Marquette University: Engineering professor receives fellowship to support structural steel research from the American Institute of Steel Construction

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Fellowship will fund research into new intermediate ductility steel building systems to better serve regions beyond those with very high seismic activity

MILWAUKEE — Dr. Andrew Sen, assistant professor of civil, construction and environmental engineering in Marquette University's Opus College of Engineering, has received The American Institute of Steel Construction's 2026 Milek Fellowship. As part of the annual Milek Fellowship, Sen will receive a four-year, $300,000 grant from the AISC Committee on Research.

Sen was selected for his project, "Balancing Safety and Efficiency in Moderate-Ductility Braced Frames," which aims to develop new intermediate ductility steel building systems to better serve regions beyond those with very high seismic activity. These new steel systems would provide a cost-effective solution for structures that do not require the highest level of deformability but are underserved by ordinary steel systems, which are strong but relatively brittle. The fellowship will provide funding support for graduate students working alongside Sen to develop cutting-edge structural research.

"Dr. Sen is precisely the kind of rising star the AISC Committee on Research recognizes with the Milek Fellowship," said Dr. Christopher Raebel, vice president of engineering and research at AISC and a Marquette alumnus. "His proposal opens

new doors to efficient, cost-effective, and sustainable solutions for new and improved structural steel seismic force-resisting systems."

AISC introduced the award in 2004 as the Faculty Fellowship Award. In 2011, AISC renamed it for William A. Milek Jr., former AISC vice president of engineering and research, to recognize his contributions to AISC and the structural steel industry. Milek Fellowship recipients earn free registration at NASCC: The Steel Conference for the duration of their fellowship. They are urged to use their fellowship to support students with high potential to be valuable contributors to the U.S. structural steel construction industry and are encouraged to fund a doctoral candidate with at least half of the fellowship money.

"There are currently two favored design philosophies: one fit for regions with high seismic risk, like much of the West Coast, and one in which seismic design is somewhat of an afterthought," Sen said. "There is a large gap between how these types of systems are designed and ultimately behave, so this is an opportunity to optimize and expand the design space. This is earthquake engineering's version of the 'Goldilocks problem.' We want to enable design strategies that are 'just right' and make practical sense across a large part of the country. AISC is the perfect partner for this work because they have a considerable knowledge base and a direct pipeline for research transfer to practice. I am extraordinarily grateful for their support and this opportunity to transform seismic design of steel structures."

Sen will be honored for the Milek Fellowship at the NASCC: The Steel Conference on April 22 in Atlanta.

About Marquette University

Marquette University is a Catholic, Jesuit university located near the heart of downtown Milwaukee that offers a comprehensive range of majors in 11 nationally and internationally recognized colleges and schools. Through the formation of hearts and minds, Marquette prepares our 11,100 undergraduate, graduate, doctoral and professional students to lead, excel and serve as agents of positive change. And, we deliver results. Ranked in the top 20% of national universities, Marquette is recognized for its undergraduate teaching, innovation and career preparation as the sixth-best university in the country for job placement. Our focus on student success and immersive, personalized learning experiences encourages students to think critically and engage with the world around them. When students graduate with a Marquette degree, they are truly prepared and called to Be The

Difference.