THE UNIVERSITY OF RHODE ISLAND

INTERNATIONAL ENGINEERING PROGRAM

Meeting of the Advisory Board

June 5, 2020

Virtual Meeting



Letter from the Executive Director

Dear Members of the IEP Advisory Board,

The 2019-2020 "Coronavirus crisis year" will certainly be one to remember. Its impact on the IEP has been unprecedented: Never before had we recalled an entire cohort of 53 students home, interrupting their internships around the globe - the highlight of their year abroad. Never before had we ended up with a nearly empty International Living & Learning Community by the close of the Spring semester, with no programs running in the IEP houses during the summer. Never before have we been so uncertain about what the Fall semester will look like both at URI and at our partner universities abroad. Yet following the lead URI provided through emergency health directives and virtual teaching/learning coachings, our students, faculty and staff quickly rose to the various health, academic and managerial challenges, turning the second half of the Spring semester into a productive endeavor. I cannot overemphasize the increase in intensity that we all were faced with, and wish to express my sincere gratitude to our Deans, faculty, staff and students for their ingenuity, their flexibility and for giving their very best! Thank you for jointly tackling those challenges and walking this extra long mile with us!

To allow the fifth year returnees to graduate in May, the IEP faculty adapted our internship courses to cover two semesters' worth of curriculum in one. In an effort to reintegrate all students from this affected cohort, we invited them as experts into our ongoing language courses, to virtual reentry meetings, and to preparation sessions for their younger peers, so that they would feel valued and reassured in the midst of their personal chaos following their involuntary recall. We also innovated upon URI's virtual 2020 admission webinars and hosted two of our own, where we focused on synchronous interactions between prospective students, IEP directors and IEP ambassadors while also integrating returned IEP students. In close cooperation with international partners and the OIE, we are now working with a Plan A and B for the generation who plans to study abroad in 2020-21, and have created online alternatives to the cancelled summer schools in Calabria and Berlin.

To assist with filling the new-found gap in students' lives, we were able to secure several local internships through our alumni network as well as research positions – funded by Dean Wright (thank you!) – in COE faculty labs. Additionally, addressing an urgent need in the community, we directed returnees to volunteer opportunities such as the ventilator project in the Memorial Union. IEP staff Angela Graney and Melissa Schenck analyzed the unexpected expenses associated with the students' early return. This allowed us to advocate for scholarships generously funded by the College of Engineering totaling an impressive \$38,000 which helped our students immensely. Again – many, many thanks to Dean Wright! As is evident from the 2020 Study Abroad & Internship Survey, the students highly appreciated all these combined efforts. In close coordination with University leadership Angela Graney managed to keep the ILLC operational until mid-May, giving ten students a home who had no place else to go. She was faced with many difficult decisions including giving a 25% refund to students choosing to leave because of the crisis. While this decision was a financial hardship to the ILLC, it was absolutely the right call.

On another note, I am happy to report several positive developments: this Fall we hosted Distinguished Visiting Prof. Erwin Tschirner from the University in Leipzig, supported by a matching grant from the Max Kade Foundation and A&S. Aside from teaching two upper-level courses in German, he significantly moved the Modern and Classical Languages Department's proficiency initiative forward by engaging faculty and students in lectures, research based course development and over ten workshops. This Spring several new members have joined our IEP Advisory Board who have been instrumental in helping with various aspects of moving the IEP forward: Professor Nicola Massarotti of the Università degli Studi di Napoli "Parthenope"; Gianfranco Milani, Managing Director of Grastim JV, Napoli; our alum Erik Anderson who works for the IAV company in Gifhorn and IEP alum Dave Rego, President of PI (Physik Instrumente) in Auburn, MA.



Welcome aboard the IEP!

My 30K grant application to the Japan Foundation came through as well and is in support of a new Japanese lecturer, Nahoko Collis from Brown University, who will be starting at URI in Fall 2020. Aside from this new grant the IEP raised a total of \$168,392 in grants and private donations in FY '20. Our new and complex credit-based proposal which allows for more transparency and equity in the workload adjustment for the directorship positions, was accepted. (Thank you, Dean Riley, for your additional investment of 25.5K per year for the IEP!) This year's round of intercultural competency assessment through the IDI showed that our efforts of increasing the students' general cultural preparation -- raising their awareness of their own cultural identity in order to better notice and navigate the culturally unfamiliar, yielded strong results. The group profile of the cohort preparing to go abroad showed the majority transitioning to the stage of "Minimization," a step further towards an intercultural mindset, a stage that many of the previous cohort only reached after seven months spent abroad.

In the midst of this Spring's sudden disruptions and uncertainties brought upon us by the global pandemic, our 60 graduating seniors in the Class of 2020 finished extremely strong: in A&S, the University Excellence Award winners in ALL language majors (Chinese, French, German, Italian and Spanish) went to IEP graduates!! In COE 50% of the University Excellence Award winners (those in BME, MCE, ISE and OCE) were garnered by IEPers, with two students winning double awards in languages and engineering (FRN & OCE and SPA & ISE)! Three out of eight Nelson B. White awards also went to IEPers. Might I surmise that by juggling a rigorous dual degree curriculum as well as through the personal and professional growth resulting from a year spent fully abroad, IEP students have been exceptionally prepared for navigating uncertainties with creativity, choosing the right balance between safety and risk, persevering in the face of unexpected hurdles, and cultivating a leadership attitude that comes with an overall broadening of one's mind and perspective on life?

Cordially,

Sigrid Berka

Signed Bella

THE UNIVERSITY OF RHODE ISLAND INTERNATIONAL ENGINEERING PROGRAM

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Enrollment Figures 2019-20

Breakdown by Major*: # Percentage of Total IEP-Serviced Student					ts:
IEP (Declared EGR)	353	90%	Total Engineering Students Serviced by IEP	361	92%
IEP (Wanting Engineering)	8	2%			
IBP (International Business Program)	13	3%	Total Non-Engineering	33	8%
ICSP (International Computer Science	9	2%	Students		
Program)			Serviced by IEP**		
Other**	11	3%			
Graduate (Dual Degree Masters)	0	0%	Total Graduate Students	0	0%
			Serviced by IEP		
Total Students Serviced by IEP*	394				

**Other includes 11 non-engineering students who want to double major in a Language and another major who are dedicated to going abroad and following the IEP model.

IEP Undergrads (Declared Engineering)*	URI College of Engineering Undergrads*	% of COE
353	1580	22%

*IEP numbers reflect enrollment collected Fall 2019. COE numbers reflect enrollment collected in Fall 2019 as head count of majors publicly reported by the URI Office of Institutional Research. Both numbers do not include Wanting Engineering designation.

IEP/College of Demographic	f Engineering s	IEP # (353)	% of IEP	COE # (1580)	% of COE
Gender	Female Male	108	31% 69%	378 1202	24%
Ethnicity***	Represented Groups (White, Asian)	261	77%	1241	82%
	Underrepresented Groups (Black/African American, Hispanic/Latino, American Indian, 2+ Races)	77	23%	277	18%
Residency	In-State Rhode Islanders	199	56%	858	54%
	Out of State	147	42%	722	46%
	Out of Country	7	2%		
Scholarship Recipients	Centennial or University Scholarships	231	65%	Data un	available
				_	

^{*} IEP numbers reflect enrollment collected Fall 2019.

^{***}IEP numbers and percentages based on **338** who self-reported ethnicity. COE numbers and percentages based on **1518** who self-reported, not including Non-Resident Alien designation.

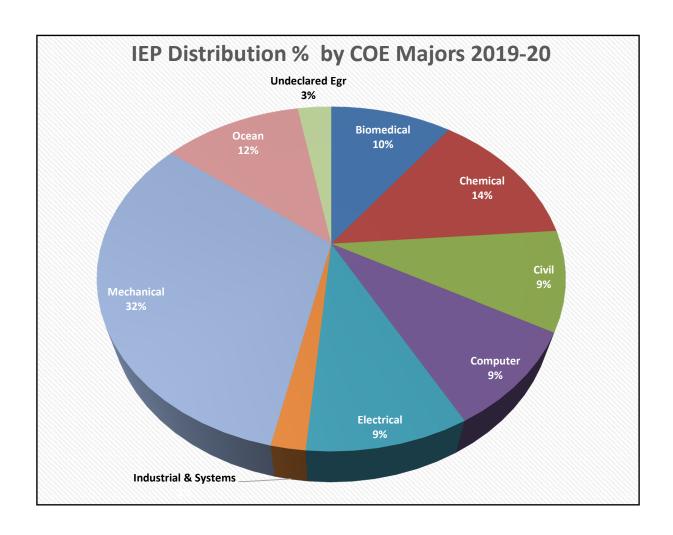


Enrollment Figures 2019-20

By Engineering Discipline	IEP#	% of IEP
Biomedical	36	10%
Chemical	48	14%
Civil	33	9%
Computer	32	9%
Electrical	33*	9%
Industrial & Systems	7	2%
Mechanical	114	32%
Ocean	41	12%
Undeclared B.S. in Engineering	10	3%
*Accounts for a student who is a double major in ELE & CPE		

COE Total # of Majors	% of COE
183	12%
155	10%
208	13%
142	9%
129	8%
54	3%
471	30%
145	9%
93	6%

Percentages may not add up to 100%, as they are rounded to the nearest percent.





Enrollment Figures By Language Track

2019-20 Enrollment Figures By Language Track

	German IEP		Spanish IEP	
Total # of Students Serviced by IEP	156		95	
IEP Undergrads in COE (Declared EGR)	141	90%	89	94%
IEP Undergrads Wanting Engineering	2	1	4	4%
IBP (International Business Program)	6	4%		
ICSP (International Computer Science)	4	3%	1	1%
Other (Dual Majors)	3	2%	1	1%
Graduate (Dual Degree Masters)				
		-		
IEP Undergrads in COE (Declared EGR)	IEP#	% of IEP	IEP#	% of IEP

IEP Undergrads in COE (Declared EGR)	IEP#	% of IEP	IEP#	% of IEP
Female	24	17%	43	48%
• Male	117	83%	46	52%
Rhode Islanders	82	58%	47	53%
Out of State	55	39%	41	46%
Out of Country	4	3%	1	1%
By Engineering Discipline*	IEP#	% of IEP	IEP#	% of IEP
Biomedical	8	6%	9	10%
Chemical	20	14%	13	15%
• Civil	11	8%	14	16%
• Computer	7	5%	8	9%
Electrical	11*	8%	8	9%
Industrial & Systems	2	1%	2	2%
Mechanical	72	51%	15	17%
Ocean	7	5%	16	18%
Undeclared B.S. in Engineering	4	3%	4	4%

Percentages may not add up to 100%, as they are rounded to the nearest percent.

^{*}Accounts for a double major in ELE and CPE



Enrollment Figures By Language Track

2019-20 Enrollment Figures By Language Track

	French IEP		Chinese IEP		e IEP
Total # of Students Serviced by IEP	49			30	
IEP Undergrads in COE (Declared EGR)	45	92%		25	83%
IEP Undergrads Wanting Engineering				1	3%
IBP (International Business Program)	2	4%		1	3%
ICSP (International Computer Science)				2	7%
Other (Dual Majors)	2	4%		1	3%

IEP Undergrads in COE (Declared EGR)	IEP#	% of IEP	IEP#	% of IEP
Female	24	53%	8	32%
Male	21	47%	17	68%
Rhode Islanders	21	47%	14	56%
Out of State	24	53%	10	40%
Out of Country			1	4%
By Engineering Discipline	IEP#	% of IEP	IEP#	% of IEP
Biomedical	8	18%	4	16%
Chemical	5	11%	4	16%
Civil	4	9%	1	4%
Computer	3	7%	5	20%
Electrical	2	4%	5	20%
Industrial & Systems	2	4%		
Mechanical	8	18%	5	20%
Ocean	13	29%	1	4%
Undeclared B.S. in Engineering				

Percentages may not add up to 100%, as they are rounded to the nearest percent.



Enrollment Figures By Language Track

2019-20 Enrollment Figures By Language Track

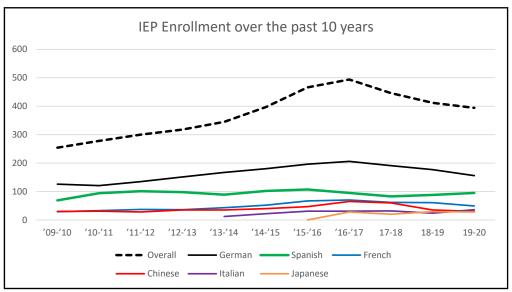
	Italian IEP		Japanese IEP	
Total # of Students Serviced by IEP	36		28	
IEP Undergrads in COE (Declared EGR)	30	83%	23	82%
IEP Undergrads Wanting Engineering			1	4%
IBP (International Business Program)	3	8%	1	4%
ICSP (International Computer Science)			2	7%
Other (Dual Majors)	3	8%	1	4%

IEP Undergrads in COE (Declared EGR)			IEP#	% of IEP
Female	7	23%	2	9%
Male	23	77%	21	91%
Rhode Islanders	15	50%	20	87%
Out of State	15	50%	2	9%
Out of Country			1	4%
By Engineering Discipline	IEP#	% of IEP	IEP#	% of IEP
Biomedical	5	17%	2	9%
Chemical	3	10%	3	13%
Civil	2	7%	1	4%
Computer	2	7%	7	30%
Electrical	3	10%	4	17%
Industrial & Systems			1	4%
Mechanical	10	33%	4	17%
Ocean	3	10%	1	4%
Undeclared B.S. in Engineering	2	7%		

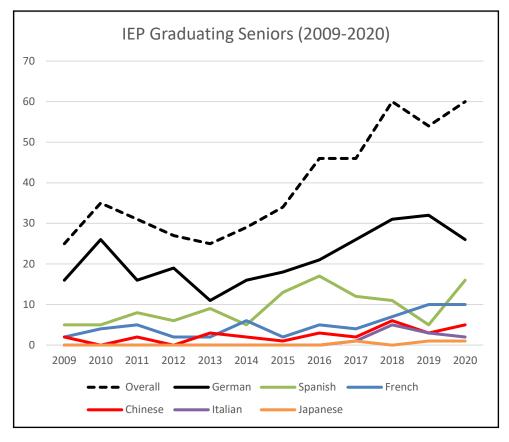
Percentages may not add up to 100%, as they are rounded to the nearest percent.



Enrollment & Graduation Figures



	'09-'10	'10-'11	'11-'12	'12-'13	'13-'14	'14-'15	'15-'16	'16-'17	'17-'18	'18-19	'19-20
Overall	254	278	300	318	345	397	466	494	448	414	394
German	126	121	135	151	167	180	196	205	191	177	156
Spanish	69	94	101	98	89	102	107	95	83	88	95
French	29	33	37	36	43	52	67	70	62	61	49
Chinese	30	31	28	35	35	40	47	65	60	35	30
Italian					12	22	31	31	32	24	36
Japanese							0	28	20	29	28





2020 Internship Placements

53 students were placed in international internships in the 2019 calendar year:

China

Biomedical Imaging Lab, ZJU
 General Electric
 Institute of Polymerization and Polymer Engineering, ZJU
 Aplex Technologies
 Penn Group Renewables
 Hangzhou
 Taipei, Taiwan
 Taipei, Taiwan

France

1. EDF
2. IHU-Strasbourg
3. Total
4. Lab Simard, UTC
5. IHU-Strasbourg
Compiègne
Strasbourg

Italy

Physical Chemistry and Applied Materials Lab (PCAM), UNICAL
 Grastim
 Hexagon Manufacturing Intelligence
 Grastim
 Grastim
 Laboratorio di Genetica, UNICAL

Rende
Naples
Rende

Japan

1. Toray / Niigata UniversityTokyo / Niigata2. Nippon Advanced Technology Co.Tokai3. Hexagon Manufacturing IntelligenceHamamatsu4. ShimadzuKyoto

Spain

1. Epic Power Zaragoza 2. CEIT / Tecnun San Sebastián 3. Dept. de Ciencias y Técnicas del Agua y del Medio Ambiente Lab, UNICAN Santander 4. Opel Zaragoza 5. Ennera Ibarra 6. 3PBio Noáin 7. Opel Zaragoza 8. Dept. de Ciencias y Técnicas del Agua y del Medio Ambiente Lab, UNICAN Santander



2020 Internship Placements

(continued)

Germany

- 1.MTU
- 2. Siemens
- 3. ZF
- 4. BASF
- 5. IAV
- 6. Bischof + Klein
- 7. Nynas
- 8. IAV
- 9. Bischof + Klein
- 10. Institute of Automotive Management & Industrial Production, TUBS
- 11. MTU
- 12, Daimler
- 13. Machine Learning and Data Analytics Lab, U. Nürnberg-Erlangen
- 14. ZF
- 15. IAV
- 16. Marum
- 17. Siemens
- 18. BASF
- 19. IAV
- 20. Siemens
- 21.Ke Kelit
- 22, IAV
- 23. Nynas
- 24. Coplan
- 25. Raytheon Anschütz
- 26. Etalon

Munich Munich

Friedrichshafen Ludwigshafen

Berlin

Lengerich

Hamburg Gifhorn

Gifhorn

Lengerich Braunschweig

Munich Stuttgart

Erlangen

Friedrichshafen

Gifhorn Bremen Munich

Ludwigshafen

Braunschweig Erlangen Linz, Austria

Gifhorn Hamburg

Regensburg Kiel

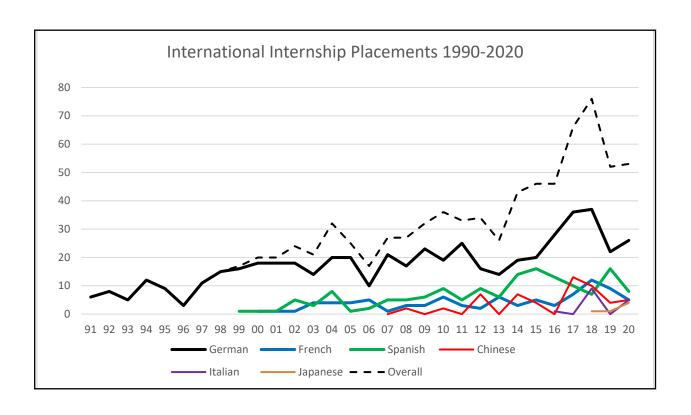
Braunschweig



2020 German J-Term students and staff during a site visit at Merck



Internship Figures



	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11
German	8	6	8	5	12	9	3	11	15	16	18	18	18	14	20	20	10	21	17	23	19	25
French											1	1	1	4	4	4	5	1	3	3	6	3
Spanish										1	1	1	5	3	8	1	2	5	5	6	9	5
Chinese																		0	2	0	2	0
Yr Total			8	5	12	9	3	11	15	17	20	20	24	21	32	25	17	27	27	32	36	33
Cum	8	14	22	27	39	48	51	62	77	94	114	134	158	179	211	236	253	280	307	339	375	408

	'12	'13	'14	'15	'16	'17	'18	'19	'20							
German	16	14	19	20	28	36	37	22	26							
French	2	6	3	5	3	7	12	9	5							
Spanish	9	6	14	16	13	10	7	16	8							
Chinese	7	0	7	4	0	13	10	4	5							
Italian					1	0	9	0	5							
Japanese					1	0	1	1	4							
Yr Total	34	26	43	45	46	66	76	52	53							
Cum	442	468	511	556	602	668	744	796	849							



Internship Partners 1990-2020 International and Domestic

3P Biopharmaceuticals (Noáin)

Abengoa (Sevilla)

Aerodata (Braunschweig) Agfa (Leverkusen, Gera)

Aicon 3-D (Braunschweig, Meersburg)

Air Liquide (Jouy-en Josas-Cedex)

Air Nostrum (Valencia) Alakaluf (Punta Arenas) Apia XXI (Santander)

Aplex Technologies (Taipei, Taiwan)

Applied Materials (Alzenau)

Arup (Madrid)

Astilleros de Santander A.S (Astander)

AUDI (Ingolstadt) Aviso (Gera) Axiva (Frankfurt)

Baird & Associates (Santiago) Bard Shannon, Ltd. (Humacao) BASF (Ludwigshafen, Santiago)

Bayer (Leverkusen)

Bayer Technology Services (Shanghai)

Beijing Ao Rui Te Science & Technology Co.

(Beijing)

Beinbauer Group (Büchlberg) Beiersdorf AG (Hamburg) Benteler (Paderborn)

Bernard Energy Advocacy (Brussels) Biomedical Imaging Lab (Hangzhou)

Biotrial (Mulhouse)

Bischof + Klein (Lengerich)

Blaupunkt GmbH (Hildesheim)

BMSER Xieneng Technology (Hangzhou)

BMW (München, NJ, SC) BMW Motorsport (München)

Böhringer Ingelheim Microparts (Dortmund)

Boston Scientific (Coyol)

Bouygues Construction (Marseille)

BP Mineralöl (Gelsenkirchen) Bruker Biospin (Wiessemebourg) B&J Adaptaciones (Barcelona)

Caterpillar (Mannheim) CEIT (San Sebastián)

Central European Fund (Nanjing)

CEREMA (Compiègne)

CGG (Paris)

Chen Lu International Skating Center (Beijing)

CCPPNR (Beijing) CIRCE (Zaragoza) Codelco (Santiago)

Communication Technologies Research Group

(Zaragoza)

Continental (Hannover, Regensburg)

Coplan (Eggenfelden, Regensburg)

CREG Catalysis, Molecular Separations

& Reactor Engineering Group (Zaragoza)

Daimler (Sindelfingen, Stuttgart, NJ, MI)

Dassault Systèmes (Vélizy-Villacoublay)

Deutsche Bahn (München, Berlin, Minden,

Kassel)

DB Cargo (Mainz)

DB Engineering & Consulting (Hannover)

DB Netz (Frankfurt)
DB Schenker (Mainz)
DB Systel (Frankfurt)

DB Systemtechnik (München)

Departamento de Ciencias y Técnicas del Agua y del Medio Ambiente (Santander)

Division of Medical Bioengineering (Okayama)

Draeger Medical (Lübeck)

École des Hautes Études en Santé Publique

(Rennes)

ECOS Canarias S.L. (Las Palmas de Gran

Canaria)

EDF (Chatou)

Emitec (Lohmar) ENERCAP (Lyon)

Ennera (Ibarra)

Epic Power (Zaragoza)

Era7 (Granada)

Etalon (Braunschweig)

Everis (Barcelona)

Ewag GmbH (Solothurn)

Experimentierstation Obstbau (Schlachters)

Fashion Power (Hangzhou) Fatronik (San Sebastián)

Federal Mogul (Crépy-en-Valois)
Feng Logistics Company (Hangzhou)
France Energies Marines (Plouzané)
Fraunhofer-Institut für Schicht- und
Oberflächentechnik (Braunschweig)

Fraunhofer Institute for Manufacturing Engineering and Automation (Stuttgart)

Gamesa S.A. (Bilbao)

General Electric (Suzhou) General Motors (Zaragoza)

Geocéan (Marseille)

GeoCiclos (Viña del Mar)

Geotecnia Ambiental (Valparaíso)

GKN Driveline (Zumaia)

GOM (Perugia)

Grastim (Naples)

Groupe ADP (Paris)

Grupo de Biomateriales (GBM) (Zaragoza)

Note: Companies marked in bold are new this year.



Internship Partners 1990-2020 International and Domestic

Grupo de Ingeniería Oceanográfica y de Costas (Santander)

Grupo GIST (Santander)

GTM (Batiment)

Hangzhou Architectural Design & Research, Ltd. (Hangzhou)

Hasbro (Hong Kong, Shenzhen)

Hexagon (various locations in Germany, Spain,

France, USA, China, Italy and Japan)

Higer Bus Company (Suzhou) Hilti (Kaufering, Schaan, Madrid)

Hochtief (Essen, Hamburg)

Hokkaido System Science (Sapporo)

Hope Global (León) Hutchinson (Auxy)

IAV (Berlin, Braunschweig, Gifhorn,

Sindelfingen)

IAVF Antriebstechnik AG (Karlsruhe)

Ibaia Energía (Beasain, Ibarra)

IDOM (Bilbao, Zaragoza) Ifremer (La Rochelle)

Ifremer Service PRAO (La Seyne-sur-Mer)

IH Cantabria (Santander)
IHU-Strasboug (Strasbourg)
IMAS (Mariano Comense)
Indaber Ibiza (Ibiza)

Infineon AG (München) Inomed (Emmendingen)

Insigma HengTian Software, Ltd. (Hangzhou) Institute of Automotive Management and Industrial Production (Braunschweig)

Institut für Elektrische Messtechnik

(Braunschweig)

Inst. of Geotechnical Engineering (Hangzhou)

Institut für Grund und Bodenbau

(Braunschweig)

Instituto de Hidráulica Ambiental (Cantabria) Institut Hospitalo-Universitaire (Strasbourg)

Inst. of Hydraulic Structure & Water

Environment (Hangzhou)

Inst. of Micro-/Nanotechnoloy & Precision

Engineering (Hangzhou)

Inst. of Polymerization & Polymer EGR (Hangzhou)

Institut Polytechnique de Grenoble (Grenoble) Intamin Amusement Rides Int. Corp. Est (Schaan)

IQE (Zaragoza)

Johnson & Johnson (NJ, São Paulo)

Ke Kelit (Linz, Austria)

King Marine (Valencia) KOB (Kaiserslautern)

Kolbenschmidt Pierburg (Neckarsulm, Abadiano)

Kraft Foods (München)

KS Fototechnik (Wuppertal)

Laboratoire Electomécanique de Compiègne (Compiègne)

Laboratoire Simard (Compiègne)

Laboratoire TIMR (Compiègne)

Laboratorio di Genetica (Rende)

Laboratorio Grandi Modelli Idrauli (Rende)

Lean In China (Beijing) Leica Camera (Solms)

Lemförder AG (SC, Spain, Germany)

LMS Imagine (a Siemens business) (Lyon)

LMU ArchäoBioCenter (München)

Logic Solutions (Nanjing)

Lufthansa Technik AG (Hamburg)

Lur Geroa (Irurtzun)

Machine Learning and Data Analytics Lab (Erlangen)

Manini Prefabbricati (Assisi)

Marum (Bremen)

Maurer Söhne (München)

Maxon Motors (Sexau)

Medincell (Jacou)

Meyer Werft (Papenburg) MTU (Hannover, München)

National Lab of Secondary Resources

(Hangzhou)

Nikola Motor (Stuttgart)

Nippon Advanced Technology Co. (Tokai)

Novacare (Concepción)

Núcleo Biotecnología Curauma (NBC) (Curauma)

NYNAS (Hamburg)

Oakwood Asia (Hangzhou)

Offshore Pipelines and Risers (Hangzhou)

Opel (Zaragoza)

Osram Opto Semiconductors (Regensburg)

Pedelta (Barcelona)

Penn Group Technologies (Taipei, Taiwan)

Pentair Electronic Packaging (Quingdao)

Physical Chemistry and Applied Materials Lab (Rende)

Pin AN Insurance Company of China, Ltd.

(Nanjing)

PolyIC (Fürth)

Porsche (Weissach)

Praxair (Spain)

Preusse Baubetriebe GmbH (Hamburg)

Price Waterhouse (Frankfurt)
Puerto Santander (Santander)

Puerto Ventanas (Puchuncavi)

Q-Das (Braunschweig) RATP Group (Paris)

Raytheon Anschütz (Kiel)

Renault (Guyancourt) Rhodia (Clamecy, Lyon)



Internship Partners 1990-2020 International and Domestic

(Hangzhou)

Robert Bosch GmbH (Stuttgart)

Robotiker (Zamudio)

Rhodia (Paris)

Saint-Gobain (Cavaillon, Avignon, Germany)

Salzgitter (Salzgitter)

SAMTACK (Barcelona)

SAP (Karlsruhe, Montreal)

Schneider Electric (Montpellier)

Schroff GmbH (Straubenhardt)

SEAT S.A. (Barcelona, Martotell)

Sensata Technologies (Aguascalientes,

Hangzhou)

Sentinel Tech (Tianjin)

Shimadzu (Kyoto)

SIDAT (Trofarello)

Siemens (München, Erlangen, Madrid, Berlin)

Siemens HealthCare (Erlangen)

Sixense Soldata (Nanterre)

Skylotec (Neuwied)

Sky Deutschland (Unterföhring)

Société Générale (Fontenay-sous-Bois)

State Key Laboratory for Chemical Engineering

(Hangzhou)

Subseamechatronics (Las Palmas de Gran

Canaria)

Supfina (RI, Schapbach)

STMicroelectronics (Grenoble)

Taco Italia (Vicenza)

Tecnalia (Derio, San Sebastián)

Tennet Offshore (Lehrte)

Teknor Apex (Suzhou)

Terres Inovia Laboratoire (Compiègne)

Texas Instruments (Aguascalientes)

Tianjin Normal Univ., Materials Science Lab

(Tianjin)

Thermochemical Processes Research Group

(Zaragoza)

TokenInsight Consulting (Beijing)

Toray Plastics (Lyon, Tokyo)

Total (Paris, Pau)

Trumpf (Ditzingen)

TRW (Alfdorf)

ULPGC (Las Palmas de Gran Canaria)

UniCredit (Hypovereinsbank) (München)

VAM/Becker Bau (Kiel)

VDO Automotive AG (Villingen)

Vidal Vademecum (Madrid)

Viessmann (Allendorf)

Volkswagen (Wolfsburg)

Volkswagen Nutzfahrzeuge (Hannover)

Vorwerk & Co. (Wuppertal)

VP et Green Ingénierie (Paris)

Worldline (Lille)

Yanmar (Saint-Dizier)

ZF (various locations in Germany, Spain, France, USA, Mexico, China, Italy) Zhejiang Communications Construction, Ltd.

Züblin AG (Stuttgart)

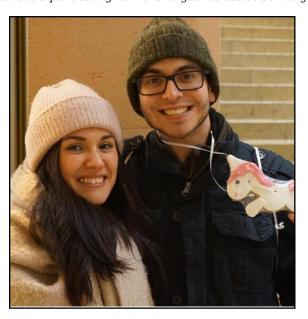


Exchanges German IEP

Technische Universität Darmstadt

	URI to TU-DA	TU-DA to URI
AY 2016-17	8	0
AY 2017-18	7	6
AY 2018-19	6	4
AY 2019-20	4	5
Total	25	15

German IEP student Renee Gordon taking advantage of some downtime to explore during her 2018-19 year abroad in Germany.



Josh D'Ambra, GIEP, and his TUBS tandem partner became close friends during his 2018 study semester at TU Braunschweig

Technische Universität Braunschweig

	URI to TU-BS	TU-BS to URI
AY 1995-96	5	5
AY 1996-97	9	9
AY 1997-98	13	12
AY 1998-99	14	12
AY 1999-00	15	16
AY 2000-01	13	13
AY 2001-02	20	25
AY 2002-03	15	15
AY 2003-04	21	16
AY 2004-05	21	16
AY 2005-06	12	14
AY 2006-07	24	14
AY 2007-08	22	13
AY 2008-09	24	22
AY 2009-10	25	14
AY 2010-11	28*	16
AY 2011-12	14	10
AY 2012-13	15*	12
AY 2013-14	20*	15
AY 2014-15	22*	17
AY 2015-16	30	16
AY 2016-17	27	20
AY 2017-18	29	15
AY 2018-19	17	14
AY 2019-20	22	16
Total	477	367



Exchanges French IEP

Université de Technologie de Compiègne - UTC

	URI to UTC	UTC to URI
AY 05-06	2	3
AY 06-07	2	3
AY 07-08	3	3
AY 08-09	4*	4
AY 09-10	6	3
AY 10-11	3*	6
AY 11-12	6*	3
AY 12-13	7*	3
AY 13-14	3	7
AY 14-15	5	4
AY 15-16	3	5
AY 16-17	7	4
AY 17-18	12	5
AY 18-19	9	6
AY 19- 20	5	6
TOTAL # of Students Exchanged	77	65

* Includes other majors



FIEP ambassadors Sandra Deeb and Lindsay Pisapio visit Normandy during their 2018-19 year abroad in France



Exchanges Spanish IEP

Universidad de Cantabria - UNICAN (Spain)

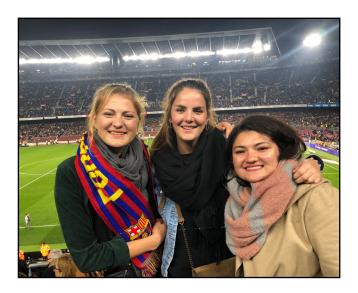
` -		
	URI	UC
	to UC	to URI
AY 04-05	2	-
AY 05-06	-	-
AY 06-07	1	ı
AY 07-08	2	1
AY 08-09	4	-
AY 09-10	2	1
AY 10-11	-	2
AY 11-12	3	2
AY 12-13	3	7
AY 13-14	3	2
AY 14-15	3	2
AY 15-16	5	2
AY 16-17	3	2
AY 17-18	2	1
AY 18-19	4	2
AY 19-20	3	1
TOTAL # of Students Exchanged	40	24



SIEP student Oliver Hazard meets up with 2018-19 UNIZAR tandem parter Ana during the Fiestas del Pilar in Zaragoza, Spain in October 2019.

Universidad de Zaragoza - UNIZAR (Spain)

	URI	UZ
	to UZ	to URI
AY 00-01	-	2
AY 01-02	2	2
AY 02-03	4	2
AY 03-04	1	3
AY 04-05	ı	3
AY 05-06	-	-
AY 06-07	1	1
AY 07-08	1	-
AY 08-09	3	1
AY 09-10	6	2
AY 10-11	3	2
AY 11-12	4	4
AY 12-13	3	2
AY 13-14	3	3
AY 14-15	6	-
AY 15-16	3	7
AY 16-17	2	6
AY 17-18	4	2
AY 18-19	3	4
AY 19-20	2	-
TOTAL # of Students Exchanged	49	45



Magda Flores Umanzor, Spanish IEP, attends an FC Barcelona game while abroad during 2018-19 year in Spain.



Exchanges Spanish IEP

Universidad de Navarra - TECNUN (Spain)

	URI to TECNUN	TECNUN to URI
AY 02-03	1	-
AY 03-04	1	2
AY 04-05	-	2
AY 05-06	3	-
AY 06-07	-	1
AY 07-08	-	1
AY 08-09	-	1
AY 09-10	2	2
AY 10-11	3	-
AY 11-12	2	2
AY 12-13	-	1
AY 13-14	8	2
AY 14-15	2	4
AY 15-16	3	3
AY 16-17	2	3
AY 17-18	2	4
AY 18-19	5	4
AY 19-20	3	3
TOTAL # of Students Exchanged	37	35



SIEP's Max Bliss tours the Incan Trail at Machu Picchu while abroad in Chile.during 2018-19 academic year.

Pontificia Universidad Católica de Valparaíso - PUCV (Chile)

	URI to PUCV	PUCV to URI
AY 14-15	5	2
AY 15-16	2	2
AY 16-17	3	-
AY 17-18	-	-
AY 18-19	4	-
AY 19-20	-	-
TOTAL # of Students Exchanged	14	4



SIEP student Kelly Domogala explores Morocco while abroad during her 2018-19 year in Spain.



Exchanges Chinese IEP

Zhejiang University (Hangzhou, China)

	URI to ZU	ZU to URI
AY 06-07	-	-
AY 07-08	2	1
AY 08-09	-	-
AY 09-10	7*	8
AY 10-11	1	2
AY 11-12	8*	8
AY 12-13	-	-
AY 13-14	7	6
AY 14-15	3	2
AY 15-16	1	4
AY 16-17	9*	5
AY 17-18	5	3
AY 18-19	3	1
Ay 19-20	2	-
TOTAL # of Students Exchanged	47	40

*Includes other majors



Dylon Lo, Chinese IEP, out to dinner with his ZJU classmates during his 2019-20 study semester in Hangzhou.



Exchanges Italian IEP

University of Calabria (Calabria, Italy)

	URI to UNICAL	UNICAL to URI
AY 15-16	-	-
AY 16-17		
AY 17-18	8	5
AY 18-19	-	-
AY 19-20	3	-
TOTAL # of Students Exchanged	11	5

University of Naples Parthenope (Naples, Italy)

	URI to Parthenope	Parthenope to URI
AY 19-20	2	-
TOTAL # of Students Exchanged	2	-



Evan Arnott, Italian IEP, at Gruppo di Oliviero Rossi Lab (UNICAL) doing research on bonding agents of roads.



IIEP's David Guevara and Jonathan Dealmeida both won €500 scholarships in a competition sponsored by the energy/oil company Q8. Their innovative submission involved deploying energy-absorbing tiles in Naples' metro stations to power ticket kiosks and turnstiles.



Exchanges Japanese IEP

Kyushu University (Fukuoka, Japan)

	URI to Kyushu	Kyushu to URI
AY 19-20	1	-
TOTAL # of Students Exchanged	1	-

Niigata University (Niigata, Japan)

	URI to Niigata	Niigata to URI
AY 19-20	2	1
TOTAL # of Students Exchanged	2	1



Jason Valdes, Japanese IEP, visiting Shikisai no Oka, a flower farm in Furano-Biei, Hokkaido, Japan.

Okayama University (Okayama, Japan)

	URI to Okayama	Okayama to URI
AY 18-19	1	1
AY 19-20	1	-
TOTAL # of Students Exchanged	2	1

Waseda University (Tokyo, Japan)

	URI to Waseda	Waseda to URI
AY 17-18	1	-
AY 18-19	1	1
AY 19-20	-	2
TOTAL # of Students Exchanged	2	3



Cumulative IEP Giving Honor Roll

(as of May 1, 2020)

Over \$500,000

Heidi Kirk Duffy & David Duffy Max Kade Foundation ZF Friedrichshafen AG

\$150,000 - \$500,000

Annette Kade Foundation Hasbro, Inc. Sensata Technologies Texas Instruments Van Meeteren Foundation

\$75,000 - \$150,000

Robert C. and Judith A. Ayotte Praxair, Inc. TRW Corporation Thomas Wroe, Jr.

\$25,000 - \$75,000

Boxer Family
Frank and Lynn Curtin
Deutsche Bahn
Hexagon Manufacturing Intelligence
Hilti AG
John and Carol Grandin
Gabriel Lengyel
Tonya McBride
Schroff, Inc./ Udo Schroff
Siemens Corporation
William and Pauline Silvia

\$2,000 - \$25,000

James Hopkins

Gary Baker
Sigrid Berka
BMW Manufacturing Corp.
Winnie Brownell
Barbara Brusini
Laurie Burger
Michael Byrnes
Hubertus Christ
Rick D'Ambrosca
Vincent DiPippo
Draexlmaier Automotive of America
Ewag Corporation
German American Cultural Society of RI
Walter Giraitis

Lufthansa German Airlines
Tobias Lührig
Michael Mueller
William Murray
Joseph O'Hearn
Pentair, Inc.
Supfina Machine Co. Inc.
Patrick Tunney
W&H Corporation
Raymond Wright
Richard Vandeputte



Recruitment & Retention 2019-20

Overview

When asked last fall what led students to choose IEP, some freshmen indicated that more personalized IEP activities played a role in their decision. As such, this year the IEP worked more closely with Admissions staff to aid in its recruitment efforts. Though URI's new "Engineering the Future" and "Like a Ram" Days, IEP staff and students were able to connect with students who specifically were on campus to learn more about becoming engineers. When URI Admissions began offering virtual information sessions to prospective students due to the outbreak of COVID-19 this spring, IEP played a role in all four College of Engineering sessions and even hosted two of its own. In regards to retention, having received some events funding through the College of Arts and Sciences, program staff were able to host social events that encouraged students to bond with and learn from international students and older peers, feeling more comfortable to ask for advice and maintaining/cultivating their motivation to continue participating in the program.

A total of nine student ambassadors worked with IEP staff and directors this year, attending such events as: Open Houses, IEP Freshmen Orientations, a Freshmen Social, high school visits, lunches with prospective students during Like a Ram days, community-building activities like an IEP Trivia and an IEP game night open to both IEP students and international students, and a livestreamed "Ask the Ambassadors" info session. During the IEP virtual Admissions webinars, the students shared their experiences with prospective students and enthusiastically engaged with the audience during the related Q&A sessions. In addition, they also worked to create a few "Ambassadors Tips" videos and to assemble resources that students could use to engage with their studied languages/cultures outside of the classroom. Some have even expressed interest in participating in language activities over the summer with their younger peers in the program.

Offsite Visits Completed

Wachusett Regional High School	Holden, MA	Melissa Schenck
West Warwick High School Career Fair	West Warwick, RI	3 alumni
Pentucket Regional High School	West Newbury, MA	1 alumnus, 1 student
Mt. Pleasant High School	Providence, RI	Melissa Schenck, Dir. Iñaki Pérez-Ibáñez, Prof. Vinka Craver
Classical High School	Providence, RI	Melissa Schenck, Prof. Tatsushi Fukunaga (JPN) 3 alumni, 1 ambassador
Rogers High School	Newport, RI	Melissa Schenck, 4 alumni
Cranston High School East	Cranston, RI	Melissa Schenck, Dir. Lars Erickson, Chuck Watson (COE Diversity) 2 alumni, 2 ambassadors, 1 student



Recruitment & Retention 2019-20

Offsite Outreach Impact Statement from Lauretta Lunghi, Language Department Chair at Cranston High School East:

They thought that the presentation was interesting. They hadn't considered a career choice in conjunction with language learning and were not aware of the number of programs that include a language learning component. The URI representatives shared their personal experiences with our students and that resonated with them. Prior to the presentation, some had thought about studying abroad. However, they didn't think that it would be possible financially. Chuck told them about financial aid and other resources/possibilities that are available at the University. That was a real plus for the students who come from modest backgrounds. They really enjoyed talking with him. They found him to be very open and sincere, and enjoyed the personal touch he and the students provided.



Spring '20 visit to Cranston High School East - left to right: Josh D'Ambra, Laura Parra, Chuck Watson, Lars Erickson, Preston Steele, Renee Gordon, Cristian Witcher and Melissa Schenck



J-Term participants mingle with alums and current students from IEP and TUBS at El Parco Pizzeria in Braunschweig, Germany.

J-Term 2020 - Piloting New Strategies

While reformulating the preparation process for students going abroad in their fourth year, the IEP piloted some new ideas and activities with this year's outgoing German J-Term participants. Students participated in cultural identity exploration activities, learned how to frame cultural observations more objectively, and were encouraged to take a more active role in their own intercultural development. While abroad during these two weeks, participants engaged openly with program staff in Q&A about what they were seeing, and together tackled cultural challenges they faced (ie. eating vegan in Germany). Some sought to establish contacts with Germans that they could keep in touch with through social media following their return. Other students were even observed learning to play regional games with others they met and having long discussions with locals about stereotypes and cultural differences, learning both about themselves and the individuals they met. In addition, to address students' reported need and desire for more personalized vocabulary on prior IEP surveys, they were tasked with creating and maintaining their own vocabulary lists on a daily basis, which could include interesting phrases, technical words and local expressions. Each day, students came away feeling like they had learned something. These tasks, among others, appear to have led to higher than expected IDI gains, the establishment of a German Club at URI, increased interest (especially from the freshmen in the course) in participating in IEP events and even living in the ILLC! Our hope is that strategies such as these will lead to increased retention and not just of these J-Term students, but also program-wide when deployed on a larger scale.



Student Awards

Beatrice S. Demers Foreign Language Fellowship

8 IEP/IEP-affliated students received the prestigious Demers in 2020!

University Excellence Award in Biomedical EGRDylan Kennedy (CIEP)

University Excellence Award in Industrial & Systems EGR

Kelly Domogala (SIEP)

University Excellence Award in Mechanical EGR

Mark Keenan (GIEP)

University Excellence Award in Ocean EGR

Sandra Deeb (FIEP)

University Excellence Award in Chinese

Zachary Smith (CIEP)

University Excellence Award in French

Sandra Deeb (FIEP)

University Excellence Award in German

Maeve Story (GIEP)

University Excellence Award in Italian

David Guevara (IIEP)

University Excellence Award in Spanish

Kelly Domogala (SIEP)

French Studies Excellence Awards

Lindsay Pisapio (FIEP)

Robert & Judith Ayotte Scholarship

Raymond Turrisi (FIEP)

Lindsay Pisapio (FIEP)

Teodoro Raffaele Diaco Excellence Scholarship

David Guevara (IIEP)

Brian DuBois (IIEP)

Evan Arnott (IIEP)

Otto Dornberg Award

Austin Clark (GIEP)

Eric Gardiner (GIEP)

Kyle Stewart (GIEP)

German-American Cultural Society Award

Matthew Cecchini (GIEP) Anastasia Paraliticci (GIEP)

John Grandin Scholarship Award

Julianna Martinez (FIEP)

Hasbro Scholarship for Chinese IEP/IBP

Dylon Lo (CIEP) Alex Cerullo (CIEP) Jordan Beason (CIEP) Mary Palys (CIEP/Flagship)

Shawn McBride Award

Brian DuBois (IIEP)

William & Pauline Silvia Award

Gianni Figueroa (SIEP)

Sharon Wallace Award

Kayla O'Connor (GIEP)

Nelson White Award

Computer Engineering – Timothy Boyd (GIEP)
Industrial & Systems Engineering – Robyn
Johnson (SIEP)

Ocean Engineering – Lindsay Pisapio (FIEP)

Barbara Woods Memorial German Studies Award

Samantha Adams (GIEP-O) Rachael Bjorn (GIEP) Jeff Kimmerlein (GIEP)

Frank L. Woods Memorial Scholarship

Frankie Marrone (GIEP) Steve Sullivan (GIEP) Sinna Vaughan (GIEP)

Wroe Family Award

Rebecca Meyers (GIEP) Monika Neal (GIEP) Anastasia Paraliticci (GIEP) Brendan Winne (GIEP)

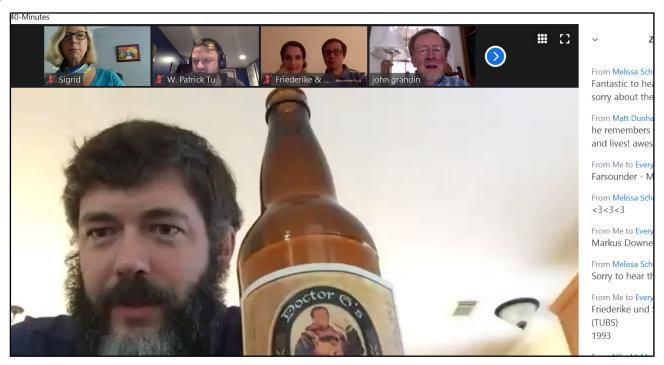


APPENDIX



Dr. John Grandin's virtual 80th Birthday

In lieu of the planned 275th birthday celebrations of TU Braunschweig on June 11th and an alumni gettogether on June 12th where we would also have celebrated John Grandin's 80th, we organized a surprise virtual toast to the beloved founder of the IEP. Friends of the IEP and 25+ IEP alums, some dating back to the very first generation of graduates from '93-'94, joined in from Germany, CA, CT, FL, MA, MI, RI, TX and shared their favorite memories, anecdotes, photos, greetings and toasts to Dr. G. /Dr. G's IEP Program:



A Note from Alum Nika McManus for Dr. John Grandin's Birthday - 05-22-2020

The work, the details, the relationships and the possibilities that the International Engineering Program prepares these global students for is infinite!

Dr. Grandin, Professor Emeritus of German, Director Emeritus and Founder of the International Engineering Program has helped numerous students receive an excellent, unique, one-of-a-kind global education with the University of Rhode Island and with Technische Universität Braunschweig!

Dr. Grandin has been working non-stop to provide the students with the security, the knowledge, the experience and the education the students are proud of, and are respected for!

The prestigious awards Dr. Grandin has received, the relationships Dr. Grandin has established and the support Dr. Grandin has provided helped and inspired the students reach their challenging goals and dreams!

We are all deeply appreciative and forever grateful to Dr. Grandin!

With gratitude, Nika McManus

Please also view the <u>YouTube video</u> Melissa Schenck put together for this occasion with photos of John and other IEP staff and alumni throughout his years with the IEP!



International Internships Cut Short, but URI Students Return with Valuable Experience

KINGSTON, R.I. - June 1, 2020 - When the University of Rhode Island switched to remote learning in March due to the COVID-19 pandemic, it was a huge adjustment for students and faculty. For students who were studying abroad at the time, it meant a premature end to their international experience.

The 53 students in URI's International Engineering Program were studying and working in eight countries in Asia and Europe when they were brought home to the United States a few weeks into the spring 2020 semester.

Making the Best of the Situation

While it was impossible to duplicate the experience of a six-month internship at a global company while immersed in a foreign culture, IEP Executive Director Sigrid Berka scrambled to find internships locally for the students for the remainder of the semester or during the summer.



GIEP students pose in front of the Brandenburg Gate in Berlin. Left to right: Monika Neal, Rebecca Meyers and Kayla O'Connor

"When the students were abruptly recalled from their internships abroad, I turned to our advisory board, IEP alumni and engineering faculty to place the students into internships and research positions so that they could continue their work in the United States," said Berka.

The responses from the board members, alumni and faculty led to several internships, despite some companies experiencing hiring freezes at the time.

"It was heartwarming to see the overwhelmingly positive response by our alumni and faculty to find internship and research opportunities for our students," said Berka.

Although they were only abroad for the semester of study and a few weeks of interning, the engineering students gained the valuable cultural experience of studying and working in new surroundings while using a language they learned at URI.

A few of the students shared their experiences.

Kayla O'Connor

Majors: Chemical engineering and German **Internship:** Four months of research at Fraunhofer Institute for Surface Technology while studying at Technical University of Braunschweig in Germany. Also placed at BASF in Ludwigshafen, Germany, for six-month internship, but could not complete it.

Hometown: Pascoag, Rhode Island

"I grew so much more while abroad than I ever thought I would," said O'Connor. "Learning and living in the German and



Kayla O'Connor visited the Rathaus-Glockenspiel in Munich with fellow GIEPers Aaron Hertzer (L) and Nicholas Akers (R).



European culture was eye-opening in every aspect. Unlike just visiting a place for a short time, we truly got to live in Braunschweig and explore all corners of the city."

At Fraunhofer IST, O'Connor worked in the atmospheric pressure plasma processes department.

"It was my first time using plasma to conduct experiments," said O'Connor. "My internship began with a lot of research on producing hydrogen through plasma conversion to use as a source of renewable energy. Through my research, I found studies involving methane and different alcohols, which because of their high hydrogen to carbon ratio, were desirable to use in this sort of reaction."

O'Connor also learned what the German work ethic is like.

"They are very time oriented and when it is said that something will be done by a certain time, that is what is expected," said O'Connor.

Oliver Hazard

Majors: Electrical engineering and Spanish

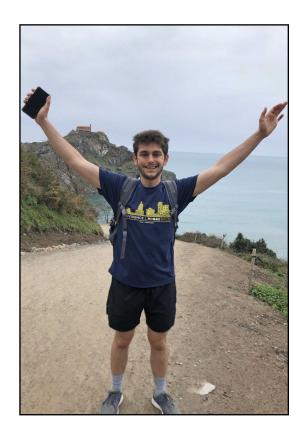
Internship: Worked at CAF Turnkey & Engineering/ Ennera, studied at University of Zaragoza in Spain **Hometown:** North Smithfield, Rhode Island

"I met many people from different parts of Spain," said Hazard. "I learned about their views on world issues, culture and their values. I became much more aware of how others think and it helped me gain a more open mindset."

Hazard worked with the engineering team in the energy division of CAF TE Ennera to calculate the performance of the solar plant.

"We created a graphic to display the plant's performance, as well as other parameters to the client," said Hazard. "Plant performance is important because at the inception of the project, the client and company agree contractually to a certain rate of production. If this is not met, the company is financially responsible to reimburse the client for the lost production."

The experience taught Hazard about the business and engineering aspects of renewable energy, a subject that had influenced his decision to enroll in the electrical engineering program at URI.



Oliver Hazard, SIEP, visited the island of San Juan de Gaztelugatxe, located along the Bay of Biscay in Spain.

"I learned what makes a solar plant financially feasible and what is expected from the developer," said Hazard. "I also learned about the different technologies used in solar energy and which solar solutions make sense for a particular project."

Scott Breault

Majors: Mechanical engineering and German

Internship: Worked at ZF Friedrichshafen AG, studied at Technical University of Braunschweig and

the Institute for Vehicle Technology in Germany

Hometown: Milford, Connecticut

Long before Breault traveled to Germany for his internship, he was excited about the



opportunity that awaited him.

"Back when I was still in high school, I learned about URI's German International Engineering Program when I saw a flyer of a student who was interning at BMW," said Breault. "I fell in love with URI's Kingston campus, as well as the idea of marrying my passions for cars and innovation."

Once in Germany, Breault relied on a strong support system to make the adjustment to a new culture.

"Luckily, I had tremendous support from URI, a great group of friends and a roommate who moved to Germany in 2015 from Ukraine," said Breault. "My roommate and I bonded over the challenges of learning the language and the intricacies of daily life."



German IEP's Scott Breault at a flea market in Braunschweig, Germany.

David Guevara

Majors: Mechanical engineering and Italian

Internship: Worked at Grastim JV, studied at Università

Degli Studi di Napoli Parthenope in Italy **Hometown:** Lincoln, Rhode Island

Like O'Connor and Hazard, Guevara also did an internship related to renewable energy.

Guevara worked for Grastim JV, a company which specializes in energy management. The company owns and manages cogeneration plants in multiple countries.

Cogeneration, otherwise referred to as combined heat and power, is a method of producing energy that is much more efficient and environmentally-friendly than energy produced at a traditional power plant.

"I was in charge of logging the time that the engines were running and when they weren't," said Guevara. "I also recorded the reasons behind any down time."

Of course, a stay in Italy would not be complete without indulging in some great Italian cuisine.

"I learned so much about the Italian culture, but my favorite experience might be learning how to cook multiple authentic dishes from one of my friends whom I met in Italy," Guevara.



David Guevara, Italian IEP, in Rome in front of the Altar of the Fatherland, a national monument built in honor of Victor Emmanuel II, the first king of a unified Italy.

Landing on Their Feet

Thanks to a lead provided by Samantha Meenach, associate professor of chemical engineering at URI, O'Connor found temporary work upon her return at Bradford Soapworks in West Warwick, Rhode Island.



"I'm working as a lab technician in the application lab to help formulate and press new soap formulations that are being sent to Bradford's clientele before being set for production," said O'Connor.

Hazard and Breault both landed internships at the German company PI (Physik Instrumente) in Auburn, Massachusetts. David Rego, who graduated from URI's German IEP in 1999 is the vice president of sales and general manager. When Berka asked if he could place some of her students, he gladly obliged. He also agreed to join the IEP Advisory Board.

"PI makes precision motion equipment for a wide variety of industries," said Breault. "I look forward to building upon my engineering skills and hopefully I'll get to use my language skills by connecting with colleagues at their headquarters in Germany."

When Guevara returned to the United States, Berka connected him with URI Professors Mohammad Faghri and Constantine Anagnostopoulos to assist in their research on microfluidics.

"I conducted research on paper-based actuators for point-of-care diagnostics," said Guevara. "Paper-based diagnostic devices are becoming more and more popular every year because of their ease of use, portability and low cost."

Since Guevara couldn't gain access to the lab at URI, his role mainly consisted of searching for related literature online.

Helping with the Coronavirus Response

Some students who weren't assigned internships at companies joined URI engineering faculty in battling COVID-19. A few of those students included:

Vanessa Kamara, biomedical engineering and German IEP, worked with Associate Professor Kunal Mankodyia on his efforts to build respirators and ventilators with the URI Rapid Responders team of scholars and companies

Alexis Charpentier, electrical engineering and Spanish IEP, conducted research with Professor Manbir Sodhi, on using 3D printing to aid the rapid response efforts

Aaron Hertzer and **Jeffrey Kimmerlein**, who are both mechanical engineering and German IEP students, joined Associate Professor Tao Wei on the Ventilator Project, a statewide effort to collect and refurbish sleep apnea machines for use in hospitals.



Asian Pacific American Heritage Month:

Highlighting Asian American Engineers

May 11, 2020 – Sarah Koenig is Deputy Production Chief, Industrialization at Pratt and Whitney. She is responsible for the industrialization of key configuration changes on the Next Generation Product Family (NGPF) Regional Jet family of engines. She earned her BS Industrial Engineering and BA French from the University of Rhode



Island and her MBA from Carnegie Mellon University. Sarah is a SWE Lifetime member.

Tell us about your background: Where are you from, what attracted you to STEM?

I was born in South Korea and adopted by an American family when I was an infant. I grew up in New York, went to college in Rhode Island, and then moved to Connecticut for work. My interest in engineering was first sparked by my high school physics class—it was the first science that really clicked for me, and I loved it. As I learned more about engineering, I realized what a good match it was for my methodical approach to things.

What has been the biggest obstacle you've overcome to be where you are today?

Believe it or not, it was my own fear. When I first started in my career, I was afraid to disagree with others, either because they might get angry at me or because I might be wrong. Over time, I learned to trust my instincts, and speak up. If they got mad at me, so what? As long as I was objective and factual, it wasn't about them personally. I gained confidence in my knowledge and experience, and knew that even if I was wrong, that my position was made to the best of my ability, and it could be an opportunity to learn.

What has been your personal experience as a (double) minority in STEM? What (good or bad) surprises have you encountered?

Early in my career, I experienced more adversity based on my age than my gender or ethnicity. I still experience it to some degree today, since I look younger than my actual age. I have experienced comments such as "I've never worked for an Asian before" and "I didn't know that you were Asian" (thanks to the increasingly virtual world that we work in across the country and world) like it was going to be a factor in how things would be moving forward. For the most part, I have been lucky to have coworkers and managers who believe that my gender or ethnicity does not affect my performance.

What's the best thing to happen since you became involved in SWE?

The friendships! My closest friends (who are also my most trusted advisors) are all people I've met through SWE. No matter what personal or professional problem I may be facing, I know that there is someone in my SWE network who I can turn to for help, advice, or a sympathetic ear. I have several SWE friends who no longer are local (or never were), but we make an effort to see each other whenever possible, whether it be at the annual conference or elsewhere. What may have once been a solo business trip dinner becomes a time to catch up over good food and wine!

What's it like to be an engineer in your field?

I have often suffered from Imposter Syndrome because I have spent my career in quality, supply chain, and operations, and never worked for the engineering organization at my company despite having an engineering degree. My engineering training provides me with a methodical approach to problem-solving the many challenges that present themselves and allows me to understand the more technical problems in order to offer better solutions or calculate the impact on my work. I rely on my ability to work crossfunctionally more than my technical abilities, most days.



Battery Research Leads German Student to URI, Earns Master's Thesis Award

Research on lithium ion batteries was recognized by URI's Graduate School

KINGSTON, R.I. – May 8, 2020 – Lukas Duwe learned a great deal about lithium ion batteries while earning his bachelor's and master's degrees in mechanical engineering at the Technical University of Braunschweig in Germany.

Curious about the electrochemical properties of batteries, Duwe decided to pursue a second master's degree in chemical engineering at the University of Rhode Island through URI's dual master's degree program with TU Braunschweig. When Duwe arrived at URI in 2018, he found himself in an unfamiliar environment, but one that was very welcoming.

"Everything was new to me, but I received so much support at URI," said Duwe. "Thanks to everyone at the Graduate School, the Office of International Education and the chemical engineering faculty, I never felt like I was on my own."



On his first day of school, Professor Arijit Bose showed Duwe where he would be conducting his research."I remember Professor Bose showing me all of the characterization tools and the battery laboratory," recalled Duwe, who lives in Dresden, Germany. "From that moment, I couldn't wait to start my research." Duwe decided to do his thesis project on an "All Solid Lithium Ion Battery for Safety and Stability."

The project required Duwe to develop a lithium ion battery in which the traditional organic liquid electrolyte was replaced with a solid polymer electrolyte. Solid polymer electrolytes are non-flammable and have reasonable mechanical rigidity. The goal was to overcome the safety issues that plague existing batteries.

"The challenge for Lukas was to develop a processing strategy that would allow the solid polymer electrolytes to maintain their integrity, while allowing for good contact between them and the active materials in the electrodes," said Bose, who served as Duwe's thesis advisor. "Lukas developed several alternate schemes and eventually determined which one was the best."

Bose was impressed that Duwe was able to complete all of his research in one academic year.

"It's a great testimony to Lukas that he did all of this in the time he had at URI, with very limited guidance from others," said Bose. "His comprehensive research is an important contribution to the rapidly evolving field of solid lithium ion batteries."

Duwe's research earned him the 2020 Excellence in Master's Thesis Research Award from the URI Graduate School.

"It feels great to be acknowledged for the hard work I put into my thesis," said Duwe. "This would not have been possible without the great mentoring and advice I received from Professor Bose, the support of my research partner, Michael Molinski, with whom I spent endless time in the lab, and of course all my other fellow students and the entire faculty, who were always happy to help."

Bose had high praise for his advisee.



"Lukas was by far the top student in my class," said Bose. "His thesis is the best master's degree work that I have had the pleasure of supervising in my 37 years at URI."

Duwe graduated from URI in the spring of 2019. He recently began working as a sales and proposal engineer at ITM Linde Electrolysis in Germany. The newly incorporated company provides global green gas solutions on an industrial scale.

"I want to help shape how the world uses sustainable energy, ideally by applying my background in electrochemistry, while learning more about the market and economic environment," said Duwe. "This challenging position can combine what I've learned with what I hope to learn in the future."

Five URI students awarded prestigious NSF graduate research fellowships

KINGSTON, R.I. – May 18, 2020 – Five University of Rhode Island students have been recognized by the National Science Foundation as Graduate Research Fellows, a distinction that includes funding to cover three years of their graduate education plus an annual \$34,000 stipend.

Selected for the honor are Megan Guidry of Luling, Louisiana, who will enroll as a doctoral student at URI in the fall; Michelle Hauer, a doctoral student from Chicago, Illinois, studying oceanography; Justin Hayes, a chemical engineering and Spanish major from South Kingstown, Rhode Island; Alexa Leone, an ocean engineering major from Hillsborough, New Jersey; and Elaine Shen, a doctoral student from Houston, Texas, studying marine ecology.

Justin Hayes

"It was a great feeling because I had spent well over 100 hours researching and talking to faculty about the fellowship and then writing, rewriting, and rewriting the proposal over a six-month span," said Hayes, a Department of State Gilman Scholar who spent last year studying in Spain as part of URI's International Engineering Program. "The fellowship will allow me greater flexibility in picking a research group, and I will be able to be more creative in developing my own research project."

While he isn't yet certain what specific research he will undertake in graduate school, he expects it will be genetic engineering for applications related to the gut microbiome, bioplastics or pharmaceuticals production. He hopes to eventually start his own biotechnology company related to his research.

Since 1952, the National Science Foundation has funded more than 50,000 Graduate Research Fellowships out of more than 500,000 applicants. Forty-two fellows have gone on to become Nobel laureates.





URI students use downtime to help during pandemic

by Lynzi Delucci, NBC 10 NEWS - April 17 2020

"My hobby is kind of taking apart things and fixing them up," University of Rhode Island senior Aaron Hertzer told NBC 10 News.

Hertzer found a good way to use his hobby on Friday along with some other students whose semesters were cut short.

"I don't really have anything else going on other than some online classes so I figured this would be a great way to do my part in the community," fellow senior Isabella Silverman said.

Hertzer and Silverman decided to volunteer their time collecting, cleaning, and handingoff around 50 donated c-pap and bi-pap machines.



"They come in here, they get sanitized and basically binned into different types," R.I. Commerce Corp. Director Pete Rumsey said.

Then, they get refurbished with new tubing into backup ventilators, available to distribute to local healthcare facilities to combat COVID-19.

"So basically, making them as like new as possible," Rumsey.

"You can consider them as lower grad ventilators," electrical engineering professor Tao Wei said.

Wei showed NBC 10 the space the university has provided for the project.

"What we need to do is just reprogram these machines and provide necessary pressure at a given time to the patients, so that's what we're doing here," Wei said.

The plan is to have these available in a matter of days, for those who need it.

"It's a resource crunch and this is a plan B," Hornstein said.

The project is the brain child of Hornstein, a Providence resident, who said he's happy to see his vision come to life.

"It's really heartwarming to see folks who want to help."

The Ventilator Project is continuing to collect machines at different locations, including fire stations. For more on where you can drop yours off and if your machine is appropriate to donate, click <u>here</u>.