



LECTURE BY BETH RIEKEN, PhD

Mindfulness & Engineering: A Pathway to Divergent Thinking & Innovation

If we want to educate innovative engineers, we need to rethink the tools we are using in our engineering classrooms.

The current paradigm in engineering education promotes linear, convergent thinking focused on gaining technical knowledge. Although convergent thinking is important, divergent thinking is critical to **considering the context in which engineering problems are situated** and to **generating innovative approaches to address those problems**. *Mindfulness* fosters divergent thinking and can be cultivated through practice. This talk presents research linking mindfulness to three engineering outcomes: divergent thinking in an **idea generation task**, divergent thinking in an **engineering problem scoping task**, and **one's confidence** in his/her **ability to be innovative**.

2-3 pm Monday January 29th
Boettcher Room, Mines library

Discussion with Mindful Mondays student group to follow at 3 pm



Rieken received her Ph.D. in 2017 from Stanford in Mechanical Engineering. She began her graduate career working in the field of laser diagnostics for combustion applications. As her interests expanded beyond the technical, Beth transitioned to engineering education research where she enjoys working at the intersection of engineering, psychology, and education. Beth is passionate about expanding engineering culture and making the social context visible in engineering work.