



Aging Technical Group Newsletter

Dear Aging TG Members,

Greetings! I hope everyone is having a good spring. Let me start this year's newsletter by thanking all of you who have dedicated time and efforts serving the Aging TG in the past years. Thank you for contributing your time and expertise to review the conference submissions, the scholarship applications, and the award nominations. Many thanks to the TG officers who have taken the responsibilities.

I would like to introduce our ATG officers for this year. In addition to myself, HeeSun Choi is our Program Chair, Jonathan Kasko is the WebMaster, and Na Du is our Newsletter editor. Many thanks to Bethany Lowndes for her continued service as our TG's Secretary/Treasurer and congratulations for being elected as the Chair-elect. The ATG officers have conducted a successful beginning of year business meeting. As the Aging TG will again conduct an election of new officers this coming August, I encourage you to consider serving our TG as your plan allows. Your dedication to this community is highly appreciated.

It is my great pleasure to congratulate the winners of the Aging TG scholarship and the Arnold Small Award. Both awards were announced during the 2020 ATG Zoom meeting in the past October. Congratulations to Na Du from the University of Michigan on winning the TG scholarship. Her proposed research is entitled "The Influence of Non-chronological Age Factors on Mental States and Takeover Performance in Next-Generation Autonomous Driving". Na is currently working under the supervision of Xi (Jessie) Yang. Also congratulations to Brodrick Stigall from at Clemson University on winning the Arnold Small best student paper award with his work entitled "A Systematic Review of Human Factors Literature About Voice User Interfaces and Older Adults". Brodrick is currently conducting research under the supervision of Kelly Caine.

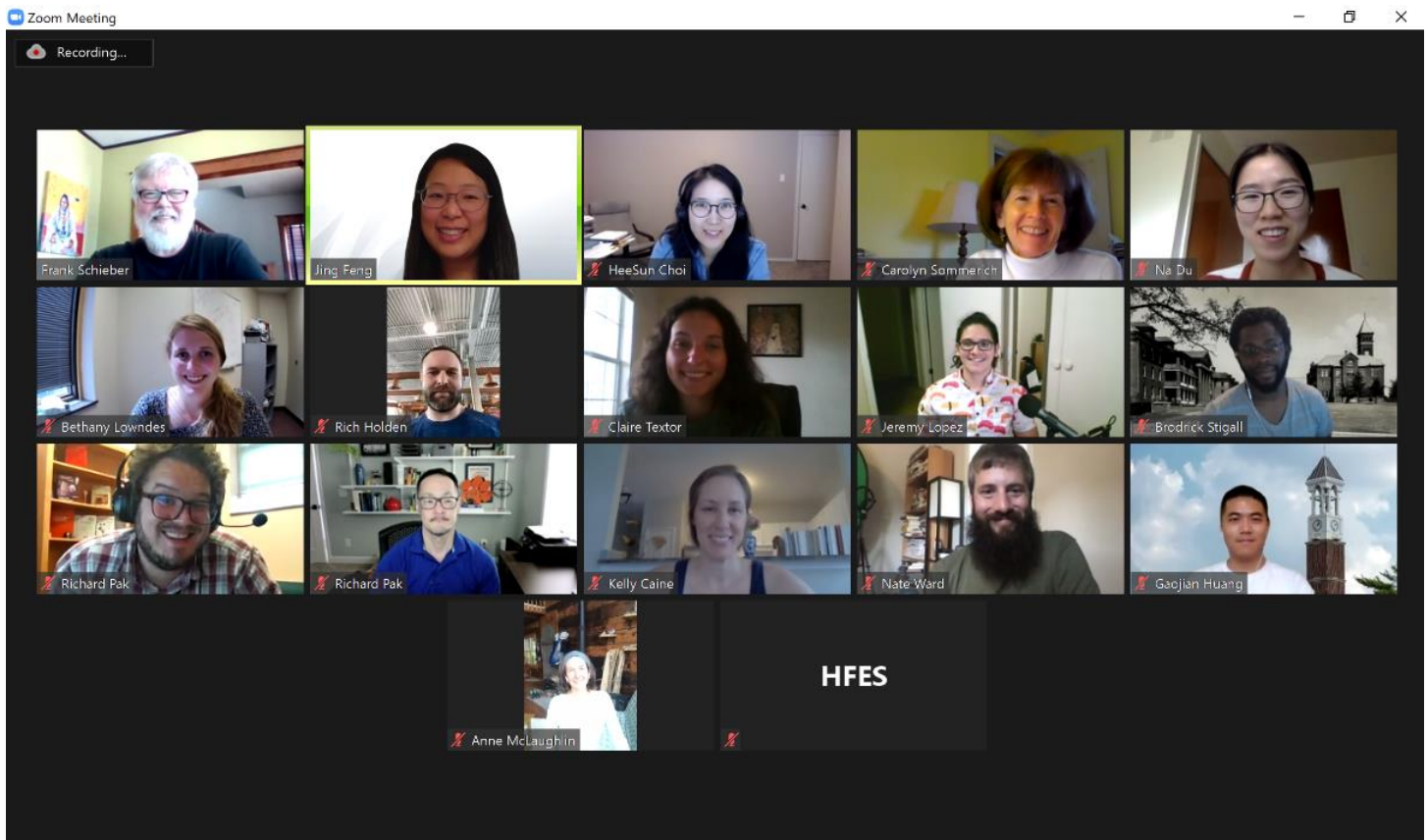
Please refer to the next page for introductions to our award winners and their work, as well as other TG reminders and upcoming deadlines.

At the end, I would like to share our "photo" from the 2020 TG zoom meeting. I hope everyone will have a nice Spring as the weather warms up and we are excited to receive your submission to the Aging TG for the upcoming HFES conference.

Best,
Jing Feng

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Reminders and Upcoming Deadlines

- **March 3, 2021:** Proposal submission deadline for the 2021 HFES Annual Meeting
- **August 1, 2021:** Officer nominations
- **August 20, 2021:** Aging TG Student Research Scholarship deadline
- **August 31, 2021:** Elections for ATG officer
- **October 4-8, 2021:** The 2021 HFES Annual Meeting will be held at the Baltimore, Maryland

Recap of Business Meeting at 2020 HFES Conference

We had a great time at our virtual business meeting last year! We met briefly to announce the new officers, get to know each other over lunch, announce the 2020 Arnold Small Award Winner and ATG Student Scholarship Winner, and discuss some ideas for our next meeting in Baltimore, Maryland. Thank you to everyone that attended the meeting. We hope to see you this year!

ATG Officer Elections

Current Officers:

Chair: Jing Feng

Chair-elect: Bethany Lowndes

Program Chair: HeeSun Choi

Secretary/Treasurer: Bethany Lowndes

Webmaster: Jonathan Kasko

Newsletter Editor: Na Du

We will have elections again this August. Please consider running for an office in the future.

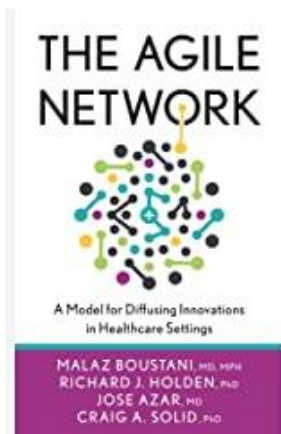
We will start accepting nominations on August 1, 2021 and elect new officers on August 31, 2021.

The Purdue Team Receives a USDOT Grant

The project Efficient, Accessible and Safe Interaction in a Real Integrated Design Environment for Riders with disabilities (EASI RIDER), submitted by Dr. Brandon Pitts and Dr. Bradley Duerstock of Purdue University, was selected as one of 10 semifinalists in the U.S. Department of Transportation (USDOT) Inclusive Design Challenge. The team, which includes BraunAbility, Local Motors, and Schaeffler Paravan as industry partners, will receive \$300,000 to develop an in-floor autonomous vehicle (AV) ramp design, automatically deploying “Smart Ramp,” automated wheelchair securement system, and on-board user-interface that will provide accessibility features that cater to the needs of people with a wide range of disabilities as well as aging populations. In 2022, the USDOT will select three final winners to receive \$2 million. More information about the design competition can be found here: <https://www.transportation.gov/briefing-room/us-department-transportation-announces-over-41-million-awards-innovative-technologies>

Three new books on better health by Rich Holden and Colleagues

Dr. Rich Holden is the co-author of *The Agile Network*, a new book describing novel healthcare transformation approaches from the Center for Health Innovation and Implementation Science, where Dr. Holden serves as Chief Healthcare Engineer. This book details how using Agile Implementation, Agile Innovation, and Agile Diffusion led to over \$1 Billion in savings due to higher-quality and more efficient care. Dr. Holden is also co-editor, with Dr. Rupa Valdez, of *The Patient Factor*, a two-volume handbook on patient ergonomics, the science and engineering of patient work. Volume 1 of the handbook presents theories and methods of patient ergonomics, whereas Volume 2 describes its applications across settings and populations, including older adults, children, and the underserved. All three books are now available for purchase or pre-order https://www.amazon.com/Richard-J-Holden/e/B08KTWMY45/ref=dp_byline_cont_book_2



\$19.95
Paperback



\$180.00
Hardcover



\$180.00
Hardcover

Dr. Richard Holden appointed as Chair of Department of Health and Wellness Design at IU Health Bloomington!

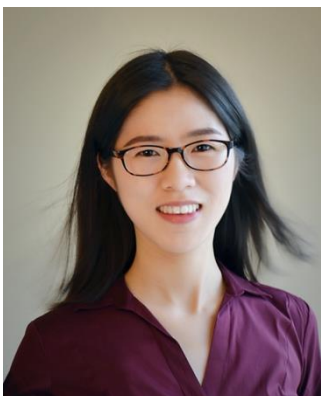
Dr. Richard J. Holden will join Indiana University's School of Public Health-Bloomington as Chair of the Department of Health & Wellness Design beginning in July. "Health by design is something I have pursued for nearly 20 years, so it's a dream come true to join a department of like-minded, passionate people," he says. Currently, Holden is a research scientist with the Indiana University Center for Aging Research at the Regenstrief Institute, an Associate Professor of Medicine at the Indiana University School of Medicine, and Chief Healthcare Engineer with the Center for Health Innovation & Implementation Science. He was awarded the distinction of Dean's Eminent Scholar as part of his appointment to SPH. He also holds multiple advanced degrees in industrial engineering and psychology. Some of his research areas of focus include human-centered design methods for health; patient ergonomics and chronic disease; and health information technology (IT) and sociotechnical change. Professor Holden currently holds both an active R01 and an active R21 grant as principal investigator from NIH, both focused on aging and Alzheimer's disease. Read more about it here: <https://publichealth.indiana.edu/news-events/news/holden-to-head-department-health-wellness-design.html>

2020 Arnold Small Award Winner



Brodrick Stigall is a 3rd-year Ph.D. student in the Human-Centered Computing. He holds a Bachelor of Science in Computer Science from University of Tennessee and Master of Science in Computer Science from Georgia Institute of Technology. Prior to beginning his doctoral studies at Clemson University, Brodrick spent 7 years working in E-Commerce at Fortune 500 companies International Paper Co. and AutoZone Inc. His research focuses on the intersection of older adult issues and voice user interface (VUI) technology. He explores how VUIs can increase the quality of life for older adults. His paper 'A Systematic Review of Human Factors Literature About Voice User Interfaces and Older Adults' is a literature review seeking to understand the state of research in Human Factors Ergonomic Society Journal and Proceedings. The paper also compares a Human Factors research in this area to computing research published in the Association of Computing and Machinery (ACM) Digital Library.

2020 ATG Student Scholarship Winner



Na Du is a member of the Aging TG and is currently a Ph.D. candidate in the Department of Industrial Operations Engineering at the University of Michigan. She also works as a research-intern at Honda Research Institute these days. Her research interests include transportation human factors, computational modeling of human behaviors, and human-centered design.

She received the Aging TG research scholarship in 2020 to support her research on older adults in driving. Her proposed work investigates the impacts of older drivers' cognitive and psychological conditions on crash involvement using naturalistic driving data. This work will contribute to the literature with comprehensive information on the crash causes and inform the design of countermeasures to reduce crashes among older drivers.

Aging Sessions at HFES Annual Meeting 2020

Session 1. Technology and Assessment of Older Adults

Monday, October 5, 1:00-2:30 PM

Paper Session

Chair: HeeSun Choi, Texas Tech University Co-Chair: Branson Kolarik, Exponent Corporation

- A person-centered design framework for serious games for dementia
- Tracking cognitive decline with a Serious Game: Benchmarking against the Mini Mental State Exam
- Use of linear-polarization Doppler radar to detect falls: Results from a simulated living environment
- A systematic review of human factors literature about voice interfaces and older adults

Session 2. Human Factors and aging: A 20-year retrospective and prospective from project CREATE

Monday, October 5, 3:00-4:30 PM

Panel Discussion

Chair: Wendy Rogers, University of Illinois

Session 3. Physical Factors in Systems Design for Older Persons

Tuesday, October 6, 11:00 AM-12:30 PM

Paper Session

Chair: Bethany Lowndes, UNMC Co-Chair: Tara Diesbourg, Oakland University

- Functional anthropometry of aging women: An examination of the waist-hip-thigh region
- The effects of engagement in physical exercise on semi-autonomous takeover requests in young and older adults
- Toward a framework of embodiment in communication technologies: Facilitating social connectivity in older adults
- A user study of the feasibility and acceptance of delivering physical activity programs to older adults using Conversational Agents