

## In Memoriam: Linda Catherine Schmidt



**Linda Catherine Schmidt**  
(1958–2021)

Professor Linda Schmidt, a pioneering leader in engineering design research and education, passed away on Mar. 12, 2021.

She was born in Blue Island, Illinois, on Nov. 27, 1958, and received her B.S. degree (1989) and M.S. degree (1991) in Industrial Engineering from Iowa State University before going on to complete her Ph.D. degree in Mechanical Engineering from Carnegie Mellon University in 1995. She was one of Professor Jonathan Cagan's early Ph.D. students. Her dissertation entitled "An Implementation Using Grammars of an Abstraction-Based

Model of Mechanical Design for Design Optimization and Design Space Characterization" was foundational to her early investigations.

Linda Schmidt began as an Assistant Professor at the University of Maryland in 1995. Soon thereafter she focused on her true passion for which she will be remembered, namely, engineering education, especially, design education. Her research interests were centered on early-stage engineering design processes. She made fundamental contributions in improving the quality of design processes, strategies, and outcomes. Her educational interests included the development of student project team training materials to build more effective engineering student project teams. She was a masterful teacher, with her lectures being lively and interactive. She received numerous accolades including a National Science Foundation Faculty Early Career Award and the American Society of Engineering Education's (ASEE) Fred Merryfield Design Award. She was a Fellow of the American Society of Mechanical Engineers (ASME). She was active in several technical committees within the ASME's Design Engineering Division. For example, she served as Chair of the ASME Design Theory and Methodology's (DTM's) Program and Conference. She served as the Chair of the Design Education (DEC's) Program and Conference. She also served ASME and other organizations in numerous other capacities, including as Paper Review Coordinator for the DTM Conference, the Design Automation Conference, and the Design for Manufacture Conference. Her activities in Design Education Technical Committee and her DTM research informed her design education efforts and vice versa. As the Advisor of Maryland's Tau Mu Chapter of Pi Tau Sigma, she led the effort to host a very successful National Convention in 2003.

Linda Schmidt's efforts at the University of Maryland were instrumental in creating the DesignME Suite—a workroom where students can hold group meetings, brainstorming sessions, and use a wide selection of manufacturing tools and materials—which she directed since 1999. Today, this suite includes the Create and Test Laboratory, the Modeling Laboratory, and the Ideation Laboratory. The DesignME Suite not only served to inform Dr. Schmidt's research activities but also served as the home for the development and advancement of the Department of Mechanical Engineering's design related undergraduate and graduate curriculum, and education of several thousands of mechanical engineering students. She impacted countless students during her tenure in the classroom. Along with the late George Dieter, Linda Schmidt co-authored *Engineering Design*, now in its sixth edition and considered a classic textbook for teaching principles of the engineering design process.

Linda Schmidt is fondly remembered for her enthusiasm and devotion to her former students as well as to her family and friends.

Gül E. Kremer, C. G. "Turk," and Joyce A. Therkildsen, Department Chair of Industrial and Manufacturing Systems Engineering at Iowa State University, remember her colleague as follows:

I am mourning the loss of a peer woman leader in engineering, a research collaborator, an IMSE alumna, and a close friend, words cannot describe the hole Linda has left behind.

Katrina Groth, Assistant Professor, University of Maryland, College Park, states:

As the most senior female professor (at the University of Maryland) in a male-dominated field, Schmidt served as a role model for all junior professors, especially the women ... She was really, really helpful for me, just as a woman in engineering, to have a role model for someone who could kind of show me what it was like to be an engineer, but also what kind of challenges I was going to face.

Jon Cagan, The George Tallman and Florence Barrett Ladd Professor of Mechanical Engineering, Carnegie Mellon University, states:

Linda's passing is a loss to the community in so many ways. Linda was one of my early Ph.D. students. I will always recall with enjoyment the time I spent working with her. She was bright, thoughtful, and inspiring. I still find today her dissertation work fundamental and an important contribution to design research. Linda also became an important part of the design community as a proponent and a role model to young faculty. I will miss her.

Kristina Shea, Professor of Mechanical and Process Engineering, ETH Zurich, Switzerland, remembers Linda Schmidt as follows:

I can still remember Linda's smiling, friendly face welcoming me to Jon Cagan's lab at CMU when I started my PhD a long time ago. She was a positive, inspirational force during our PhD days and I learned many things from her, from engineering grammars to navigating the academic world. Her many scientific and educational contributions to the engineering design community as well as her warm-heartedness will be remembered by many for years to come.

Sophoria Westmoreland, a former doctoral advisee, writes:

Dr. Schmidt was an extraordinary advisor, mentor, friend, and guided me diligently on my doctoral journey. She was resolute in her academic passions and taught me to value excellence and integrity above all. Dr. Schmidt helped me craft my academic voice and gave me opportunities to learn how to teach, how to write, design a college course, and lead students by example. The greatest gift she gave me was the opportunity to earn my doctoral degree under her and for that I will forever cherish her and be ever grateful.

Brian Weiss, a former doctoral advisee, remembers Linda Schmidt as follows:

It was an honor to learn from and work with Dr. Linda Schmidt; she left us too soon. I had the honor and privilege to be one of her Ph.D. students. She served as my guide not only in research, yet in professionalism and humanity. During this 5-year period, we both experienced life challenges. I was fortunate that we could chat candidly about our respective struggles and provide perspective to one another. She will be missed.

Another former doctoral advisee, Werner Born, states:

Linda was a warm-hearted advisor who unconditionally supported the growth of her students academically and beyond. Above all else, she was contagiously positive and her ability to find humor in any situation made her a one-of-a-kind research partner.

Her colleagues, David Bigio, Hugh Bruck, Aris Cleanthous, Vincent Nguyen, Gary Pertmer, Elisabeth Smela, and Monifa Vaughn-Cooke, who team taught the capstone design course at the University of Maryland remember Linda as follows:

Professor Schmidt is remembered as a dynamic, funny, and kind person who advanced engineering education as well as the participation of women in engineering. Her legacy includes two design

courses, “Engineering Design Ideation” and “Integrated Product and Process Development,” as a result of over a decade of her enthusiasm and rigor. Her research on design education and teamwork were vital to the success of these courses. Beyond that, she was an encouraging mentor and advocate for students, with a witty humor that enlivened her lectures. The showcase Design Day at the end of each semester that she initiated is a memorable and exciting highlight for the students and the department. Her mentorship, scholarship, and leadership will live on for decades.

Wei Chen, Chair and Professor of Mechanical Engineering, and Wilson-Cook, Professor of Engineering Design, Northwestern University, had the following to say upon learning about Linda’s passing:

(1) Linda and I started our academic career at the same time. I enjoyed very much the time we worked together as young assistant professors (also with Professor Kemper Lewis) on organizing the NSF sponsored workshop on Decision-Based Design—we organized 18 workshops together over eight years (1996–2004) and later published an edited book on “Decision Making in Engineering Design” (2). Linda will be deeply missed by her colleagues and friends as both a passionate engineering design educator and a kind human being. She contributed so much for advancing the theory and practice of engineering design education and vested a lot of time in bringing up the young generation. At the personal side, I always enjoyed hearing about her beloved nieces and nephews, likewise, it was a lot of fun sharing the stories of my children with her.

Alice Agogino, the Roscoe and Elizabeth Hughes Chair in Mechanical Engineering, University of California, Berkeley, writes:

Professor Linda C. Schmidt of the Department of Mechanical Engineering at the University of Maryland, College Park was an amazing teacher, mentor, researcher and colleague.

Farrokh Mistree, L.A. Comp Chair and Professor of Aerospace and Mechanical Engineering, University of Oklahoma, remembers Linda Schmidt as follows:

I admire Linda’s commitment to education. She will be remembered by the countless people she interacted with and the book she co-authored with her colleague George E. Dieter is a significant legacy. Linda is a role model for others to emulate.

Kemper Lewis, Dean of the School of Engineering and Applied Sciences, University at Buffalo, states:

Linda was truly gifted at making others around her better. Whether it was a professional or personal interaction, she would always bring value and joy to the people around her. She was a world-class encourager, a passionate educator, and a dear friend.

We have been blessed to have Professor Linda Schmidt in our lives, to work with, and to learn from, as well as to be able to pass her teachings on through our own efforts.

**Janet K. Allen**  
**School of Industrial and Systems Engineering,**  
**University of Oklahoma,**  
**Norman, OK 73019**

**Shapour Azarm**  
**Department of Mechanical Engineering,**  
**University of Maryland,**  
**College Park, MD 20742**

**Balakumar Balachandran**  
**Department of Mechanical Engineering,**  
**University of Maryland,**  
**College Park, MD 20742**