Thus far, human trafficking research has primarily focused on qualitative studies, statistical estimations of prevalence, and insights generated from economic models. However, a variety of additional mathematical modeling and data analytic techniques also have the potential to help address the unique challenges facing anti-human trafficking efforts including: the covertness of traffickers, the hidden nature of victim-survivors, fragmented data, and limited resources. This presentation will discuss ongoing transdisciplinary collaborations in this sphere and utilize multiple illustrative examples, including optimizing the allocation of a limited budget for rehabilitative shelters for human trafficking survivors and coordinating efforts to disrupt trafficking networks. Applications of such modeling approaches to other social justice contexts will also be briefly discussed.

Presentation Objectives:

• Identify opportunities for industrial engineers to aid service providers, policy makers, law enforcement personnel, and other researchers
• Acknowledge challenges to modeling these environments
• Highlight the benefits of incorporating industrial engineering models into the decision-making process through illustrative examples

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