ISTeC (Information Science and Technology Center) Research Advisory Committee
Retreat on the Scientific and Engineering Foundations of Information Science and Technology
Saturday, May 8, 8:15am to 3:00pm, Lory Student Center

DOSSIER

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Research Interests (one paragraph):
Research is focused on the study of cognitive process involved in the science of designed systems and interventions associated with achieving scientific and technological literacy in STEM (Science Technology Engineering and Mathematics) content areas. This research focus is in cognitive and measurement science, theory of technological thinking, and psychometrics. Current research interest is extending into the scientific study of the design of software-intensive systems that perform computing, communications and information processing.

Titles of current research projects (funded or not):
NSF – Medical Technology: Contexts and content in science and technology. This project seeks to study the impacts and advances in medical technology on decision-making, social and ethical concerns, and diffusion of medical technology.
USDA – "La Cocina Saludable" design and implementation of a software-intensive Spanish language human nutrition education program.

Current collaborations inside and outside your department:
CS and FSHN – La Cocina Saludable software design
Colorado Institute of Technology – Science Technology Expansion Program (NSF) currently under review. Participants include ISTeC departments.

Breakout sessions you would like to attend at the retreat (please rank order from 1 to 3):

3.	Alternative models of computing
1.	Computing and information processing in support of basic science and engineering
	Dense sensor networks
	Imaging and tracking
	Automatic image, text, and speech recognition for multimodal interfaces and search engines
2.	Other (Interdisciplinary Information Science)

Faculty at CSU whom you would like to see included into your preferred breakout group:
One optional paragraph you would like other participants to read before the retreat: I am very interested in stimulating interdisciplinary research and educational projects that build on the science of design. The scientific study of the design of software-intensive systems that perform computing, communications and information processing. In fields more mature than computer science, design methodology has traditionally relied heavily on constructs such as languages and notational conventions, modularity principles, composition rules, methodical decision procedures and handbooks of codified experience. Such an approach to design is practiced in fields such as architecture and civil engineering. However, the design of software-intensive systems is more often done using rough guidelines, intuition and experiential knowledge. Can we extend the science of design to software-intensive systems and design curriculum to teach the next generation of designers?