Alumni Features — Following in the long tradition of engineers who change the world, three recent graduates are celebrating new successes.

Michelle A. Riedman ’13 is investigating seismic soil-structure interaction analysis for nuclear facilities. She also has been performing fragility analyses (determining structural capacity distributions and failure probabilities). Employed at Simpson Gumpertz & Heger, a structural engineering firm near Boston, Michelle says her Civil Engineering courses have been put to great use.

“Many of the projects in our division (Engineering, Mechanics and Infrastructure) deal with structures that aren’t the traditional bridge/building civil structures,” she explains. The picture shown here, she says, is a finite element model of a hydro-electric turbine that she built and uses to determine deflections under gravity, temperature, preloading, and hydrostatic loading conditions.

Mitchel Wacholder ’14 is enjoying his new position as a project engineer with Kirchhoff-Consigli Construction Management in Albany, New York, a job he took after spending some time considering a variety of other options, including positions in the oil industry and in engineering/design and construction. “Although my decision didn’t grant me the highest salary I could have received, I chose what I am most passionate about,” Wacholder says. He says he is involved in all aspects of the construction industry, from contract management to field inspection and building renovation. He is completing work on his first major project, the 24-floor, $35 million renovation of the SUNY Albany Mohawk Tower, shown in the photograph at left. Wacholder says he is anticipating his next major project, the construction of a Buddhist Temple Complex in Ulster County. Wacholder says he has just finished up the pre-construction phase and is about to begin the exciting construction phase of this unique project.

“The years studying at RPI have certainly helped me to get where I am today and prepare me for any endeavor I choose,” he says. “I have gained more knowledge than I ever imagined I could have.”
Lauren Mudd, Ph.D ’14 has been enjoying her opportunity to investigate a new part of the country as she takes on the challenges of her new position with the IntraRisk Division of Applied Research Associates in Raleigh, North Carolina. Her primary role involves hurricane risk modeling. “A few hectic months of dissertation writing have been followed by a few hectic months of relocating across the country and settling in to a new position,” she says. “Settling into living in Raleigh so far has consisted of biking the hills, exploring the greenway system (there are over 100 miles of interconnected pathways in the city) sampling from the more than 75 breweries, and meeting interesting folks.” The photo, at right, is Lauren with Eric Domonell ’11, and her parents and dog, enjoying the scenery a few blocks from her home in Raleigh.

“The new position brought me to Raleigh, North Carolina, where (especially after last winter in Troy), I hope to enjoy a snowless winter!” - Lauren Mudd

World-Wide Connections—Civil and Environmental Engineering alumni are located worldwide, working and living around the globe. The Department’s influence in Geotechnical, Environmental, Transportation and Structural engineering is having global impact and addressing global challenges in energy, sustainability, and other areas crucial for humanity.

The most recent alumni listing has Civil and Environmental graduates living in over 43 countries and territories including 47 of the 50 United States. (Do you know an alum who lives in Iowa, North Dakota, or South Dakota?)
The Denmark Connection — Dylan Quinn ‘15, a 2014 Founders Award winner, recently talked about his study-abroad semester in Denmark. He was in Copenhagen for the Spring 2014 semester, studying Civil Engineering and immersing himself in the culture of this magnificent Scandinavian city. Dylan took courses at the Technical University of Denmark quite different from the courses offered here at Rensselaer. This, he says, “will be a nice advantage in my upcoming job search.”

As a senior, Dylan is beginning his job search, and plans to work for a structural design firm in the northeast and pursue his Professional Engineer license. In particular, he is interested in how Building Information Modelling (BIM) can be used to unite design and construction management. “By helping to bridge the gap between designers and builders,” he says, “BIM could result in faster and more efficient construction processes.”

Founders Award — Two of our students, Dylan Quinn and Waleed El-Sekelly, are recipients of the 2014 Founders Award of Excellence, established by the Institute in 1994 to honor students who embody the qualities of creativity, discovery, and leadership, and the values of pride and responsibility.

Waleed El-Sekelly ‘14 has been a student here for five years, completing his M.S. and Ph.D. degrees. He defended his doctoral thesis in October and will graduate in December. Upon graduation, Waleed will work as a post-doctoral researcher on a National Science Foundation project headed by Professors Tarek Abdoun and Victoria Bennett. The project is aimed at gamification of geotechnical engineering and real life applications. In 2011, he was a member of the RPI team that won the ASCE GeoWall National Student Competition in Dallas, Texas.

In addition to the academic opportunities, Dylan enjoyed the chance to experience a new culture and learn more about people from a different country. “Having never traveled outside of the United States before, I gained a new perspective on how I live my life from my interactions with people of a different culture.” While studying abroad, Dylan visited all the major cities in Denmark and the capitals of the Scandinavian countries, and also enjoyed extended weekend trips to Germany and Switzerland. “Studying abroad has not only been one of the best experiences of college, but also of my life,” he says.
Red and White Emerging Leader Award — Elise Budd ’15
was honored in October at a Rensselaer Alumni Association dinner recognizing volunteers for their contributions to their professions, their communities, and the world. Elise is the first student to receive this award. She is an active Red & White member, previously serving as Executive Director of the Traditions Committee and VP for Recruitment. Elise, also is a member of Phalanx Honor Society and several other Rensselaer student organizations.

Originally from Brookhaven, Long Island, New York, she will graduate in May with degrees in Environmental Engineering and Communications. She intends to pursue a career as an environmental engineering consultant. Her interests are in geoenvironmental engineering, contamination transport, and environmental engineering law. Elise plans to pursue her Professional Engineering license.

New Faculty— The Department of Civil and Environmental Engineering welcomes new faculty and staff.

Shun Uchida joined our Geotechnical Group recently as an Assistant Professor. After completing undergraduate study at Waseda University, Japan, in 2006, he pursued graduate research at the University of Cambridge. There he obtained M.Phil. (2008) and Ph.D. (2013) and then moved to the Technion – Israel Institute of Technology as a post-doctoral researcher.

Dr. Uchida’s expertise is geotechnical numerical analysis, especially in the fields of multiphysical engineering problems. These include thermo-hydro-mechanical coupling, constitutive modeling and computational geomechanics. His current research interests are geomechanical behavior of methane hydrate-bearing sediments, unsaturated soil behavior, seismic-induced submarine landslides and geothermal energy.

Mohammed Alnaggar joined our Department this year as an Assistant Professor. His research combines state-of-the-art physics-based constitutive models that simulate the effect of a multitude of physical and chemophysical phenomena on concrete ageing and deterioration. The models he uses are formulated both at the fine mesoscale and macroscopic scale using both discrete and continuum approaches. He currently simulates the response of aging infrastructures and their response to severe loading conditions including fire, impact, blast, wind and earthquakes.

Dr. Alnaggar earned his doctorate in Structural Engineering from Northwestern University, his M. Sc. in Structural Engineering from Zagazig University, and his B.Sc. in Civil Engineering from Zagazig University.

Any questions, comments, or ideas regarding the CEE Newsletter may be directed to Debra Roden, roden3@rpi.edu. Debbie joined the Civil and Environmental Department in September. In addition to compiling the department newsletter, she is the liaison for our two student groups, ASCE and Chi Epsilon, and responsible for undergraduate student services.