



# Seminar Series Comp. Sci. & CRA-W



## Software Product-Line Engineering for Sustainable, Long-lived Systems

**Robyn Lutz, Computer Science, Iowa State University**

**Apr 16th Friday, 11:00am to 12:00pm**

**Venue - Civil Engineering 101**

**Abstract** - This presentation describes the current state of software engineering for software product lines and proposes directions for needed work. It first gives a snapshot of central ideas and accomplishments in several key research areas for software product lines. It then describes some problems that are important and feasible to solve in the next decade, where results will be used to good effect in actual systems. We then focus more specifically on autonomous and safety-critical software product lines that must evolve over time, and discuss what recent research results mean for designing sustainable, long-lived systems.

**Brief Bio** - Robyn R. Lutz received the Ph.D. degree from the University of Kansas (1980). She has been a member of the technical staff at Jet Propulsion Laboratory, California Institute of Technology since 1983, currently in the Flight Software and Data Systems section. She is also a professor in the Department of Computer Science at Iowa State University, where she teaches undergraduate and graduate courses in software engineering. Her interests are in two overlapping areas of software engineering: (1) how to build robust software systems and (2) how to specify and analyze requirements and design. In the first area, her work focuses on software safety, software product lines, and defect analysis. In the second area, she works on formal modeling and analysis of requirements and design, especially for fault detection and recovery. Her research is supported by the National Science Foundation and by NASA. She is a member of ACM, IEEE, and the IEEE Computer Society.