

UNIVERSITY ALLIANCE RUHR



RuhrFellowship Program

June 5 - July 26, 2019





Bochum, Bermuda3eck

Welcome RuhrFellows 2019,

It is a great honor and privilege to welcome you to the Ruhr Area!

Congratulations on joining our RuhrFellows community. You can call yourself one of the nine distinguished students carefully chosen as this year's participants.

Since 2012, this program, which aims at fostering academic, cultural, and economic exchange between US and Ruhr universities, has brought more than 100 students to the Ruhr Area. Located in the heart of Europe, the Ruhr is Germany's largest metropolitan region with over 5 million inhabitants. Once one of Europe's largest coal and steel producing hubs, the region has since made tremendous transformations and is paving the way to a more digital, more sustainable, and greener future. It is therefore no coincidence that students from American universities increasingly

choose the three universities of the Ruhr as their gateway to Europe.

As a RuhrFellow, you will be participating in an outstanding two-month program hosted by Ruhr University Bochum. In June, you will improve your German language skills and learn more about the University Alliance Ruhr and its partners. The Culture Series will provide you an insight into current issues, such as the *Energiewende*, cyber security as well as migration, intercultural communication, and popular culture. Excursions to the State Parliament, the US Consulate, the RWE power plant, the Chemiepark Marl, and the Coal Mine Recklinghausen complement the exciting summer school part of the program. In July, you will apply your gained knowledge during an

internship at an innovative and worldwide operating company based in the region. Against this background, you will get to know the Ruhr Area as an excellent environment for studying, working, and living well.

Such programs would not be possible without the support of outstanding people and institutions. With that said, we would like to thank our wonderful sponsors, the Max Kade Foundation New York City, the Wirtschaftsförderung Dortmund and the Regionalverband Ruhr for their generous support of this year's RuhrFellowship program. Without their trust and commitment, this program would not have been possible and we truly hope to continue this productive collaboration in the future.



Essen, Red Dot Design Museum

We thank our participating companies the Emscher-genossenschaft, Evonik, innogy, ista, Klöckner, KPMG, thyssenkrupp, Vaillant, and WILO deeply for providing internship placements and allowing you to learn more about their business and organizational practices.

Our heartfelt thanks goes out to all of the professors, staff members, and students at the University Alliance Ruhr and beyond, who have helped to put this unique program together. The RuhrFellowship 2019 would not have been possible without their unlimited efforts, commitment, and enthusiasm!

We are very much looking forward to taking you on an academic, cultural, and social journey through the region. We sincerely hope that your experience will continue beyond this summer and that it may be the first step into lifelong intellectual, professional, and personal bonds between you and the Ruhr Area.

Jutta Schmid
Deputy Director
International Office, Ruhr University Bochum

Sina A. Nitzsche
and *Lan Nhi Nguyen*
Organizing Team
International Office, Ruhr University Bochum





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tu technische universität
dortmund



UNIVERSITÄT
DUISBURG
ESSEN

Open-Minded

University Alliance Ruhr

The academic hub for research, teaching, studying, and networking in Germany's vibrant Ruhr Area

The University Alliance Ruhr is an alliance between the Ruhr University Bochum (RUB), TU Dortmund University (TUDO), and the University of Duisburg-Essen (UDE), the three largest universities in Germany's thriving Ruhr Area. Each of our institutions has a strong tradition of breaking down walls between disciplines. We believe in the benefits of collaboration on all levels of scholarship and research, which is one of the reasons we came together in this unique university alliance.

More than 120,000 students, of which 20,400 are international, as well as over 1,300 professors and 9,300 researchers study and work within the UA Ruhr universities. Together, the three universities have 800 partnerships with

universities in over 130 countries and a combined annual budget of close to €1.2 billion – which provides our students and researchers with virtually unlimited possibilities for exchange and resources for development. To support our already strong global network of international exchange and collaboration, the UA Ruhr has also created academic liaison offices for North America, Latin America, and Russia.

The Ruhr Area is not only Germany's largest academic hub, but also an epicenter of innovation that fosters close interaction between academia and the private sector – and our alliance provides students and researchers from around the world with an open gateway to our region.

We invite you to learn more about the UA Ruhr alliance and our universities, and we look forward to welcoming you in the Ruhr Area soon!





Bochum, Jahrhunderthalle

Program

Tuesday, June 4, 2019 6pm RuhrFellows Warming	Friday, June 7, 2019 9-11:30am German Language Course 12-1:30pm Official Welcome Lunch with Prof. Dr. Kornelia Freitag, Vice President of Ruhr University Bochum, Partners, and Sponsors 2-3pm Climate Change and its Impact on Fauna and Flora: Tour of Botanical Garden Speaker: Dr. Wolfgang Stuppy	Thursday, June 13, 2019 1-10 pm Meeting of the Minds Reception, Essen
Wednesday, June 5, 2019 9-12pm RuhrFellows Welcome Brunch 2019 1-2pm Campus Tour 2-4pm Faculty of Engineering: Meet & Greet 5pm Pub Crawl Hosted by Engineering Students	Monday, June 10, 2019 Public Holiday	Friday, June 14, 2019 10am-12pm RuhrFellows Culture Series 2: Hip-Hop in the Ruhr Area: Histories, Identities, and Communities Speakers: Dr. Sina Nitzsche, Faculty of Philology, Amandip Singh, Dancer 1-3 pm RuhrFellows Culture Series 3: The Germans: Society, History, and Culture Speakers: Prof. Dr. Werner Voss, Dr. Frank Hoffmann, Institute for German Cultural Studies
Thursday, June 6, 2019 9-11:30am German Language Course 1-3pm RuhrFellows Culture Series 1: The Ruhr: How it all Started, How it Changed, and Why it is Important Speaker: Dr. Lutz Budrass, Faculty of Historical Sciences	Tuesday, June 11, 2019 9-11:30am German Language Course 3-5pm Surprise Event organized by Transatlantic RuhrFellows '19	Monday, June 17, 2019 8am-5pm Field Trip: RWE Power Plant Proudly Presented by <i>innogy</i>
	Wednesday, June 12, 2019 9-11:30am German Language Course 1-3 pm Company Visit	



Dortmund, Signal Iduna Park

Program (continued)

Tuesday, June 18, 2019

9-11:30am German Language Course
1-3pm Horst Görtz Institute for IT Security
Cyber Security in the Digital Age
Speakers: Prof. Dr. M. Angela Sasse, David Rupprecht, M.Sc., Lea Schönherr, Faculty of Electrical Engineering and Information Technology
3-5 pm **RuhrFellows Culture Series 4:** Culture and Psychology
Speaker: Dr. Pradeep Chakkarath, Faculty of Social Sciences

Wednesday, June 19, 2019

9-5pm Field Trip to TU Dortmund University

Thursday, June 20, 2019

Public Holiday

Monday, June 24, 2019

9-11:30am German Language Course
12:30-5pm Field Trip to Coal Mine Trainingsbergwerk Recklinghausen
Proudly Presented by RAG

Tuesday, June 25, 2019

9-11:30am German Language Course
1-3pm Doing a PhD in the Ruhr Area: How the RUB Research School & Research Academy Ruhr Support Young Scholars
Speaker: Dr. Nicole Sprafke, Research Academy Ruhr

Wednesday, June 26, 2019

9-11:30am German Language Course
2-7pm Field Trip to University of Duisburg-Essen

Thursday, June 27, 2019

8:30-10am Breakfast Meeting at the NRW Parliament, Düsseldorf
Speaker: Angela Freimuth, Vice President of the NRW Parliament, President of the German American Parliamentary Group
10-10:30am Tour of NRW Parliament, Düsseldorf
11-12:30pm US Consulate Düsseldorf: Q&A with US Consul General Fiona Evans

Friday, June 28, 2019

9-1:30pm Field Trip Chemiepark Marl
Proudly Presented by Evonik

Thursday, July 4, 2019

6pm Fourth of July BBQ

Friday, July 26, 2019

6 pm RuhrFellows Farewell Party



Sarah Bui



Cassidy Crone



Thomas Jankovic



Participants

Sarah Bui

Sarah Bui is a rising junior at the University of California, Berkeley, majoring in Environmental Science. She is from Ho Chi Minh City, Vietnam, currently discovering solutions to environmental problems around the world to bring back to Vietnam. She currently works as a Waste Reduction Coordinator for UC Berkeley residence halls and dining halls, conducting weekly audits and training staffs to sort their waste. She is also involved in plant-microbe interactions research in the USDA and has climbed a roof to install solar panels with Grid Alternatives. Besides academic and professional work, she loves to cook, go hiking, and travel. She is excited to freshen up her German this summer.

Cassidy Crone

Cassidy Crone is a rising junior at Princeton University from Tucson, Arizona, studying Mechanical and Aerospace Engineering with a certificate in German Language and Culture. Her interests include spacecraft and aircraft design and aerodynamics. She is the vice president of Princeton Club Fencing and enjoys painting in her free time. Last summer she participated in a one-month study abroad in Munich and is excited to learn more about the Ruhr valley and German language and culture and improve her German-speaking abilities.

Thomas Jankovic

Thomas Jankovic is a rising senior at Princeton University majoring in German Politics and Culture and minoring in Environmental Studies and Vocal Consort Performance. He studies German culture as an intersectional framework for his interests in classical music and environmental policy. He is currently researching the mechanisms linking the German energy transition to energy democratization. Last summer he worked at the Hessisches Ministerium für Energie (Hessian Ministry of Energy) within the Energiemonitoring department. On campus, he sings with the Nassoons acapella group, the Decem consort choir, and the Glee Club, and he plays French horn in the orchestra. He grew up in Norwalk, Connecticut, and also enjoys tutoring, long distance running, and Ultimate frisbee.

Participants (continued)



Kaila Pfrang



Malini Rao



Agasha Ratam

Kaila Pfrang

Kaila is a rising junior studying Aeronautics and Astronautics at the Massachusetts Institute of Technology. She is particularly interested in the intersection of chemical engineering with the aerospace industry in areas such as habitation, propulsion, and human spaceflight. Additionally, she is passionate about understanding the way in which people interact leading to her studies in public policy as it pertains to urban studies and planning. She is very excited to spend a summer in one of the most innovative countries and leaders in the chemical industry especially after spending last summer with NASA Langley Research Center looking into Mars spaceflight trajectories. Kaila is very involved as an MIT Varsity Sailor and a leader with the student government committee on innovation working on exciting projects

to better the community. In general, she enjoys traveling, exploring new cultures and languages, hiking, and biking. She is very excited to continue learning German and expanding her world knowledge.

Malini Rao

Malini Rao is a junior studying Mechanical Engineering and Applied Mechanics at the University of Pennsylvania. She grew up in Bangalore, India, and moved to Philadelphia for university. She is interested in pursuing product design and manufacturing. She works as a teaching aide for the Mechanical Engineering department and has experience, as well as enjoys tutoring in physics and math. She can often be found working on projects in her lab, swimming at the university pool, or exploring new coffee shops in Philly. She loves the outdoors and likes to go hiking or bicycling during weekends and school breaks. She enjoys learning about German culture as well as learning the language itself.

Agasha Ratam

Agasha Ratam is a rising junior at Yale University, where he studies Economics as well as Electrical Engineering and Computer Science. In the summer, Agasha developed an FPGA-based simulation software for asynchronous chips. His favorite courses he has taken in college include Data Visualization and American Economic History. In his free time, he enjoys discovering new music, playing chess, and reading comics. Agasha grew up in Jakarta, Indonesia and dreams of visiting all seven continents one day.

Participants (continued)



Eric Rizzi



Kent Toshima



Christopher Valencia



Eric Rizzi

Eric Rizzi is a rising senior at Lehigh University, studying Chemical & Biomolecular Engineering. Born and raised in a small town (Cold Spring, New York) he is incredibly excited to be in Germany this summer. He is passionate about renewables, sustainability, and the overall well-being of the environment. He intends to pursue a career that is focused on improving the conditions of our natural environment. On Lehigh's campus he is an involved student, serving as an Orientation Coordinator, an Admissions Tour Guide, co-hosting a radio show, being a member of a fraternity, and playing drums in a few bands. His hobbies include hiking, playing music, playing sports, and going to concerts.

He enjoys meeting new people and traveling, as just last summer he interned in Sydney, Australia, at EnergyLab for 8 weeks. He is excited for the endless opportunities a summer in Germany has to hold and is looking forward to traveling and experiencing Europe for the first time.

Kent Toshima

Kento (Kent) Toshima is a rising junior at Harvard majoring in Computer Science and minoring in Energy & Environment. He is interested in interdisciplinary projects of computer science and environmental science; he is currently in a research project at Harvard SEAS to study the effect of aerosols in the atmosphere on climate change using statistical models. He is half Japanese and half American, born and grew up in Tokyo until he came to the United States two years ago. He values learning about different cultures and is very much looking forward to the RuhrFellowship. In his free time, he likes to run in nature.

Christopher Valencia

Christopher Valencia is a rising junior at the University of Pennsylvania majoring in Mechanical Engineering with an interest in Computer Science. He is half Peruvian and half Colombian, and grew up mostly in the New York and New Jersey area. While at Penn, he spent his past summer as a Residential Advisor for SMASH, a STEM-advocacy program that provides higher education resources to underprivileged, yet motivated high school students across the country. In addition to being a lifelong mentor for these students, he also enjoys boxing, being in the machine shop, and performing as a member of Penn's Onda Latina Latin dance group. His future endeavors include working in the field of energy or a field that combines his interest of mechanical design with computer science.

Partner

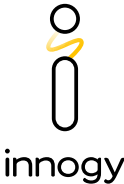
We would like to thank our partner companies and organizations for their support in providing the RuhrFellows with the opportunity to gain valuable hands-on experience in a range of industries in Ruhr Area.

We would also like to acknowledge the generous support of the Max Kade Foundation, the Wirtschaftsförderung Dortmund and the Regionalverband Ruhr.



ista is one of the leading companies in improving energy efficiency in the building sector. With our products and services, we help to sustainably save energy, CO2 and costs. ista has specialized in sub-metering, which is the individual metering, billing and transparent visualization of consumption data for multi-family buildings and commercial properties. The company employs more than 5,500 people in 24 countries worldwide and helps roughly twelve million apartments and commercial properties to save important resources. The ista Group recorded sales of €881.1 million in 2017.

ista.com



innogy SE is a leading German energy company, with revenue of around €43 billion (2017), more than 42,000 employees and activities in 16 countries across Europe. With our three business segments Renewables, Grid & Infrastructure and Retail, innogy addresses the requirements of a modern, decarbonised, decentralized and digital energy world. Our activities focus on our more than 22 million customers, and on offering them innovative and sustainable products and services which enable them to use energy more efficiently and improve their quality of life. The key markets are Germany, the United Kingdom, the Netherlands and Belgium, as well as several countries in Central Eastern

innogy.com

and South Eastern Europe, especially the Czech Republic, Hungary and Poland. In renewable power generation, the company is also active in other regions, e.g. Spain, Italy and the USA, with a total capacity of 3.9 gigawatts. As a leader of innovation in future-oriented fields like eMobility, we are represented in the international hot-spots of the technology industry such as Silicon Valley, Tel Aviv and Berlin. We combine the extensive expertise of our energy technicians and engineers with digital technology partners, from start-ups to major corporates.



The Industrial Solutions business area of thyssenkrupp is a leading partner for the engineering, construction and service of industrial plants and systems. Based on more than 200 years of experience we supply tailored, turnkey plants and components for customers in the chemical, fertilizer, cement, mining and steel industries. As a system partner to the automotive sector we develop highly specialized solutions to meet the individual requirements of our customers. Around 16,000 employees form a global network with a technology portfolio that guarantees maximum productivity and cost-efficiency.

thyssenkrupp.com



KPMG is a network of professional firms with around 207,000 employees in 152 countries and territories. In Germany too, KPMG is one of the leading auditing and advisory firms and has around 11,700 employees at 25 locations. Our services are divided into the following functions: Audit, Tax, Consulting and Deal Advisory. Our Audit services are focused on the auditing of consolidated and annual financial statements. The Tax function incorporates the tax advisory services provided by KPMG. Our high level of specialist know-how on business, regulatory and transaction-related issues is brought together within our Consulting and Deal Advisory functions.

kpmg.de

We have established teams of interdisciplinary specialists for key industries of the economy. These pool the experience of our experts around the world and further enhance the quality of our advisory services. Our ambition is to explore new and innovative paths together with our clients. Our objective is to make valuable solutions for tomorrow available today. Our approach is driven, passionate and totally committed.



WILO SE, with headquarters in Dortmund, is one of the leading manufacturers of pumps and pump systems for heating, cooling and air-conditioning technology, for water supply and drainage and sewage. As a global player, Wilo is always striving to place the requirements of the customers at the heart of what it does and to find tailor-made solutions for our customers and partner companies. Making. Life. Easy. We use this triumvirate as a basis for developing products and solutions which make people's lives more comfortable in many ways. The company employs about 7,800 people worldwide. In 2018 turnover amounted to €1.46 billion.

wilo.com

Partner (continued)



Klöckner & Co is one of the largest producer-independent distributors of steel and metal products and one of the leading steel service companies worldwide. Based on our distribution and service network of around 160 locations in 13 countries, Klöckner & Co supplies more than 100,000 customers. Currently, the Group has around 8,600 employees. Klöckner & Co had sales of some €6.8 billion in fiscal 2018. As a pioneer of change in the steel industry, Klöckner & Co is in the process of digitalizing its entire supply and value chain. In addition, our digital unit, kloeckner.i., is increasingly providing consulting services for external

kloeckner.com



The Emschergenossenschaft (Emscher Water Management Association) was founded on December 14, 1899, and was the first German water board. It later inspired the foundation of several other water boards, among them the Lippeverband, which was founded on January 18, 1926.

Our activities in the Emscher region can be traced back over 100 years. Drawing on the vast experience gained during this time, we are able to offer services tailored to the specific needs of people and the commercial development of the Emscher river catchment area.

eglv.de

As a public corporation, the Emschergenossenschaft is supported by its members: cities, municipalities and mining and business partners.



We may not manufacture tires, mattresses, medications, or animal feeds, but Evonik is part of all of those products – and many more. While we often contribute only small amounts of material, those contributions are precisely what make the difference. That's because Evonik products make tires fuel-efficient, mattresses more elastic, medications more effective, and animal feeds healthier. That's what specialty chemicals are all about. And when it comes to specialty chemicals, we're among the best in the world.

evonik.com



Vaillant offers its customers worldwide eco-friendly, energy-saving heating and ventilation systems that make increasing use of renewable energies. Our product portfolio encompasses solar-thermal and photovoltaic systems, heat pumps, ventilation systems for low-energy buildings, high-efficiency heating systems using fossil fuels, and intelligent controls. In financial year 2017 the company, which has been family-owned since its foundation in 1874, achieved with more than 13,000 employees sales of about €2.36 billion.

vaillant-group.com

Sponsors



The Max Kade Foundation, Inc. takes pride in participating and sponsoring various programs which encourage the exchange of academic ideas among universities and colleges both in the United States and in German-speaking countries. In this ever-changing global society the fostering of cross-cultural understanding has become more important than ever before.

The Foundation supports initiatives which promote international understanding by sponsoring exchange programs between Germany, Austria and the United States such as post-doctoral research exchange programs, visiting faculty exchange programs, and exchange programs of undergraduate and graduate students both here and abroad.

maxkadefoundation.org



The Metropolis Ruhr, which is home to more than five million people, is repositioning its location marketing with its “City of Cities” campaign and self-confidently communicating the strength of its location-related factors. The location marketing campaign of the Regional Association Ruhr (RVR) is a long-term strategy. It is intended to present the business location of the Ruhr Metropolis as a strong location for industry that offers an attractive environment in which to live and diverse business and education opportunities. The “City of Cities” wants to attract new people from outside: investors, visitors, businesspeople, skilled workers and students.

metropole.ruhr



Welcome to Dortmund!

Like almost no other German city, Dortmund has seen enormous change in recent years. The former “steel city” developed into a modern and cosmopolitan metropolis, acquiring reputation all across Europe as an innovative location for technological development.

Start-ups, spin-offs and technology companies in close proximity of TU Dortmund University grow in one of Europe’s largest technology parks with more than 10,000 employees, more than 300 companies at the location Dortmund.

But the biggest city in the Ruhr Area also scores with a wide range of possibilities in the cultural and sporting sectors, with extensive greens and a high quality of life.

wirtschaftsfoerderung-dortmund.de

Academic Resource Centers



RUB Research School is the campus-wide graduate school for all doctoral researchers and postdocs at RUB. It offers advanced qualifications in an international environment, supports a seamless transition into the job market and advises everyone starting or planning a doctorate at RUB.

research-school.rub.de



Research Academy Ruhr (RAR) is the cross-university platform within UA Ruhr for students’ careers in research, business, and society. The three UA Ruhr universities have joined forces in the RAR to offer a strong network for early career researchers.

research-academy-ruhr.de

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