

AWM DISTINGUISHED SPEAKER SERIES

University of Oregon



Dr. Jessica Sidman

Mount Holyoke College

*presented by*

The UO Student Chapter of the Association for Women in Mathematics

## Frameworks in motion: theory, design, and fabrication

Tuesday, January 11, 2022

4-5pm on zoom

Meeting ID: 997 1738 3206

No prerequisites required

What do your umbrella, a folding gate, and a scissor lift have in common? They are all made of rigid parts attached at joints designed to yield a structure that can move with one degree of freedom and then locked in a rigid state to perform a useful function. In 1981, famed architect Santiago Calatrava wrote a PhD thesis, “Concerning the Foldability of Space Frames,” consisting of a systematic exploration of the geometry and design of foldable frameworks. I’ll use his thesis as a jumping off point to explore the fundamentals of rigidity theory and share some ongoing work on the design of a tent framework in collaboration with architect Naomi Darling and Mount Holyoke students Sohini Bhatia, Stephanie Einstein, Nana Aba Turkson, and Zainab Umar.

