Mittelpunkt der Strategie.

Rund 80 Prozent des Umsatzes werden aus führenden Marktpositionen erwirtschaftet, die wir weiter ausgebaut werden sollen. Dabei konzentriert sich der Konzern auf wachstumsstarke Megatrends – vor allem Gesundheit, Ernährung, Ressourceneffizienz und Globalisierung. Evonik erzielte 2013 mit rund 33.000 Mitarbeitern einen Umsatz von 12,7 Milliarden Euro und ein operatives Ergebnis (bereinigtes EBITDA) von 2,0 Milliarden Euro. Überzeugender Beleg des globalen Geschäfts ist ein Umsatzanteil außerhalb Deutschlands von über 76 Prozent.

#### Exploring opportunities.

##### Growing together.

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

### Ferrostaal GmbH

Ferrostaal ist ein weltweit tätiger, Technologie-, Hersteller- und lieferantenunabhängiger Industriedienstleister.

Als Projektentwickler ist das Unternehmen in den Bereichen Petrochemie, Windenergie, Beleuchtungslösungen, Air Technology, Öl & Gas und ausgewählten Industrien tätig.

Als Service- und Vertriebspartner für internationale Hersteller handelt die Gesellschaft mit Maschinen und Ausrüstung für Recycling, Verpackung, Schienenverkehr, Labortechnik und Druck sowie mit Rohren und Rohrzubehör.

Im Bereich Automotive entwickelt Ferrostaal maßgeschneiderte Prozesse und betreibt komplette Modulmontagen für international tätige Automobilhersteller und -zulieferer.

Rund 3.600 Mitarbeiter verbinden für die Kunden jahrzehntelange Industrieexpertise mit Finanzierungs kompetenz. Ferrostaal ist in rund 40 Ländern mit eigenen Gesellschaften vertreten.

### HOCHTIEF Aktiengesellschaft

HOCHTIEF gehört zu den führenden globalen 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.

Der Konzern mit Sitz in Essen hatte im Geschäftsjahr 2013 weltweit mehr als 80.000 Mitarbeiter und erzielte Umsatzerlöse von 25,69 Mrd. 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 damit 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 24 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 Energiedaten-erfassung 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.

### Klößner & Co SE

Klößner & Co ist der größte produzentenunabhängige Stahl- und Metaldistributor und eines der führenden Stahl-Service-Center-Unternehmen im Gesamtmarkt Europa und Amerika.

Das Kerngeschäft des Klößner & Co-Konzerns ist die lagerhaltende Distribution von Stahl und Nicht-Eisen-Metallen sowie der Betrieb von Stahl-Service-Centern. Auf Basis seines Distributions- und Servicenetzwerks bedient der Konzern an rund 220 Standorten in 15 Ländern über 146.000 Kunden. Aktuell beschäftigt Klößner & Co rund 9.700 Mitarbeiter. Der Konzern erwirtschaftete im Geschäftsjahr 2013 einen Umsatz von rund 6,4 Mrd. €.

Die Aktien der Klößner & Co SE sind an der Frankfurter Wertpapierbörse zum Handel im Regulierten Markt mit weiteren Zulassungsfolgenpflichten (Prime Standard) zugelassen. Die Klößner & Co-Aktie ist im MDAX®-Index der Deutschen Börse gelistet.



### RAG Aktiengesellschaft

Die RAG Aktiengesellschaft bündelt die gesamte Kompetenz, die aus dem deutschen Steinkohlenbergbau erwachsen ist. Unter ihrem Dach firmieren RAG Deutsche Steinkohle, RAG Anthrazit Ibbenbüren, RAG Montan Immobilien, RAG Mining Solutions, RAG Konzernrevision, RAG Ruhranalytik und RAG Verkauf.

Bis zum Auslauf des deutschen Steinkohlenbergbaus Ende 2018 gilt es für das Unternehmen, zuverlässig die mit der Politik vereinbarten Mengen an Steinkohle zu fördern und die sozialverträgliche Personalanpassung zu vollziehen. Jahrzehntelange Erfahrung befähigen die Bergleute, Ewigkeitsaufgaben kompetent zu bewältigen. Die RAG engagiert sich nach wie vor für den Strukturwandel in den Bergbauregionen.

Die kreative Entwicklung ehemaliger Bergbau-Areale ist nicht nur ein Geschäftszweig – sondern darüber hinaus Verpflichtung und Teil der Tradition. Die RAG nutzt ihre Potenziale vielfältig. Die Erschließung neuer Geschäftsfelder im Bereich der erneuerbaren Energien gehört ebenso dazu wie der Verkauf von gebrauchtem Bergbau-Equipment und die Vermarktung von weltweit gefragtem Know-how „made in Germany“.

## Ruhrverband

### Der Ruhrverband – ein operatives Unternehmen der Wasserwirtschaft

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 Verwaltungseinheiten 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 4.485 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.

## 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 200 Ländern aktiv, und zwar schwerpunktmäßig auf den Gebieten Elektrifizierung, Automatisierung und Digitalisierung. Siemens ist weltweit einer der größten Hersteller energieeffizienter ressourcenschonender Technologien. Das Unternehmen ist Nummer eins im Offshore-Windanlagenbau, einer der führenden Anbieter von Gas- und Dampfturbinen für die Energieerzeugung sowie von Energieübertragungslösungen, Pionier bei Infrastrukturösungen 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 2013, das am 30. September 2013 endete, erzielte Siemens auf fortgeführter Basis einen Umsatz von 75,9 Milliarden Euro und einen Gewinn nach Steuern von 4,2 Milliarden Euro. Ende September 2013 hatte das Unternehmen auf dieser fortgeführten Basis weltweit rund 362.000 Beschäftigte.

Weitere Informationen finden Sie im Internet unter [www.siemens.com](http://www.siemens.com).

## SMS group AG

Die SMS group besteht unter dem Dach der SMS Holding GmbH aus einer Gruppe von international tätigen Unternehmen des Anlagen- und Maschinenbaus für die Verarbeitung von Stahl und NE-Metallen.

Sie gliedert sich in die Unternehmensbereiche SMS Siemag, SMS Meer und die Industriebeteiligungen. Die SMS Holding GmbH ist verantwortlich für die strategische Planung und Kontrolle. Alleineigentümer der SMS group ist die Siemag Weiss GmbH & Co. KG, die Holding der Unternehmerfamilie Weiss.

Die seit vier Generationen familiengeführte Unternehmensgruppe zeichnet sich durch eine starke Marktposition sowie eine auf die einzelnen Kundenbedürfnisse ausgerichtete, leistungsorientierte Verantwortungskultur aus.

Die SMS group vereint die Flexibilität mittelständisch agierender Unternehmenseinheiten mit den Ressourcen eines internationalen Verbunds, der auf die kontinuierliche Aus- und Weiterbildung und das Erfahrungswissen seiner Mitarbeiter, eine wegweisende Technische Entwicklung, eigene Fertigungseinrichtungen und das Know-how eines Systemanbieters einschließlich der Elektrik und Automation und dem Service setzt.

Über 13.800 Mitarbeiterinnen und Mitarbeiter erwirtschaften weltweit einen Umsatz von rund 3,5 Mrd. EUR.



## TRIMET ALUMINIUM SE

### TRIMET - Aluminium macht vieles leichter

Der Name TRIMET steht für ein Unternehmen, dessen Erfolgsgeschichte maßgeblich von seinem Gründer Heinz-Peter Schlüter geschrieben wird. 1988, bereits drei Jahre nach der Gründung, wandelte er die Firma von einer GmbH in die TRIMET Metallhandelsaktiengesellschaft um. 1993 übernahm TRIMET das Gelsenkirchener Recyclingwerk für Aluminium.

Mit dem Zukauf der Essener Aluminiumhütte machte das Unternehmen dann 1994 den Schritt in die industrielle Fertigung von Primäraluminium.

Die rund 2.700 Mitarbeiter arbeiten mit dem Zukunftswerkstoff Aluminium auf höchstem Niveau. Sie entwickeln, produzieren, gießen, vermarkten und recyceln an mittlerweile acht Standorten zum Nutzen der Kunden und in ernster Verantwortung für die Umwelt. Dabei werden sie von der unternehmenseigenen Forschung und Entwicklung sowie dem eigenen Labor für Umwelt- und Metallanalytik unterstützt. Dadurch werden stets neue, innovative Lösungen für den vielfältigen Einsatz des energieeffizienten Aluminiums verwirklicht – im Sinne des Kunden und des Unternehmens.

## VAILLANT GROUP

### 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, Systeme und Dienstleistungen für Wohnkomfort.

Das Produktportfolio reicht von effizienten Heizgeräten auf Basis herkömmlicher Energieträger bis hin zu Systemlösungen zur Nutzung regenerativer Energien.

Im Geschäftsjahr 2013 erzielte das Unternehmen, das sich seit seiner Gründung 1874 in Familienbesitz befindet, mit mehr als 12.000 Mitarbeitern einen Umsatz von rund 2,4 Mrd Euro.

# 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)

- A.T. Kearney
- Accenture
- Baker & McKenzie
- BANK IM BISTUM
- Bayer MaterialScience
- BDO
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- Brost-Stiftung
- BVB 09
- Commerzbank
- Deutsche Annington Immobilien
- Deutsche Bahn
- Deutsche Bank
- Deutsche Post
- Duisburger Hafen
- E.ON
- Emschergenossenschaft und Lippeverband
- Ernst & Young
- Evonik Industries
- Fahrzeug-Werke LUEG
- Ferrostaal
- Flughafen Düsseldorf
- FUNKE MEDIENGRUPPE
- Gelsenwasser
- Grillo-Werke
- HELLWEG – Die Profi-Baumärkte
- HOCHTIEF
- ifm electronic
- Imperial Logistics International
- ista International
- Klöckner & Co
- KÖTTER Holding International
- KPMG
- Kümmerlein Simon & Partner Rechtsanwälte
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- ThyssenKrupp Steel
- Tönnies Holding
- TRIMET ALUMINIUM
- TÜV Nord
- Universitätsklinikum Essen
- Vaillant
- Veltins
- Verlagsgruppe Handelsblatt
- Vivawest Wohnen
- Westfalenhallen Dortmund
- WGZ BANK

*Stand: Oktober 2014*

# TalentMetropole Ruhr



Das Ruhrgebiet hat viele Talente. Jeder kann etwas besonders gut. Dies gilt es zu entdecken, zu fördern und mit Blick auf die berufliche Zukunft zu nutzen. Genau dieser Aufgabe widmet sich die TalentMetropole Ruhr, die Bildungsinitiative des Initiativkreises Ruhr. Sie hat sich aufgemacht, die vielfältigen Bildungsaktivitäten verschiedener Anbieter und Träger zu bündeln – als zentrale Anlaufstelle für Jugendliche auf der Suche nach Förderchancen. Denn das Ruhrgebiet hat ein großes Potenzial an Menschen, die an Bildung herangeführt werden, die für sie nicht selbstverständlich ist. Die TalentMetropole Ruhr macht Bildungsaufstiege möglich und Vorbilder sichtbar.

[www.talentmetropoleruhr.de](http://www.talentmetropoleruhr.de)



Initiativkreis  
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