

## A Tribute to Dr. Yoon Duk (Debbie) Kim

As we mourn the tragic death of Dr. Yoon Duk (Debbie) Kim, we want to remember her life and the impact that she had on many people. With her cheerful smile and contagious energy, Yoon Duk brightened the atmosphere wherever she was. She was a kind and faithful friend to many, and a loving mother to her daughter Katie. Yoon Duk possessed a sharp intellect, which she enthusiastically applied in the field of structural engineering, with expertise in behavior, design, and stability of bridge and building systems.



Yoon Duk Kim graduated Summa Cum Laude from Hanyang University in Seoul, Korea with a B.S. in Architectural Engineering (2001). She then came to the United States for graduate school and studied at Georgia Institute of Technology, where she earned M.S. (2004) and Ph.D. (2010) degrees in Civil and Environmental Engineering. Her research advisor for both degrees was Prof. Donald White, and she studied topics related to behavior, design and stability of I-section members for bridge and building applications. Her M.S. thesis title was “Transverse Stiffener Requirements in Straight and Horizontally Curved Steel I-Girders,” and her Ph.D. dissertation title was “Behavior and Design of Metal Building Frames with General Prismatic and Web-Tapered Steel I-Section Members.” Her Ph.D. research led to the AISC/MBMA Guide on “Frame Design Using Web-Tapered Members” and she co-authored the section on tapered columns in the 6<sup>th</sup> Edition *SSRC Guide to Stability Design Criteria for Metal Structures*. Her thesis and dissertation have been cited over thirty times, indicating the quality and value of her research. After graduating, Yoon Duk spent several years at Georgia Tech as a post-doctoral fellow, during which time she was a major contributor to research on gusset plates in steel truss bridges following the collapse of the I35W bridge in Minneapolis. Yoon Duk was an expert in nonlinear analysis for complex structural problems, but she also possessed the ability to translate the detailed analysis results into recommendations that were applicable for design practice.

When just a graduate student at Georgia Tech, Yoon Duk already exemplified the best qualities of a teacher: a command of the subject matter, patience and an ability to inspire others. Her willingness to mentor younger graduate students was truly a blessing to those she helped. Yoon Duk was known as the go-to person to answer technical questions when Prof. White was not available. Her research served as the basis for subsequent M.S. theses and Ph.D. dissertations of at least five graduate students that worked in areas related to finite element analysis of steel structures. Furthermore, her jovial manner always brightened the office and was contagious among those around her. She had a gift of hospitality and planned many social events for those in Prof. White’s research group, never forgetting to honor birthdays or major achievements, and she invited the group to her house to sample a smorgasbord of traditional and contemporary Korean food. Yoon Duk was always a willing participant in clowning around with her colleagues, as evidenced by this picture where she was encouraged to steal the ball from the Franco Harris “Immaculate Reception” statue in the Pittsburgh airport when returning from the



2011 SSRC *Annual Stability Conference* in Pittsburgh.

Over the time that she was a post-doc, Yoon Duk taught courses in statics, strength of materials and steel design at Georgia Tech and Southern Polytechnic State University. She went on to teach similar courses at Georgia Perimeter College for several years before moving to Texas A&M University – Commerce, where she taught a wider range of courses in structural mechanics and design and construction management and planning. Yoon Duk was actively engaged in the structural engineering profession through the American Institute of Steel Construction (AISC), the American Society of Civil Engineers (ASCE) and the Structural Stability Research Council (SSRC). She published journal papers on her research and gave presentations at prominent conferences, including presentations at five SSRC *Annual Stability Conferences* (2007, 2008, 2010, 2011 and 2013). Yoon Duk was an active contributor to the development of the upcoming 7<sup>th</sup> Edition of the SSRC *Guide*, serving as the vice-chair of TG04, Stability of Metal Bridges and Bridge Components.

Starting in 2015, Yoon Duk was an Assistant Professor in Construction Engineering at Texas A&M University – Commerce. In addition to teaching, she was also the academic advisor for construction engineering majors and the faculty advisor for the Student Construction Association. She was well-liked and identified as a “star” by the dean of Engineering and Technology because of her “extraordinarily warm presence, her scholarship and her stellar teaching.” Beyond her home institution, Yoon Duk touched the lives of many people with her kindness, determination, encouragement and technical contributions, particularly related to stability research and design. Yoon Duk will be remembered fondly and missed profoundly.

In honor of Yoon Duk Kim, SSRC is creating a memorial travel fellowship award for attending the *Annual Stability Conference*. To remember Yoon Duk’s enthusiasm for and contributions to structural stability, this award will encourage students and early-career professionals to grow in their understanding of structural stability and engage with the structural stability community. Those interested in contributing toward the endowment of this award may do so by credit card (please see donation button on [SSRC website](#)) or by check (indicate “Yoon Duk Kim Memorial Fund” in memo):

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Questions about donations should be sent to [ssrc@aisc.org](mailto:ssrc@aisc.org).