

Professor Anne Lemnitzer: An Engineer for All Seasons



If you need an expert to show you the difference between a tub of chocolate gelato and that of polymer slurry, Anne Lemnitzer, Ph.D., P.E., associate professor of geotechnical engineering at University of California Irvine (UCI), is the one you would call on. She is as comfortable in a lab, on a job site, on an advanced skier mogul slope, on a photo shoot, or, as she would be, behind a counter serving gelato and exotic bakery goods. She is a multitasking and multifaceted professional with academic, research and varied recreational interests that might make an ordinary person's head spin.

She is a past Fulbright scholar, holding a Ph.D. and two master's degrees in civil and structural engineering, with a strong minor in geotechnical engineering. Her education spans the Atlantic Ocean with engineering studies conducted at the University of Applied Sciences, Leipzig, Germany; California State University, Long Beach; and University of California, Los Angeles (UCLA), where she ultimately gained her doctorate degree in 2009. She

has also spent time studying in Chile, France and Italy. And that's just for openers.

Lemnitzer's areas of teaching include earthquake engineering, soil mechanics, foundation design, site characterization, and, formerly, statics and dynamics, mechanics of materials, and everything structural and geotechnical in between. She has authored or coauthored over 50 peer-reviewed conference and journal papers, and an equal number of data sets and reports. Add in a myriad number of technical conference presentations, committee service, plus her laboratory and field studies, and you become aware of just how productive a geoprofessional she is.

As if this wasn't achievement enough, she has also received nearly two million dollars in funding to support her research and those working under her direction. In recognition of her vast array of technical achievements, she has been the recipient of numerous prestigious awards bestowed upon her by national and international organizations. In addition to serving as a trustee, her DFI activities include being the coeditor in chief of the *DFI Journal*, serving on technical committees and being a conference organizer as well as a technical presenter. She serves not only DFI but also a variety of related and highly-respected professional societies including the Geotechnical Institute of the ASCE.

Lemnitzer takes particular pride in mentoring and advising her undergraduate and graduate students. She has worked with over 50 graduate students in the past years, whether as an immediate Ph.D. or M.S. thesis advisor, as a member of their Ph.D. committees, or by supervising individual graduate students' research at UCI. She thoroughly enjoys helping prepare her students for both academic and professional careers. This includes connecting them with regional and national collaborators and industry

partners, frequently taking them to construction sites, industry events, workshops and conferences. She is also engaged in voluntary teaching and mentoring activities in engineering and general science at the municipal, state and regional levels.

Why Geotechnical Engineering?

Lemnitzer tells us, "To be honest, I did not choose a career in the area immediately. I always wanted to become a medical doctor, but the wait times for admission in Germany were super long back then. Since my parents own a structural engineering company, my next thought was to take over the company. I first applied for university admission in the field of architectural engineering. I failed my architecture entrance exam badly. I guess my definition of 'creativity' was truly *not* creative. I decided to study structural engineering instead. My undergrad and graduate degrees are in structural engineering; however, most of my Ph.D. research evolved toward soil-structure interaction. Hence, I became more and more involved with geotechnical topics and projects...I really started to like deep foundation engineering."

Career Influences

As is often the case, mentors played a part in confirming her path. "During my doctoral studies and research, my mentors were my Ph.D. advisors. I was super lucky having two really great UCLA faculty members, Professor John Wallace and Professor Jonathan Steward, to coadvise me. After graduating, I can honestly say that my involvement with the 2010 DFI Annual Conference in Hollywood, Calif., changed my research direction and perspective. It became so much more practicality focused. I have met a lot of excellent colleagues and made really great friends, especially through DFI."

Another nonacademic event added to her sense of applied geotechnics when she made a presentation about her work, with a hope for cooperative funding, to a joint DFI-ADSC committee, where she was asked to defend her proposed research. “I was very nervous, very. Those contractors are a tough crowd, but I learned so much and got the best real-world experience possible. Since then, my research direction has changed entirely. AND, I learned how to negotiate.”

Colleagues Weigh In

Lemnitzer is highly regarded by her fellow professionals. Ben Turner, Ph.D., DBA World, (formerly Dan Brown and Associates), has known her since 2013 when she served on his dissertation committee. He offers, “Anne has quickly become a key player in the deep foundations world. She seems to know everybody as a result of her charming personality and steely resolve, which enables her to bring together assets from the construction, supplier, consulting and academic world. I have no doubt that her contributions to our industry will have a lasting impact.”

Professor Armin W. Stuedlein, associate professor of geotechnical engineering at Oregon State University, adds, “Anne is a tireless advocate for DFI. She is the ideal role model for all young professionals entering the industry, demonstrating technical excellence, strong leadership and a friendly willingness to help at any time. The magnitude of her impact on DFI will be felt for years to come.”

As fellow DFI trustee, Lori Simpson, P.E., G.E., principal and vice president at Langan, puts it, “Dr. Lemnitzer is such a valuable trustee of DFI. I am impressed with how much time and energy she gives to the organization.” On the academic side, Simpson adds, “she showed me her research and I love that it is very practical and needed in our field. I look forward to being able to make use of her research in my practice.”

Advice to Women in Engineering

Lemnitzer engages in extensive volunteer work in her community and within DFI. She is very involved with the activities of DFI’s Drilled Shaft and Seismic and Lateral Loads Committees, and with the Women in Deep Foundations Committee. Her advice to women becoming involved in the profession is to “work hard, get licensed, get involved, join committees and get to know your colleagues. Don’t be afraid or shy, failure is one of the steps to success. Challenges will always be there, and perhaps, especially as women, we often have to prove ourselves twice or three times as much as our male colleagues. But don’t step back; once respect is established, there is an overwhelming amount of help and support from all colleagues.”

As a career aside, Lemnitzer laughingly adds, “When starting my academic career, I was so afraid and nervous about getting tenure that I went out to get a national bartending license as a backup... I ended up not needing it, but if I ever get fired, I’ll open up a Martini bar and a European gelato and bakery café.”

Her Newest Achievement

We are pleased to announce that Professor Lemnitzer, young geotechnical engineer, role model, academic, researcher, author, professional photographer and skiing impresario, has just added an entirely new dimension to her impressive list of accomplishments. On May 15, she brought the newest member of the family to us all in the form of an 8 lb. bouncing baby boy, Robert Henry Cox. Another “first” for Lemnitzer.

We don’t expect that she will be opening that Martini bar, gelato shop and bakery anytime soon, but, with Professor Lemnitzer, one never knows.



Special Issue on Megaprojects

The Nov/Dec 2019 issue of *Deep Foundations* is a Special Issue on Megaprojects and Project Delivery Methods. This special issue features articles on such megaprojects as sports arenas, infrastructure systems, office/residential structures, and power generation and transmission. Topics will also cover various methods used in the geodesign-construction industry to deliver public and private projects, including aspects of design-bid-build, various design-build approaches, and funding/investment mechanisms (e.g., private public partnerships, P3).

To suggest an article idea, contact Antonio Marinucci, MBA, Ph.D., P.E., executive editor, at mageditor@dfi.org.