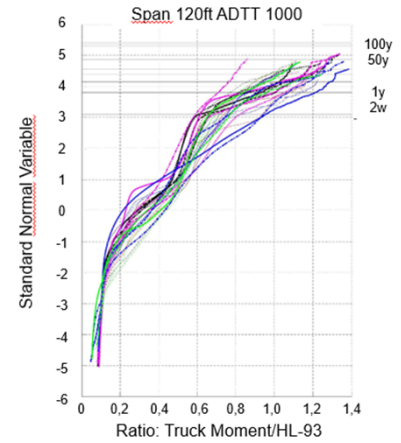




New Course FALL 2025
CE 597000 IRS(3.0 Cr) CRN# 27587
Tu/Th 12:00-1:15pm in SCHM 307

Introduction to Reliability of Structures

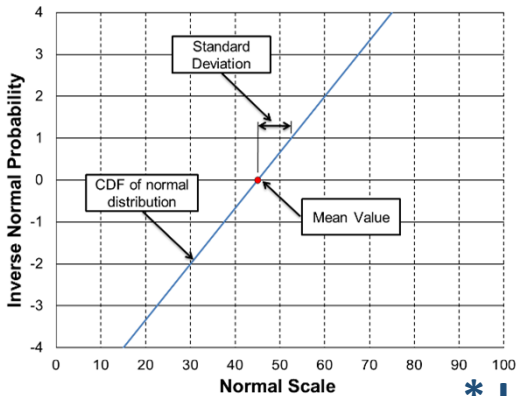
Purdue University Lyles School of Civil & Construction Engineering



Course Objectives:

Understand and recognize the importance of variability and incomplete information in civil engineering, particularly structural engineering. Ensure an appropriate level of safety and functionality of structures in the presence of these uncertainties by applying probabilistic methods to the design and evaluation of structural systems. Be able to answer the questions:

- How can we measure the safety of structures?
- How does a designer implement the optimum safety level?



Topics Covered:

- Uncertainty in structural engineering
- Random variables and system properties
- Simulations (Monte Carlo)
- Reliability analysis procedures
- Code calibration
- Unpredictable future loads
- Variability in resistance models
- System reliability
- Current research and future trends

*** LEAD INSTRUCTORS ***

Anna M. Rakoczy, Ph.D.

Curtis Visiting Professor, Purdue University

