

Colombia Grant

Great news! URI was awarded a 25k grant by the 100,000 Strong in the Americas Innovation Fund. This is the second grant the Spanish IEP has won!

This academic year, URI will be collaborating with SENA Centers in Barranquilla – the National Training Service in Colombia on an innovative and cross-cultural project called “Sustainable Prostheses - An All Inclusive Approach to Designing in the Americas”. The primary goal of this program is to create a new model of engaging engineering faculty and students from the United States and Colombia in collaborating on the creation of sustainable prostheses that will have a socio-economic change. Sharing the complimentary expertise in sustainable prostheses engineering, joint teams across the two Americas will create affordable prototypes to address the enormous need for low-cost, light-weight prostheses in Colombia and the US.

Both teams at URI and SENA are led by two faculty members and include four students of diverse background and disciplines. The URI team includes four

students of biomedical, mechanical and electrical engineering – Laura Parra (BME), Cristian Witcher (MCE) and James Gannon (ELE) are Spanish IEP students and are already conversing with their team mates in Colombia in Spanish. Furthermore,

Corvah Akoiwala (BME) joined the team with solid 3-D Printing expertise that he will be teaching to his team mates. We are very pleased that our students will be guided and taught by our professors Kunal Mankodiya, Assistant Professor of Electrical, Computer & Biomedical Engineering, and Manbir Sodhi, Professor of Industrial & Systems Engineering. SIEP Director Silke Scholz will be providing the program management and cultural component at and beyond URI. Last but not least – and most importantly – our teams also include four Colombian upper extremity amputees who take an active part in the creation of the very prosthetics that they need.

Our project will include four key activities:

We start with cross-country and virtual teamwork in this spring semester and learn about the needs and specifications

for prosthetics of the four amputees.

In June we will welcome the SENA Team at URI to work on the creation of the prostheses while performing a Designathon. We are excited that they will be living in our IEP Houses for two weeks!

In August, it is our turn to travel, work and study abroad in Barranquilla. For two weeks our students will be fine-tuning the prostheses together with their colleagues at SENA. The four amputees will receive a new prosthetic arm.

Finally in November, we will present our model and project jointly during our 2017 Colloquium on International Engineering Education in Arizona in the fall.

This is the year of diversity in the SIEP, and we are happy to welcome Colombia as a new location and opportunity of professional development for our global engineers. Please stay tuned for more news regarding this exciting project.

Press release at: <https://today.uri.edu/news/uri-engineering-students-to-make-prosthetic-arms-hands-for-amputees-in-colombia/>

THE UNIVERSITY OF RHODE ISLAND INTERNATIONAL ENGINEERING PROGRAM

Global Update

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Director's Notes



Dr. Sigrid Berka,
Executive Director

Reflecting on the IEP's educational mission I would like to begin with a word from President Dooley taken from his personal blog where he underscores the continued need for global engagement

“...global connectivity has dramatically heightened our awareness of the interests, opportunities, and challenges that all humanity shares. Prosperity is now mutual; economic growth in one nation is dependent upon growth in many others. A country's economy, society, and even its politics are no longer independent of the rest of the world. ... No single country – no matter the size of its economy, the capabilities of its military, or the heights of its walls – can overcome these challenges by itself. The nations of the world must work collaboratively. And the world's research universities must work collaboratively to discover the knowledge and develop the tools that will be required. The University of Rhode Island is already globally engaged to assist in these efforts, and our commitment will only grow over time.”

The spectrum of the IEP's winter and spring activities reflect – in spirit and practice - the values above. It is especially noteworthy that our J-term/internship opportunities have expanded to several new countries, to Belgium, Costa Rica, Japan and Puerto Rico (pp. 3-4)!

SIEP News: Grant Awarded for Project in Colombia



'Sustainable Prostheses – An all-inclusive approach of designing in the Americas' team: First row (left to right): Corvah Akoiwala (BME), Cristian Witcher (SIEP/MCE), Laura Parra (SIEP/BME) and James Gannon (SIEP/ELE); Second row (left to right): Dr. Sigrid Berka (Executive Director IEP); Dr. Kunal Mankodiya (Assistant Professor Electrical, Computer, and Biomedical Engineering); Not Pictured: Dr. Manbir Sodhi (Professor Industrial and Systems Engineering).

Winter J-terms this year included the annual Max Kade sponsored study tour to Germany that opened students' eyes to German history, technology and culture (p.4) as well as a brand new Japanese J-term during which students were exposed to Japan Past and Present and were able to earn credits towards the new Japanese Minor! (p.2-3)

This Spring, we are very happy to host Professor Sandro Moraldo on our campus who came to us from the University of Bologna in Italy and who still regularly guest lectures at his alma mater, the Universität Heidelberg. Prof. Moraldo is teaching a course on *The Culture-Political History of Germany – 1945 to Globalization*, and one on *Short Films in Germany - From Theory to Practice* as this year's Distinguished Max Kade Visitor. Asked about what he enjoys most regarding his stay at URI, he elaborates that aside from teaching our IEP students he “love(s) Mark's cuisine in the TI house. Not only his muffins are delicious and the right start into the day but also for me he's a real master chef. I'm Italian and I know what I am taking about!” Sandro, his wife and daughter live in Narragansett and

integrated rapidly into the German Section and life in RI. Welcome the Moraldos!

Great news: Spanish IEP director and PI Silke Scholz and her team were successful in applying for a \$25K grant on “Sustainable Prostheses – An All Inclusive Approach to Designing in the Americas.” This grant is part of the 100k Strong in the Americas Initiative and while URI and SENA Centers collaborate this year, we will open yet another door to the Hispanic world for our Spanish IEP students (p. 4). More grant writing is underway this spring...

Board members, you should by now have received the Save-the Date postcard inviting you to our **30th IEP Anniversary Reunion** which will be held after our morning board meeting on **Saturday, June 3rd from 3–7 p.m.** at the URI Alumni Center, under a tent on the lawn. Campus tours will be offered at 2 p.m. Alums, please watch out for e-mails by a class agent representing your year of graduation!

I hope you will enjoy reading our exciting Spring Global Up-Date!

Winter J-Terms 2017 to Germany and Japan

This year's Study Tour 2017 “Germany Today: Science, Technology, and Culture” was generously funded by the Max Kade Foundation, and led by Sigrid Berka and Anett Geithner, our DAAD Lecturer. Aside from visits to the German Parliament, History Museum, Maxim Gorki Theater students were introduced to new companies such as Vattenfall, Philips and Porsche. We owe a great thank-you to our current GIEPers at TU Braunschweig and TU Darmstadt who presented their impressive research in various institutes and encouraged their younger peers to follow in their footsteps. Another highlight was seeing Don Giovanni at the Frankfurt Opera, in Italian with German subtitles, a first for many in the group!



A visit to the new Porsche plant in Leipzig.

Students' final statements on the blog like the one from ELE & German major Andrew Mace confirm that the value of a short-term, faculty-led tour ahead of the entire year abroad should not be underestimated: *I feel as though I have improved my understanding of German culture just from my two weeks there. Obviously, I have so much more to learn and understand, however I could see a visible improvement of my cultural awareness.*

You can follow the group by visiting our blog at <https://uristudienreise2017.wordpress.com/> where you can find enthusiastic student statements, videos and pictures highlighting German history, technology and culture. ***

Dr. Masako Hoye (Languages) and Dr. Timothy George (History) were co-instructors in January 2017 for “Japan Past and Present,” URI's first J-Term course in Japan. The two-week study tour focused on the 17 students' interests in culture, language, and history. Students visited the cities of Tōkyō, Kyōto, Hiroshima, Kōchi, Kamakura, and Narita; made a day trip to the island of Miyajima with its famous Itsukushima Shrine; and spent a night in a temple at Kōyasan, the mountaintop headquarters of Shingon



Outside Ryūgaō Cave near Kōchi with Kōchi University students and faculty

Buddhism, where they ate vegetarian temple food and rose early to observe the monks' chanting. In Kōchi they worked with Kōchi University students to interview sellers in the city's famous outdoor Sunday Market and then made formal presentations of their findings.

Throughout the trip the students investigated one of four topics of special interest and on their final day in Japan the groups made a formal presentation to a seminar class at Waseda University in Tōkyō. Perhaps the most memorable experience was a private talk at the Hiroshima Peace Memorial Museum by a survivor of the atomic bomb.

THINK BIG WE DO™



Experiences from Abroad

By the end of February, most of our students abroad have moved to a new city to begin their six-month internships. Here are a few of their experiences and expectations..

Alex Jenkins, CIEP/CHE/Chinese Flagship
Beijing, China

"As part of the Chinese IEP I am spending a 10-month period at Beijing Union University (BUU). During the fall semester I enrolled in language classes and a BUU biochemistry course. It was a fantastic opportunity to be discussing metabolism of proteins and other biological functions exclusively in Chinese. During the spring semester I will enroll in full time language courses for 4 days a week and then attend my internship one day per week. My internship is for a technology startup company called Beijing AoRuiTe Science & Technology Company where my main responsibilities include translating technological journals and user manuals from English to Chinese. My goal for the internship is to expand my engineering vocabulary with the hope that by the end of my internship I'll be able to have thorough technical discussions with my Chinese colleagues. Apart from my classes and internship, I've found a lovely community in Beijing. Upon my arrival I joined Beijing's co-ed elite Ultimate Frisbee Team, Big Brother. During New Year's Eve I coincidentally met, board member of the IEP, Clay Pell. Even 6000 miles away from Rhode Island you can still run into friends of URI!"



Alex Jenkins (top-center) pictured with Beijing mixed Ultimate Frisbee team, Big Brother, at culminating fall tournament in Hong Kong.

Jack Kahrs, FIEP/ELE
Brussels, Belgium

"As an intern at Bernard Energy Advocacy I work on different projects in the energy sector, mostly concerning electricity transmission, interconnections, energy storage, and power trading. My tasks range from research and presenting information to my superiors, to developing project roadmaps for clients, including project development, consulting, industry monitoring. Depending on the project, I write in French or English, although I always communicate with my co-workers in French. An interesting project I was recently assigned to is the development of a new power trading network for the Gulf countries (Bahrain, Kuwait, Saudi Arabia, UAE), which would allow for stock exchange inspired power trading to occur between the countries, stimulating the industry and promising the full utilization of the grid. I'm hoping the year of Arabic I took at URI will help me in one way or another.



Jack Kahrs visiting Prague.

As you can see, the work is very international, as we have clients from all over the world (including the US!). Probably the most important thing I've learned is that everybody needs energy, and it really is a great way to unite and bring citizens from different countries together. I am really excited to see what's next."

Brenno Ribeiro, GIEP/MCE
Weissach, Germany;

"My experience in Germany has been nothing but amazing. We started out the year at TU Darmstadt by taking a four-week intensive German summer course to prepare us for the winter semester. I took four courses during the winter semester, including a technical German class and a general automotive course. The German courses were challenging, but being in an environment with other students helped my German tremendously. I also participated in a research project with the Institute for Combustion Engines and Powertrains (VKM) during the semester. My project involved the temperature of different emission-related components in relation to the vehicle speed. It was very interesting working in a German research institute and it gave me a lot of insight into both the automotive emissions and research fields.

I am now preparing to move to Weissach, a small town near Stuttgart, for my internship segment of the year. I was fortunate enough to find housing in an all intern apartment very close to



Brenno Ribeiro visiting Altstadt Frankfurt (Old Town)

the company. I will be interning at Porsche in the pre-development department responsible for the development of engines and electric powertrains of vehicles several years before their public debut. I am excited for this part of the year, I've always been a big Motorsport and Porsche fan. I am so grateful for this opportunity."

Michael Logar, SIEP/OCE
Santiago, Chile

"During the fall semester I studied at Pontificia Universidad Católica de Valparaíso where I completed six courses. My favorite being "The Geology of Tsunamis". Where better to study earthquakes and tsunamis than one of the most prone countries in the world? In that course I had the opportunity to teach two classes, including one on the forces of a tsunami on a structure.

After the semester I moved from Valparaíso to Santiago where I began my internship with Baird. I am now an integral part of the engineering team working on many different projects in Chile and beyond. The first project I worked on was a structural inspection of a breakwater at the Port of Arica in the north of Chile. Currently, I am working with the team to create a map of the wave energy that could be produced off the coast of Peru. Every day I am learning something new that will make me a better engineer. I am working in my dream job, and to be doing so while speaking Spanish makes it even more enjoyable.

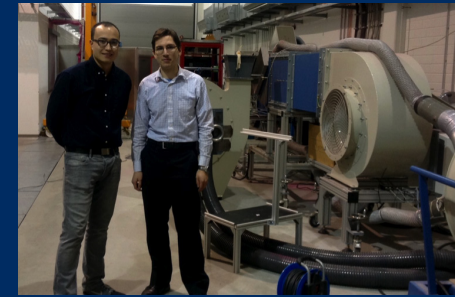
I have also made an effort to really see the country and surrounding region, including a memorable weekend bus trip to Argentina. I enjoyed an eight day hike known as the 'O' of Torres del Paine in Chilean Patagonia and explored the local culture in the Valparaiso and Viña del Mar area of Chile.

In the time that I have left I plan on taking advantage of every opportunity to get involved in a project, I also plan on perfecting the spanish language or "Chileno" as it is known here."



Michael Logar, participating in Bow tie Tuesday in the office

Michael Palmer, GIEP/MCE
Munich, Germany



Michael Palmer (right) and Ibrahim Brown (GIEP, MCE) next to a wind tunnel at the Institute of Engines and Turbomachinery.

one of the research institutes at the university. I was also fortunate enough to be accepted to participate in a research project at this same institute. It felt great to be working on tasks that could influence the handling of an engine, especially since the institute has such strong ties to major manufacturers like MTU. Recently, I have begun an internship at BMW's Research and Innovations Center in Munich. Here in Munich I live in a single room apartment provided by the company and every day I am excited to work at the beating heart of BMW. At work I am a member of a two-man team that coordinates efforts at a local production plant with the center in Munich. This means that I am able to interact with many of the departments in the company. As part of my work, I get to work closely with many Germans, which helps me with my goal of improving my language skills. On top of this, I am able to get a feel of how BMW works as a whole. Overall, I am looking forward to continuing my journey in Germany and learning and experiencing as much as I can."

Craig Smith, SIEP/MCE
Alajuela, Costa Rica

"Being a Spanish IEP student at URI means a lot to me. It has always been my dream to learn a language and travel the world to see different places and experience cultures different from my own. Already during my college career I have had the opportunity to study in Chile, Spain, and now beautiful Costa Rica, where I am just beginning my six-month internship with global medical device provider Boston Scientific. Being able to practice my Spanish skills in three very different countries has been especially rewarding and has greatly broadened my vocabulary and cultural understanding.

From participating in drumming parades and cider tastings with the Basques of Northern Spain, to coffee farm tours and exploring jungles and volcanoes with the "Ticos" of Costa Rica, seeing so many different places and experiencing many



Craig Smith in Cataratas La Paz, Alajuela, Costa Rica

unique cuisines and cultures has been a very enriching learning experience for me not only as a person, but also as a developing professional. I have met and worked with people that come from all over the world and the great networking I have achieved through this experience will certainly serve me well for many years to come. The IEP program is a can't-miss experience that has left me with life-long friends and memories, as well as making me a more well rounded, better prepared professional engineer ready to take on the world!"

Adam Nabb, SIEP/MCE
Humacao, Puerto Rico

"I will be completing a six-month internship with Bard Shannon Ltd, a division of Bard who develops, manufactures, and markets medical technologies throughout the world. Bard Shannon Ltd is located in Humacao, Puerto Rico. I am excited to be the first SIEP student to complete my internship in Puerto Rico. Previously, I had completed a summer internship with Davol in Warwick, which is another division of Bard. My position in Puerto Rico is as an engineering Coop in the Business Excellence department. The plant handles most of the manufacturing within the company and works with all of the products that I worked with during my time interning at Davol.

Within the Business Excellence department, I will be working closely with support groups such as labeling, packaging, and quality assurance. Due to the fact that the majority of products that Bard produces will be used within the human body, sterilization and proper handling is crucial. I will guide and execute continuing improvements within my areas, using Six Sigma techniques and lean manufacturing theory as a basis for changes.



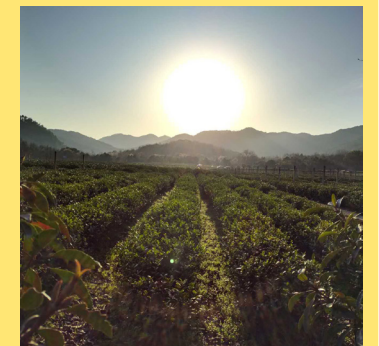
Adam Nabb dressed to enter the clean manufacturing room.

I am excited to experience the company from a completely different point of view, while continuing to improve my Spanish skills and learning more about the Boricua culture on the "isla de encanto." I am excited for the challenge of working in a Spanish speaking country and adapting the numerous languages differences between Spain (where I studied for six months) and Puerto Rico."

Zachary Tiang, CIEP/CVE
Hangzhou, China

"My name is Zachary Tiang (Chinese name 程泓杰) and this semester I have the honor of doing my professional internship with Hangzhou Architectural Design & Research Institute Co. LTD (杭州市建筑研究院有限公司). I am in the 5th Working Division that has worked on a project titled Hangzhou Green Office Park Masterpiece (Office Park 杰作杭城绿色商务引领). Currently my work involves green design

pre assessment. The designs created have to follow a specific green architecture guideline created by working professionals in collaboration with the government. It is similar to the third party verification system known as LEED (Leadership in Energy and Environmental Design) in the US. I review plans and designs to make sure everything proposed is in the assessment standards for green building. It is very interesting to see the difference in standards between China and the US and where the differences come from. The climate, availability of materials, and population factors are all vastly different in China and is reflected in the green assessment standards. The challenge of finding the differences is exciting and forces me to improve my technical vocabulary in Chinese. Another interesting challenge I face is my hour commute to work by bus and metro. Stepping onto a bus you can see a vast population of the working class; construction workers in hard hats, sanitation workers, business men in full suit and tie, even children in their school uniform. I see the daily life of the working class that fuels China and it's unbelievable how hard they work."



China National Tea Museum in Hangzhou.