

UNIVERSITY ALLIANCE RUHR



RuhrFellowship Program

June 5 - July 31, 2018





Red Dot Design Museum, Essen

Welcome RuhrFellows,

We would like to welcome you as fellows of our RuhrFellowship Program 2018!

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

to the RuhrFellowship than there were positions to award.

In a program that combines a four-week summer school at TU Dortmund University and a four-week internship, you will improve your German language skills, get to know the universities of the University Alliance Ruhr, discuss actual topics during the “Cultural Series” lectures, participate in exciting excursions and have internships in German companies. Against this background you will get to know the Ruhr area as an environment for living, studying and working. For the internship part of this year’s program, we are proud to partner with Bayer, BRENNTAG, DSW 21, HOCHTIEF, innogy, ista international, Ruhrverband, SMS group GmbH, Taros, Vaillant and

Wirtschaftsförderung Dortmund. The RuhrFellowship Program is organized by the University Alliance Ruhr in cooperation with the Max Kade Foundation and the Wirtschaftsförderung Dortmund and brings students from renowned US universities to the Ruhr area since 2012. No matter whether university, economy or RuhrFellow: all parties profit from our program. This applies particularly to participants who return for further qualifications or with the aim of starting a professional career in our region. After their return to the USA, the RuhrFellows are closely integrated into the alumni program of the Liaison Office of the UA Ruhr in New York.

We are excited to have you on board for our RuhrFellowship

Program 2018 and hope you will return with lots of new insights, transatlantic connections and valuable experiences.

Dr. Barbara Schneider
Director International Office
TU Dortmund University



Dr. Barbara Schneider



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tu technische universität
dortmund

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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 19,000 are international, as well as over 9,000 researchers 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 1.4 billion euros – 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!



Skyline of Dortmund



Program

Tuesday, June 5, 2018

- 9:30am-10:00am Welcome RuhrFellows 2018
- 10:15am-11:15am Orientation on Campus
- 11:30am-1:00pm Intro to Mensa / Lunch
- 1:15pm-1:45pm Discussion of Schedule and Organizational Topics
- 2:00pm-4:15pm Placement Test / German Language Course

Wednesday, June 6, 2018

- 11:00am-12:00pm Bank Account Opening (Group 1)
- 12:15pm-13:30pm German Language Course
- 1:00pm-2:00pm Bank Account Opening (Group 2)
- 3:15pm-5:15pm Guided City Tour

Thursday, June 7, 2018

- 12:00pm-2:00pm *Excursion:* Innogy
- 3:45pm-5pm German Language Course

Friday, June 8, 2018

- 8:30am-10:00am Center for Entrepreneurship & Transfer
- 10:30am-12:30pm Faculty of Mechanical Engineering - Institute of Forming Technology and Lightweight Components

Monday, June 11, 2018

- 8:30am-10:00am *Cultural Series:* The Ruhr's Urban Transformation (Dr. Julia Sattler)
- 10:30am-1:45pm German Language Course

Tuesday, June 12, 2018

- 8:30am-11:45am German Language Course
- 4:00pm-5:30pm *Cultural Series:* Germany - A Transatlantic Perspective (Prof. Dr. Walter Grünzweig)

Thursday, June 14, 2018

- 10:00am-2:15pm *Excursion:* University of Duisburg-Essen

Friday, June 15, 2018

- 8:30am-11:45am German Language Course

Monday, June 18, 2018

- 11:00am-1:30pm *Excursion:* Staatskanzlei & Landtag NRW

Tuesday, June 19, 2018

- 8:30am-11:45am German Language Course
- 1:00pm-2:30pm *Cultural Series:* Relationship Status: It's complicated! Germany and the European Union in Today's Changing Environment (Dr. Kathrin Rucktäschel)



Duisburg, Inner Harbour

Program (continued)

Wednesday, June 20, 2018

Whole Day Introduction To Internship

Thursday, June 21, 2018

10:00am-4:00pm *Excursion:*
Ruhr University Bochum

Friday, June 22, 2018

8:30am-11:45am German Language Course
2:00pm-3:30pm *Cultural Series: Social Innovation*
(Prof. Dr. Jürgen Howaldt)

Monday, June 25, 2018

11:30am-3:00pm *Excursion: Evonik Creavis*

Tuesday, June 26, 2018

9:00am-10:30am German Language Course
2:00pm-3:30pm *Cultural Series: Differences in Cultural Standards between the U.S. and Germany* (Prof. Dr. Hartmut Holzmüller)

Wednesday, June 27, 2018

10:00am-1:00pm Guided Site Tour
Wirtschaftsförderung Dortmund

Thursday, June 28, 2018

9:00am-11:00am Faculty of Biochemical and Chemical Engineering
2:10am-3:10pm BVB-Tour | Stadium Signal Iduna Park
3:30pm German Football Museum

Friday, June 29, 2018

10:30am-12:30pm Fraunhofer Institute for Material Flow and Logistics
1:30pm-10:00pm Meeting of the Minds

Participants



Tatsuya Daniel



Madison Erdall



Sarah Fendrich



James King

Tatsuya Daniel

Tatsuya (Tats) Daniel will be a junior at MIT in the fall majoring in Physics and Mathematics and minoring in German. He is half Japanese and half African-American, and mostly grew up in the Chicago area. One of his biggest hobbies is distance running, about 40-60 miles a week. He loves learning new languages – he can currently speak English, Japanese, German and a little bit of Spanish, and he wants to eventually be able to speak ten different languages. Additionally, he has been in 19 different countries (and counting!) since starting college.

Madison Erdall

Madison (Maddi) Erdall is a senior at the University of California, Berkeley majoring in Environmental Science, German, and Hispanic Linguistics and minoring in Public Policy. She has experience researching the distribution of Bay area air pollutants and the historical ecology of Silicon Valley's watersheds. She is interested in environmental policy and plans on furthering her academic career studying the mechanisms that connect renewable energy technology and poverty alleviation. While growing up in Minneapolis, she spent time living with her family in Barcelona and Bavaria. She speaks German, Spanish, and English and enjoys playing soccer, traveling, and supporting FC Barcelona and Liverpool FC.

Sarah Fendrich

Sarah is a rising junior at the University of Pennsylvania studying Cognitive Neuroscience, with minors in Statistics and German studies. Her primary interest is in the intersection of neuroscience and business. Sarah is involved in neuroimaging research regarding decision-making and communication, and is the academic chair for the Wharton Neuroscience Initiative Student Society. Sarah is also passionate about writing; she is a writing tutor and an editor for The Daily Pennsylvanian, the PennScience Journal of Undergraduate Research, and the F-Word, a feminist literary magazine. She grew up in Westchester, New York, and enjoys hiking, soccer, music, and traveling.

James King

James (Jeb) King is a junior at Harvard College studying Computer Science as well as German, which he can speak proficiently. He is Director of Studio Engineering at Harvard's undergraduate radio station WHRB 95.3 FM, where he voices and produces commercial announcements and occasionally hosts Blues shows on weekend mornings. He is also a member of the Harvard Computer Society and Harvard Undergraduate Robotics Club. Jeb is from Indianapolis, Indiana, and likes learning foreign languages, world travel, and Ritter Sport chocolate. As an Eagle Scout, he enjoys backpacking and camping whenever he can get the chance.



James McIntyre



Vineet Jagadeesan Nair



Yueqi Ren



Nicholas Ritter

Participants (continued)

James McIntyre

James (Jake) McIntyre is a rising junior at Harvard College, studying Statistics and Government. At Harvard, he plays for the varsity football team, and participates in multiple extracurricular groups, including the Harvard Political Review, Harvard Political Union, and Harvard Investment Association. He has a passion for German language and culture as well as for international exploration. In fact, he spent last summer studying abroad in Greece, where he engaged in interdisciplinary seminars combining historical, literary, philosophical, and linguistic approaches to cultural exchange. Jake grew up originally in Orlando, Florida, where he attended Bishop Moore Catholic High School.

Vineet Jagadeesan Nair

Vineet Jagadeesan Nair is a recent graduate of UC Berkeley, where he studied Mechanical Engineering and Economics with a minor in Electrical Engineering and Computer Sciences. He is passionate about renewables, energy efficiency, and sustainability. As an undergraduate, he undertook research spanning new solar cell materials, home energy monitoring for smart grids, and optimizing both printed and Li-ion batteries. In addition, he engaged in activities including environmental consulting, STEM outreach, peer tutoring, and student government. After completing the RuhrFellowship, Vineet will begin graduate school at the University of Cambridge, pursuing an MPhil in Energy Technologies as a Gates-Cambridge scholar.

Yueqi Ren

Yueqi Ren is an undergraduate student at the University of Pennsylvania, where she studies Bioengineering and works on neuroscience research. She has lived in China, Canada, and the U.S. and has attended eight schools over the course of her education. Despite moving around, Yueqi finds time to enjoy reading, music, drawing, and eating. She is also a fan of crime thrillers and romantic comedies. Her recent endeavors include looking into the Brothers Grimm and their fairy tales, learning about epilepsy research, finding out what it's like to live without running water, and getting back into running.

Nicholas Ritter

Nicholas Ritter is a rising junior at Princeton University majoring in Economics with certificates in Statistics, Machine Learning, and Applied Mathematics. He is also interested in international relations and development economics, and directed a dinner series with professors specializing in development this academic year. Last summer, he worked for a nonprofit in China focused on environmental issues. At Princeton, Nicholas is on the debate team, for which he directed the largest student-run event on campus, and serves as a representative to the faculty committee on academics. He is from Summit, NJ. In his free time he plays soccer and writes poetry.

Participants (continued)



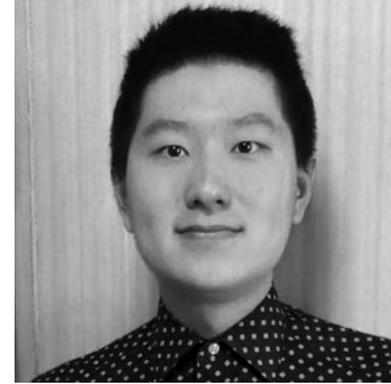
Samar Saad



Daniel Tokarz



Eric Zhong



Hanming Zu

Samar Saad

Samar Saad graduated from the University of California, Berkeley, this past may with a degree in Civil Engineering. She will be pursuing a Master of Science in Structural Engineering, Mechanics, and Materials this fall at UC Berkeley. Her research interests include concrete materials, sustainable design, and post-disaster rehabilitation in third world countries. Samar grew up in Southern California and outside of her academic interests, enjoys making sculptures, tap dancing, and deep-sea fishing. This past year she began to study Arabic and looks forward to continuing these studies in her future academic career.

Daniel Tokarz

Daniel Tokarz is currently a rising junior at Yale University where he is pursuing a double major in Mechanical Engineering and Applied Math. He is an active member of the Yale Political Union and sits on the executive board for the Yale Undergraduate Sports Analytics Group and Christian Union at Yale. He grew up in Palatine Illinois, a suburb of Chicago, where he graduated from Fremd High School in 2016. He has previously worked as a research assistant in Professor Eric Brown's fluid dynamics lab. He is also an avid sports fan and enjoys following both the NFL and the NBA.

Eric Zhong

Eric Zhong is currently a rising junior student at University of California, Berkeley studying Energy Engineering. In particular, he is interested in the mechatronic features of propulsion systems within the energy field. The previous summer, Eric worked at NASA Jet Propulsion Laboratory, assisting researchers in developing new holographic microscope technologies. Aside from energy, Eric is an avid sports fan. He is extremely excited for the upcoming World Cup and the opportunity to experience it in a true football nation. Eric grew up in the Los Angeles suburbs, is fluent in Chinese, and enjoys exercising, eating, and traveling.

Hanming Zu

Hanming Zu is an electrical engineering student at University of Pennsylvania. He comes from Beijing, China, and speaks English, Chinese and German. His academic interests are robotics and analog circuit design. He was a research assistant at Architected Materials Lab in University of Pennsylvania, where he designed auger extruder for paste material 3D printer and programmed corresponding firmware. He has experience in PCB design, Solidworks, C, Java and Python. He also worked as a College House Manager, with the responsibility of planning events and building community in student dormitory. He likes doing quantum mechanics for fun, playing tennis and travelling.

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 Bayer.



Bayer is a Life Science company with a more than 150-year history and core competencies in the areas of health care and agriculture.

With our innovative products, we are contributing to finding solutions to some of the major challenges of our time. With life expectancy continuing to rise, we improve quality of life for a growing population by focusing our research and development activities on preventing, alleviating and treating diseases. We are also making an important contribution to providing a reliable supply of high-quality food, feed and plant-based raw materials.

www.bayer.com



BRENNTAG, the global market leader in chemical distribution, covers all major markets with its extensive product and service portfolio. Headquartered in Essen, Germany, the company operates a global network with more than 530 locations in 74 countries. In 2017, the company, which has a global workforce of more than 15,000 employees, generated sales of €11.7 billion (\$13.3 billion). Brenntag connects chemical manufacturers and chemical users. The company supports its customers and suppliers with tailor-made distribution solutions for industrial and specialty chemicals. With over 10,000 products and a world-class supplier base, Brenntag offers one-stop-shop solutions to around 185,000 customers.

www.brenntag.com



DEW21 is a local provider for power, gas, calorific energy and water. As a modern company supplying energy services, DEW21 has approximately 10,00 employees providing it's services for up to 600,000 customers in Dortmund and surrounding area. As a company in urban majority ownership DEW21 feels very connected to Dortmund and the region.

DEW21 invests in Dortmund and into regenerative energy to fulfill upcoming challenges in the future. Our target: Creating the local energy-turnaround.

DEW21 is one of the best in NRW and nationwide amongst municipal companies in producing renewable energies.

Further more than 1.500 contracting-projects are realized in Dortmund yet.

www.dew21.de

City of Dortmund
Economic Development
Agency



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 renown 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 sector, with extensive greens and a high quality of life.

www.wirtschaftsfoerderung-dortmund.de



HOCHTIEF is a leading global construction and services group. The group is present in the transportation, energy and social/urban infrastructure sectors as well as in the contract mining, PPP and services markets. With around 54,000 employees and a sales volume of about € 23 billion in 2017, HOCHTIEF's global presence is focused on developed markets. With CIMIC, the Group is market leader in Australia. In the USA, HOCHTIEF is the No. 1 general builder via Turner. Flatiron ranks among the most important players in the field of civil works, mainly in transportation infrastructure. Thanks to its commitment to sustainability, HOCHTIEF has been listed in the Dow Jones Sustainability Indexes since 2006.

www.hochtief.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 its three business segments Renewables, Grid & Infrastructure and Retail, innogy addresses the requirements of a modern, decarbonised, decentralised and digital energy world. Its activities focus on its 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 and South Eastern Europe,

www.innogy.com

Name

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.

Partner (continued)



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 5,400 people in 24 countries worldwide and helps roughly twelve million apartments and commercial properties to save important resources. The ista Group recorded sales of € 850.4 million in 2016.

www.ista.com
www.inside.ista.com



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 here 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.

www.maxkadefoundation.org



The Ruhrverband - an operating water management company

The Ruhrverband is a non-profit oriented water management company based on public law. This applies to the operation of its reservoirs, ensuring water supply for 4.6 million people, as well as the sewage treatment for 60 communities in the whole catchment area of the Ruhr. The River Ruhr and its tributaries are managed as an entity across political administrative units. This kind of river basin management creates a fair balance between different uses and interests surrounding the rivers and lakes. This concept saves costs and - as postulated by the EU Water Framework Directive - promotes environmental protection as well as general public interests.

www.ruhrverband.de



Leading Partner in the World of Metals

SMS group is a global, leading partner for the metal industry. As a family-owned business headquartered in Germany, quality and innovation are in our DNA. We are committed to the success of our customers and strive to add value along the entire value chain of the global metal industry.

SMS group covers the product range from ironmaking to metallurgical plants, from rolling mills to strip processing lines, from tube mills to heat treatment technology – along with electrical and automation systems as well as service.

www.sms-group.com



Taros, an independent, privately owned contract research organization, based in Dortmund, Germany, has been serving the chemistry needs of pharmaceutical, chemical and biotech companies since its inception in 1999. More than 10.000 synthesis, research and process chemistry projects have successfully been delivered to the ever-growing global customer base.

Taros operates state-of-the-art lab facilities, employing a team of scientists (65% of whom hold post-graduate degrees in Chemistry) who are committed to supporting the diverse needs of its customers in efficient drug discovery, medicinal chemistry and classical synthetic chemistry. Taros' scientists combine more than 140 years of industrial organic

chemistry experience with over 60 years of active drug discovery experience from big pharma and biotech. Our chemists bear expertise across a broad range of therapeutic areas (oncology, respiratory, CNS, cardiovascular, inflammation, pain, metabolism and infectious) and in all small molecule target classes.

www.taros.de



Vaillant offers its customers worldwide eco-friendly, energy-saving heating and ventilation systems that make increasing use of renewable energies. Its 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.

www.vaillant-group.com

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www.uamr.de



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