



**Wisconsin Institute for  
Healthcare Systems Engineering**  
UNIVERSITY OF WISCONSIN-MADISON

# AWORD FROM WIHSE

AUGUST/SEPTEMBER 2020

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## News

### WIHSE WELCOMES NEW EXECUTIVE COMMITTEE MEMBER, PROFESSOR LINSEY STEEGE

We are excited to welcome Professor Linsey Steege from the UW School of Nursing to the WIHSE Executive Committee! Professor Steege holds the Gulbrandsen Chair in Health Informatics and Systems Innovations in the School of Nursing. Her expertise in engineering and nursing and her interests in health informatics and quality improvement are a great fit with the expanding WIHSE research community. We look forward to the knowledge and insights she will provide as WIHSE continues to expand research, outreach and impact.

### WIHSE DIRECTOR, PROFESSOR PASCALE CARAYON, PARTICIPATES IN WORLD PATIENT SAFETY DAY WEBINAR

Three of the leading world experts on Human Factors, including WIHSE Director Professor Pascale Carayon, shared the importance of Human Factors to improve safety for healthcare professionals and patients on World Patient Safety Day, September 17<sup>TH</sup>, 2020. A recording of the webinar, including Professor Carayon's presentation "Human Factors and Ergonomics (HFE) in Patient Safety and Worker Well-Being", can be accessed online at <https://isqua.org/world-patient-safety-day-2020/isqua-webinar-recording-the-importance-of-human-factors-in-preventing-harm-and-protecting-workers.html>.

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## Upcoming Events

### 2021 WIHSE CONFERENCE

We are planning to hold the WIHSE conference in the spring of 2021. We are committed to addressing how to design health care work systems and processes for vulnerable populations; this is critical especially in times of health crisis such as the COVID-19 crisis. Stay tuned for news and announcements about our conference!

DETECTING AND MANAGING BALANCE AND MOBILITY PHENOTYPES USING NEXT GENERATION TECHNOLOGIES: ARTIFICIAL INTELLIGENCE, BIOMECHANICAL SENSING, AND BEYOND. AN ICTR INTERDISCIPLINARY SYMPOSIUM

[Register to attend!](#) On **Friday, October 30<sup>th</sup>**, ICTR and WIHSE will sponsor an Interdisciplinary Symposium. The University of Wisconsin-Madison has rich resources in computer sciences, engineering, kinesiology, and health sciences to detect, manage, and improve balance and mobility phenotypes through next generation technologies. This interdisciplinary symposium will convene UW-Madison researchers and clinicians in the areas of artificial intelligence, sensing technologies, clinical medicine, kinesiology, and other health fields. WIHSE Director Pascale Carayon and WIHSE Executive Committee member Hongrui Jiang participate in the symposium planning committee.

Event Goals:

1. Increase awareness of state-of-the art research being conducted at UW-Madison
2. Create a community collaboration using interdisciplinary approaches
3. Foster and support new interdisciplinary research resulting in funding, and health system interventions

Focus Areas:

1. Gait/balance sensing
2. Artificial Intelligence
3. Longitudinal cohorts/data sets/human subjects (MIDAS, CAARN, SHOW)

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**Congratulations are in order!**

WIHSE FACULTY COLLABORATOR, DR. MICHELLE KELLY, RECEIVES AHRQ K08

Congratulations to Dr. Michelle Kelly, assistant professor of Pediatrics, for her AHRQ K08 award "Engaging Families to Improve Pediatric Safety"! Dr. Kelly has been working with many WIHSE members including Dr. Peter Hoonakker. Mentored by WIHSE Director Pascale Carayon, Dr. Kelly champions efforts to promote family engagement, including redesigning hospital rounds to include families and sharing doctor's inpatient notes with families through BedsideNotes.

WIHSE ASSOCIATE DIRECTOR, PROFESSOR NICOLE WERNER, RECEIVES NIA R41 GRANT

Congratulations to WIHSE Associate Director, Professor Nicole Werner, for receiving an NIA R41 grant in partnership with Whiplash Technology, Inc. to develop an application, CareVirture, that supports families and providers care for persons with Alzheimer's.

SCHOOL OF NURSING PROFESSOR ANDREA GILMORE-BYKOVSKYI RECEIVES NIA INNOVATION AWARD – IN COLLABORATION WITH PROFESSOR NICOLE WERNER

Congratulations Professor Andrea Gilmore-Bykovskiy from the School of Nursing on her NIA Innovation Award to work on "Characterizing Episodes of Lucidity in Dementia Using

Observational and Applied Computational Linguistics Approaches”. WIHSE Associate Director Nicole Werner from the College of Engineering will be collaborating with Dr. Gilmore-Bykovskiy on this exciting new project.

#### WIHSE FACULTY COLLABORATOR, PROFESSOR OGUZHAN ALAGOZ, AWARDED NIH R01

Congratulations to WIHSE faculty collaborator, Professor Oguzhan Alagoz, along with Dr. David Francis for receiving an NIH R01 grant to develop a machine-learning based simulation modeling approach to estimate and mitigate thyroid cancer overdiagnosis.

<https://www.engr.wisc.edu/news/alagoz-receives-grant-to-use-machine-learning-on-thyroid-cancer-overdiagnosis/>

#### WIHSE GRADUATE STUDENT, MEGAN SALWEI, RECEIVES DOCTORATE AND HFES AWARD

Congratulations WIHSE graduate student Megan Salwei for successfully defending her PhD dissertation, “Human-centered design of health information technology for workflow integration,” and receiving her doctorate! Megan has also received the HFES Student Member with Honors award for her outstanding contributions during her tenure as a student. We are very proud of her! Megan is now a Postdoctoral Research Fellow funded by the NLM Training Grant in the Department of Biomedical Informatics at Vanderbilt University Medical Center. She works within the Center for Research and Innovation in Systems Safety in the Department of Anesthesiology where she is mentored by Dr. Matthew Weinger, Norman Ty Smith Chair in Patient Safety and Medical Simulation.

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## **Publication Highlights**

- Exploring dementia family caregivers’ everyday use and appraisal of technological supports  
<https://www.sciencedirect.com/science/article/pii/S0197457220302056>
- Human factors and ergonomics systems approach to the COVID-19 healthcare crisis  
<https://academic.oup.com/intqhc/advance-article/doi/10.1093/intqhc/mzaa109/5912962?searchresult=1>
- Beyond the corrective action hierarchy: A systems approach to organizational change  
<https://academic.oup.com/intqhc/article-abstract/32/7/438/5861569>
- The average effect of emergency department admission on readmission and mortality for older adults with chest pain  
<https://europepmc.org/article/med/32732782>

- Classification of opioid usage through semi-supervised learning for total joint replacement patients  
<https://ieeexplore.ieee.org/document/9088280>

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### **Keep in touch with WIHSE!**

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