Spring 2012 Faculty Candidate Seminar

Ergonomics in Healthcare: Challenges, Roles, & Issues

Susan Hallbeck
University of Nebraska - Lincoln

Monday, February 27, 2012 - 2:00 to 3:00 p.m. - 2004 Black

Abstract
Ergonomics in healthcare explores how human beings interact with patients, equipment, facilities, and environments. The emphasis is on human beings and how the design of objects and environments influence people, decisions, and safety. The intensity of the personal interactions makes healthcare industry different from other industries. Health care is all about people: patients and their families and friends, and the various healthcare professionals and workers. In implementing human factors and ergonomics concepts in healthcare, one has to be cognizant of the challenges, the roles people have in the system, and the issues in maintaining a system.

This presentation will showcase the breadth of applications that industrial engineering and ergonomic knowledge can impact. Dr. Hallbeck will discuss a series of healthcare research projects she has worked on:

- design and testing of laparoscopic surgical tools,
- redesign of hospital crash cart medication drawers,
- a decision aid for assigning blood thinners upon admission for hospital patients
- ergonomic evaluation of medical jobs/tasks such as intubation, central venous catheterization and minimally invasive surgery.

Dr. Hallbeck will also highlight several more conventional industrial ergonomics projects such as evaluation of a walk-behind lawn mower, comfort during driving and usability of signage for wayfinding.

About the Speaker
Dr. Susan Hallbeck is a Professor of Industrial and Management Systems Engineering and Mechanical and Materials Engineering at the University of Nebraska - Lincoln. She holds courtesy appointments in the Department of Biological Systems Engineering at UNL and the Department of Surgery at the University of Nebraska Medical Center. She is the Director of the Innovative Design and Ergonomic Analysis Lab (IDEA Lab). She has two patents; one of these, the IntuiTool, an articulating laparoscopic grasper, won the Human Factors and Ergonomics Society Product Design Award Honorable Mention in 2004. She recently served as the lead Engineering coordinator in a 10-University consortium for the Department of Veterans Affairs. She has been active in the Human Factors and Ergonomics Society, recently serving on the Executive Committee and currently serving as the chair of the Product Design Technical Group. She has also worked with the National Institute for Working Life in Sweden and with TNO’s ergonomic design group in the Netherlands. Dr. Hallbeck is a professional engineer and certified professional ergonomist. She earned her PhD from Virginia Tech, her MS from Texas Tech and her BS from Iowa State University all in Industrial Engineering.

Teaching seminar is Tuesday, February 28 at 9:00 a.m. in 2004 Black