You are cordially invited to attend:

**Thursday, January 25, 2018**
3:00 p.m. - 4:30 p.m.
(Refreshments provided)
252 Erickson Hall

**Dr. David Feldon**
Professor, Instructional Technology and Learning Sciences
Utah State University

**Leveraging Expertise: Advancing STEM Education for Undergraduates**

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**Abstract:**
Postsecondary STEM education is built upon transactions driven by expertise—faculty work to articulate their knowledge and skills in ways that are accessible to students, and students actively choose to invest their efforts toward developing expertise through their selection and pursuit of professional pathways. Thus, effective undergraduate instruction requires a dynamic management of articulated content, instructional strategy, and motivation. However, experts often fail to provide explanations of their problem-solving processes that are complete, accurate, and accessibly framed, negatively impacting student achievement and persistence. This presentation describes the results of research and development projects from multiple STEM fields, which focus on utilizing enhanced explanations from experts and effective instructional practices based on underlying principles of cognition to generate better student outcomes for both content-based learning and motivation.

**Biographic sketch:**
David Feldon is a professor of Instructional Technology and Learning Sciences at Utah State University. His research examines the development of expertise in STEM disciplines as it contributes to effective and innovative problem solving, as well as the quality of instruction. Dr. Feldon earned his Ph.D. in educational psychology and his M.S. in instructional technology from the University of Southern California.