

Assistant Professor, University of Wisconsin-Madison

Blum, Hannah B.



Specialties:

- Machine Learning Applications in Structural Design
- Virtual and Augmented Reality in Structural Eng.
- Analysis, Computational Modeling, and Experiments of Steel, Cold-Formed Steel, and Stainless-Steel Members and Structural Systems
- Structural Stability & Structural Reliability

Qualifications & Certifications:

- Ph.D., 2017; Civil Engineering; University of Sydney; Sydney, NSW, Australia
- M.S.E., 2012; Civil Engineering; Johns Hopkins University; Baltimore, MD, USA
- B.S., 2010; Civil Engineering; Johns Hopkins University; Baltimore, MD, USA

Professional Experience:

- 4+ years as Professor and Researcher

Committees & Memberships:

- Alain H. Peyrot Fellow in Structural Engineering
- American Iron and Steel Institute (AISI), Cold-Formed Steel Committee on Specifications Main Committee member
- Structural Stability Research Council (SSRC) – TG03 vice-chair
- American Institute of Steel Construction (AISC) Committee on Structural Stainless Steel Main Committee member
- ASCE/SEI Stainless Steel Cold-Formed Sections Standards Main Committee member
- Cold-Formed Steel Research Consortium (CFSRC) Affiliated Investigator

Summary: Dr. Blum is an Assistant Professor in the Department of Civil and Environmental Engineering at the University of Wisconsin – Madison. Her research group focuses on the computational modeling and experimental testing of steel, cold-formed steel, and stainless-steel structural members, connections, and systems (including portal frames and steel joists), in addition to the application of new technology in structural engineering, including machine learning and virtual and augmented reality. She has experience collaborating with industry including the Metal Building Manufacturers Association, (MBMA), the Steel Joist Institute (SJI), the Steel Deck Institute (SDI), New Millennium Building Systems (NMBS), AISC and AISI. Dr. Blum’s research group has authored multiple peer-reviewed journal articles and international conference proceedings. Prof. Blum has mentored numerous PhD, Masters, and Undergraduate students, and is the faculty advisor for the AISC Student Steel Bridge Club. She has experience teaching Steel Structures, Structural Reliability, and Structural Mechanics, and has implemented Virtual and Augmented Reality educational modules into her classes. Dr. Blum has access to a large, fully equipped structural testing laboratory with a strong floor and strong walls, and modern computational resources and software.

