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Keynote Speaker

Prof Larry Leifer

*Professor of Mechanical Engineering Design
Stanford University*



Keynote Title:

Dancing with Ambiguity:
Embracing the Tension between Divergent and Convergent thinking
in Systems Engineering

Biography:

Larry Leifer is a Professor of Mechanical Engineering Design and the founding Director of the Center for Design Research and Hasso Plattner Design Thinking Research Program at Stanford, (d.research) at Stanford University. He is also the Director of Stanford Industry Affiliate Program in Design and member of Hasso Plattner Institute of Design at Stanford, (d.school). As a Stanford faculty member since 1976, he develops and instructs the ME310 course –Project-Based Engineering Design, Innovation, and Development. His design thinking research covers design-team research methodology, global team dynamics, innovation leadership, interaction design, design-for-wellbeing, and adaptive mechatronic systems.

Abstract:

Over the past thirty years, a powerful methodology for innovation has emerged. It integrates human, business and technical factors in problem forming, solving and design: “Design-Thinking.” This human-centric philosophy integrates expertise from the design, social, management, and engineering sciences to create a corpus of behaviors that are best implemented by small high-performance project teams. It produces a vibrant interaction environment that promotes creativity and rapid learning cycles through conceptual prototyping. The strategy has proven successful in the creation of innovative products, systems, and services.

Design-thinking works. Industry, government, and academia are subscribing to boot camps, immersive workshops, and corporate re-organization. Teams of industry, government and education experts are tackling complex problems and finding powerfully adaptive solutions. The time is right to apply rigorous academic research to understand how, when and why design thinking works and fails. It is time to create next generation design thinking behaviors and supporting tools.

Through courting ambiguity, we can let invention and innovation happen even if we cannot make them happen. We can nurture behaviors that increase the probability of finding a path to innovation in the face of uncertainty. Emphasis is placed on the questions we ask in balance with the decisions made. A suite of application examples and research findings will be used to illustrate the concepts in theory and in practice.