What I did on my summer vacation
Villanova Engineering Faculty and Students Share their Summer Experiences

Sofia Bonner ’18 ME

“I went to the Grand Canyon and white water rafted down the lower half with my father and a group of other people. Nine days of intense heat, freezing water and beautiful starry nights, as well as rafting level 3-5 rapids in a six-person paddle boat were some of the most exciting days of my life. I'll never forget the anticipation before a big rapid or the endless white froth when in the middle of one. It was a unique experience of team bonding with my fellow paddlers and one I want everyone to try!”

Anthony A. Busa ’19 ChE

“I spent a month traveling through China with a photographer to explore traditional Chinese and Tibetan culture. I’m an amateur photographer and studied Mandarin all through high school so I thought it would be the perfect opportunity for a study abroad program, internship and vacation all in one.

We traveled to countless Chinese towns and Tibetan villages in the most rural parts of Sichuan, China and luckily my Mandarin skills returned and quite quickly expanded.

It was amazing to experience ancient-style rural life and to uncover the most beautiful places to photograph.”

David Castelli ’18 ME

"I interned for a company called Leviton, an electronics manufacturing company. I used my basic Solidworks skills that I learned at Villanova and enhanced them at this company by designing and constructing 3D models of test lab equipment. I was also able to use this CAD program to brainstorm and develop ideas to improve Leviton’s existing product portfolio."
Dr. David Dinehart, Professor, Civil and Environmental Engineering

“I spent part of the summer in Italy teaching ‘Architecture and Augustine.’ The seven Villanova engineering students in the course conducted a structural inspection of an Augustinian monastery, lived in community with the Augustinian friars, and had a behind the scenes tour of an Augustinian cloistered convent. Other adventures included visiting the Leaning Tower of Pisa, Lucca, Florence and Rome, where we had tickets to mass with the Pope in St. Peter’s Basilica.

My vacation time included an event for Coaches vs. Cancer where I got to hang with some Villanova folks, including Jay Wright, in Rochester NY.”

Ed Dougherty ’69 EE, ’86 MSCS, Director, Engineering Entrepreneurship

“This summer I lake tested the surface effect ship I’ve been working on for the Navy with a shipbuilder in Florida and Jamie Hyneman of Mythbuster fame. Eventually we hope to build a 165-foot boat that will ride on the surface of the ocean at 70 mph and be able to carry a great deal of weight. For the tests we built a seven-foot model and towed it around the lake while collecting data. My main charge was the design of the instrumentation package to read, record and wirelessly transmit pressure in the air chambers (they keep the ship up out of the water), power delivered to the ship, drag, and six degrees of motion 10 times per second. I expect that other Villanova professors and students will get involved simulating the 165 foot vessel.”
David Harvey ‘18 CE

“I worked as a research assistant for the University of Nevada-Reno in their Civil Engineering department. My responsibilities included helping to conduct a research project, which sought to analyze the effects of static and dynamic loading on sloped asphalt pavement. I also helped prepare and run dynamic modulus and beam fatigue tests. In addition to my research position, I also traveled to Sydney, Australia where I am currently studying civil engineering at the University of Technology for the fall semester.”

Hossein Hosseiny, PhD student

“I attended a research group project held by the National Oceanic and Atmospheric Administration at the National Water Center at Tuscaloosa, Al. We worked on flood inundation mapping techniques and methods to improve it. It was a great opportunity to work with 32 graduate students and six professors from different universities.”

Dr. Scott Jackson, Adjunct Professor, Chemical Engineering

“My wife, daughter and I bicycled the Great Allegheny Passage for four days from Pittsburgh to Cumberland Md. In so doing we climbed over the eastern continental divide, went through five tunnels and crossed a 150-foot high, 3/4-mile long viaduct. It was a great trip!! Lots of history, lots of scenery and lots of exercise.”
Vanessa Kungne, Chemical Engineering graduate student

“During my summer back in Cameroon, I was able to grow my business and also engage with the youth in my community. Also, I took part in International Youth Day 2016 speaking in a webinar organized by the Mastercard Foundation in partnership with the MIT Legatum Center for Development and Entrepreneurship, Ashoka (a global organization that identifies and invests in leading social entrepreneurs) and the African Leadership Academy.

In May 2016, I was featured in Forbes among their ‘30 Most Promising Young Entrepreneurs in Africa 2016.’”

Dr. Ross Lee, Fellow, Sustainable Engineering

“I worked on a research project sponsored by a local company, Gray Brothers, Inc. The project also involved Dr. Metin Duran, Professor of Civil and Environmental Engineering; Chemical Engineering Associate Professors Drs. Justinus Satrio and Michael Smith; two master's students in Sustainable Engineering, Maddie Spinner and Aly Perez; and undergraduates Hyo Won ’17 ChE and Michael Bossman ’17 CE.

The research, led by a team of professors including Drs. Metin Duran, Justin Satrio, Michael Smith and myself, focused on a new way to covert waste into useful bioproducts. Under Dr. Duran, the waste was first converted via anaerobic digestion to biomethane and residual products. Dr. Satrio’s research looked at the hydrothermal conversion of the digestate to useful products, while Dr. Smith studied the best way to realize the value from the biomethane via subsequent chemical conversion. Ensuring that this research factored in sustainability, I looked at each of these approaches from a whole systems thinking perspective.

We have made excellent progress; we already have a lab scale digester and hydrothermal conversion unit up and running, and a first generation Aspen analysis of biomethane downstream options nearing completion.”
Todd Levari, 56, Mechanical Engineering graduate student

“This summer as a daily routine, I worked for a slave driver at my job from 8 a.m. to 6 p.m., replaced the shrubs and roof to our house, maintained the cars and lawn, weeded my wife's vegetable and flower gardens every evening, and painted the kitchen and upstairs. Summer vacation? You gotta be kidding me!

When I was a college student we found work as farm hands through the summer. The cucumber fields were hot. That is why we stayed in school. So stay in school!”

Scott Miller ’18 CpE, Computer Science minor

“I served as a software developer intern at NASCENT Technology in Charlotte, NC. My summer project assignment was to port an existing Windows Forms application written in Microsoft Visual Basic called ‘SYNAPSE AGS Kiosk User Interface’ to the Linux operating system. It was quite challenging since the original program contains over 11,000 lines of code. I learned about databases, networks, programming in different languages, and how exciting it is to work in a professional environment. My intern position helped me to put book study into real world application and gain a perspective of how companies use engineering and computer science. I hope I am fortunate enough to have another opportunity to work at a cool company like NASCENT.”

Mark Orebiyi ’17 CE and Applied Mathematics

“This summer I had an internship with Michael Baker International in their Alexandria, Va. location. The company is a global leader in engineering, planning and consulting. I worked on projects with FEMA and PennDOT—mostly on conceptual designs for BMPs (best management practices) to try and reduce effluent nitrogen and phosphorous levels in Chesapeake Bay. The internship was a great experience and plan to pursue a full time position in the near future.

I also served as a resident advisor for the College’s NovaEDGE summer camp.”
Seri Park, Assistant Professor, Civil and Environmental Engineering

“I was on sabbatical at McGill University, Montreal, Canada. The whole family went to Montreal and my kids really enjoyed the French camp. It was a good chance for me, too, as I was able to practice French; I went to French elementary school in Greece. So besides my research about the roundabouts safety and sensor technology, our family truly enjoyed French culture.”

Catharine Scoboria ’18 ME

“Over my summer vacation, I worked as an intern at McCarthy Engineering in Boyertown, Pa. Over the past three months, I learned everything from how to use AutoCAD to how to remove ceiling tiles. My main project was a redesign of the HVAC system of a local school, and my days were spent sizing pipes, surveying and drafting. It was certainly a huge project, but it was a lot of fun, too, and I'm so thankful for everyone at McCarthy for showing me the ropes!”

Kevin So ’17 CE

"I spent the summer catching up with friends in my hometown, NYC, where I got to work for a construction company at the WTC. I contributed to the new major WTC Transportation Hub project and got to do daily photo-shoots to track the area’s progress, explore train tracks and tunnels several stories underground, travel and visit projects around the city area, and assist with many miscellaneous construction-related assignments."
Paul Tansey ’18 ME

“This summer I did not have an internship, I did not have a job, I did not study abroad, and I did not go on vacation; I started a business.” Read about Paul’s successful venture: “Lake Yachts.”