Abstract:
Excellent engineers are developed and launched through exceptional education and apprenticeships. Edison once declared, “I start where the last man [Individual] left off.” Mechanical engineering, more specifically its design thread, should teach engineers the tools, methods, and processes to begin where the last engineer left off. Regardless the work mode —new design project, refinement of an existing design, or design incident failure— an appropriately educated/skilled engineer quickly ascertains where to begin and what to contribute. As high percentages of baby boomers retire, industry demands graduates with greater readiness and proficiency in the theory and practice of mechanical design, analysis, and manufacture. Firsthand observations of Chief Engineers, Engineering Fellows, Directors, and Engineering Managers will be presented regarding the strengths and weaknesses of today’s ME graduates. Pros, cons, and future trends of today’s academic ME Design Threads will be presented, concluding with a vision for building upon, and extending to premiere status, the Purdue ME Design Thread as esteemed by its peers and industry recruiters.

Biography:
Dr. Jensen received his Bachelor and Master of Science from Brigham Young University (BYU) and his PhD in Mechanical Engineering from Purdue University in 1993. As a BYU faculty member in the Ira A Fulton College of Engineering and Technology, he was instrumental in teaching and conducting research in the areas of: Mechanical Engineering Design and Manufacturing; Global Collaborative Engineering Design Education (GM/PACE, and Boeing/AerosPACE); Direct and Curvature Matched 5-axis Machining; Optimized, Robust, CAD-centric Parametric Design (MBE, MBD, MBSE); Next Generation Collaborative Multi-user, Multi-disciplinary CAX Tools and Methods.

Dr. Jensen has mentored and chaired 68 graduate students to completion, secured and directed ~$10M in sponsored research, authored and co-authored more than 120 peer-reviewed Journal and Conference papers, and been the principle inventor on more than 60 patents (some pending). He has been a guest lecturer at more than 50 universities around the world, and has received 22 prestigious honors and awards: for example, 1st Ira A. Fulton College Professor of Global Engineering, and Pratt & Whitney’s 1st Engineering Fellow for Model Based Engineering/Design.