

**Developing an NSF ERC on “Healthy and Safe Aging (HSA)”  
Roundtable #2 – December 14 (10am-noon CT)**

The objective of the roundtables is to develop a roadmap for the research agenda of the NSF-ERC-HSA. The process used to develop the research roadmap engages researchers (faculty at UW-Madison and at core partner institutions) as well as various stakeholder groups (e.g., older adults, health care delivery organizations, technology companies).

During the first roundtable, we brainstormed ideas for research on healthy and safe aging (HSA) aimed at helping older adults stay home and healthy, preventing visits to the ER/hospital, and recovering quickly after a visit to the ER/hospital. With input from faculty and researchers in engineering and health sciences and multiple stakeholders, we developed a draft research agenda organized around three engineering research thrusts:

- (1) Multi-modal sensing sociotechnical systems for HSA at home
- (2) Multi-level data-to-sensemaking cycle (harnessing data) for older persons/patients, caregivers and clinicians
- (3) Safe integration and implementation of patient-centered and integrated technologies for HSA.

We have also identified four possible testbeds:

- Testbed 1: Community Academic Aging Research Network (CAARN), which brings together researchers and community partners to conduct research on healthy aging.
- Testbed 2: Simulation facility at the UW-Madison School of Nursing with a replica of an apartment.
- Testbed 3: Concordia Village of Tampa, Florida; a community of 115,000 residents who are over 55.
- Testbed 4: Long-term care-nursing home-residential facilities in Indiana.

At the second roundtable, we will review and discuss the proposed research thrusts and testbeds. In advance of the roundtable, the participants will review the document that describes the research thrusts, and be ready for discussion of the following questions:

1. Fit of your research with the thrusts: Does your research fit in one or several thrusts? Which one(s)?
2. What are the fundamental engineering research questions in your research? What are barriers to this research?
3. What are the barriers to developing technologies (sociotechnical systems) related to your research?
4. What are the barriers to disseminating and implementing the technologies (sociotechnical systems) developed from your research?
5. How could you use the testbeds in your research?
6. What ideas do you have for specific research projects that fit the thrusts?

Agenda for second roundtable:

When?	What?
10-10:05am	Welcome and introductions
10:05-10:30am	Description of research thrusts
10:30-10:35am	Split into assigned groups
10:35-11:35am	Group discussion
11:35-11:55am	Reports from the two groups
11:55am-noon	Wrap-up and next steps

Participants will be split into two groups (two separate rooms) and will spend 1 hour discussing the research thrusts in light of their expertise (see questions above). Discussion in each of the two groups will be facilitated by two UW-Madison faculty. At the beginning of the group discussion, group members introduce themselves: name, role and institution. Students will take notes during the brainstorming session and will email their notes to Teresa by Monday afternoon. The two facilitators will provide a high-level, short (~5 minutes) overview of the group discussion.

Challenges to overcome during the group discussion:

- How to engage collaborators that are connecting remotely?
- Balance between fundamental engineering knowledge and application-societal impact.

We have developed the following guidelines for participation:

- For engineering faculty: propose innovative ideas that contribute to new fundamental engineering research.
- For health care providers and researchers: help to define/identify impact of research ideas on mid-term (<5 years) and long-term (5-10+ years) outcomes related to healthy and safe aging.
- For industry stakeholders: help to define/identify potential industry development of research ideas.