



***“Socially responsible engineering as a pathway to
inclusivity? A systems perspective”***

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Abstract:

It is important that engineers are educated to consider the social impacts of their work, understanding that engineering is a socio-technical endeavor. Some students are specifically drawn to engineering due to a desire to have a positive impact on people and the environment, while others may find these considerations burdensome. Student attitudes about socially responsible engineering have been found to differ based on a variety of demographic factors of the students (e.g., gender and race/ethnicity) and their environment (discipline, institution). Motivations to help people through engineering can change as students are socialized and enculturated – and have generally shown to trend downward. Further, research has found that some of the students most motivated to help others transfer out of engineering. A complex array of factors can influence these student pathways, including course content, co-curricular and extracurricular activities, role models, and discipline, department, and institutional cultures. This presentation will examine these issues.

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11:15 AM - 12:05 PM

Via Zoom

*For more information,
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Bio: Angela Bielefeldt is a Professor of Civil, Environmental, & Architectural Engineering and Director of the Engineering Plus program at the University of Colorado Boulder. She holds a B.S. degree in Civil Engineering from Iowa State University and M.S. and Ph.D. degrees in Civil and Environmental Engineering from the University of Washington. Bielefeldt has taught first-year civil engineering students for 25 years, as well as environmental engineering capstone design, and graduate level environmental engineering courses. Bielefeldt has been active in promoting ethics and sustainability education. Her research initially focused on site remediation and point-of-use drinking water treatment, later progressing into engineering education. Since 2012 she has graduated 8 PhD students whose dissertation research focused on engineering education, with two more in-progress. Bielefeldt is the Editor for the International Journal for Service Learning in Engineering, deputy editor for the Journal of Civil Engineering Education, a Fellow of the American Society for Engineering Education, and a President’s Teaching Scholar at the University of Colorado. She is also a licensed Professional Engineer in Colorado.