



THE UNIVERSITY OF  
TENNESSEE  
KNOXVILLE

# Emerging Technologies in Aging & Dementia

Held virtually ([Zoom link here](#)) and in person at the  
UT Student Union, Rooms  
362A&B

## Day One, June 8

- 8:00am EST**     **Light breakfast**
- 8:10am**     **Welcome:** Hollie Raynor, Associate Dean for Research, College of Education, Health, and Human Sciences, University of Tennessee-Knoxville
- 8:15am**     **Opening Remarks:** Joel Anderson, College of Nursing and Xiaopeng Zhao, Tickle College of Engineering, University of Tennessee-Knoxville
- 8:20am**     **A Savior, An Elixir, or the Unknown? The Role of Emerging Technologies for Aging and Dementia**  
Shelia Cotten, Clemson University
- 9:05am**     **User Perceptions of Checked in Care: Care Cohort—Helping to Connect Older People Through the Internet**  
Margaret MacAndrew, Queensland University of Technology
- 9:25am**     **Evaluating the Fitness-To-Drive Using Evoked Visual Responses in Alzheimer’s Disease**  
Ahmad Mitoubi (Presenter), Z. Liu, D. Banks, A. Khojandi, M. Oliver, D. Cox,  
R. Fernandez (Co-authors), University of Tennessee-Knoxville
- 9:45am**     **Neural Signature of Everyday Function in Older Adults At-Risk of Cognitive Impairment**  
Pierfilippo de Sanctis, Albert Einstein College of Medicine
- 10:05am**     **A Smart System for Older Adults with Dementia Who Have Risks of Self-Neglect**  
Minzhi Ye, Case Western University and Ping Feng, Shenzhen Technology University
- 10:25am**     **A Machine Learning Approach to Enhancing Communication about Nursing Home Residents with Alzheimer’s Disease or Related Dementia**  
Kimberly Powell, University of Missouri
- 10:45am**     **In Their Own Words: Panel of Persons with Diagnosis**  
Janice Wade-Whitehead, CEO/President of Alzheimer’s Tennessee
- 11:35am**     **Break & Lunch setup**
- 12:00pm**     **Lunch Provided**
- 1:15pm**     **Alzheimer’s Association Research Initiatives**  
Stefania Forner, Alzheimer’s Association/ISTAART
- 2:00pm**     **Detecting and Measuring Affect and Neurobehavioral Symptoms in Persons with Dementia Using Artificial Intelligence (AI)-Assisted Methods: A Systematic Review**  
Ying-Ling Jao, Pennsylvania State University
- 2:20pm**     **Evaluation of Telepresence Robot in Long-Term Care Research**  
Lillian Hung, University of British Columbia



- 2:40pm**      **Development of A Robotic Platform to Detect Lost Moments in People with Dementia**  
Fengpei Yuan, University of Tennessee-Knoxville
- 3:00pm**      **Using Verbal Fluency, Natural Language Processing, and Machine Learning to Detect Alzheimer's Disease**  
Aradhana Soni (Presenter) Amrhein, M. Baucum, E. Paek, A. Khojandi (Co-authors), UTK
- 3:20pm**      **Break**
- 3:35pm**      **"Did You Take Your Meds?": Alzheimer's Disease and Tech Solutions**  
Monica Crane, Genesis Neuroscience Clinic
- 4:25pm**      **Capturing Agitation with Wristband Technology: A Comparison Case Study**  
Elana Do, CareBand
- 4:45pm**      **Development of a Home-Based Dialogue System for Older Adults**  
Seiki Tokunaga, RIKEN
- 5:05pm**      **Deploying Human-Robot Interaction Models for Dementia Care in Federated Learning**  
Xiaowen Su, University of Tennessee-Knoxville
- 5:25pm**      **Digital Technology for The Aging Brain and Alzheimer's – Funding and Resources at the National Institute on Aging (NIA)**  
Yuan Luo, Program Director, National Institute on Aging
- 5:45pm**      **Wrap up & closing**

## Day Two, June 9

Light breakfast available in the morning

- 8:00am EST**      **Reflection of the Interaction between Data and Technology for Older Adults: Hype vs Reality**  
Partha Bhattacharyya, Program Director, National Institute on Aging
- 8:45am**      **The Effect of Sociodemographic Characteristics on Depressive Symptoms in People with Early-Stage Dementia: Findings from a 12-Week Health Promotion Course**  
Martine Kajander, Centre for Age-Related Medicine, Stavanger University Hospital
- 9:05am**      **Assessing Self-Reported Sleep Fragmentation and Sleep Duration and Its Association with Cognition in a Large Online Community-Based Aging Cohort**  
Jon Arild Aakre, Centre for Age-Related Medicine, Stavanger University Hospital
- 9:25am**      **Describing Experiences of Making a PPI Framework Tailored to the Multinational Research Project Eshape**  
Anne Henriksen, Centre for Age-Related Medicine, Stavanger University Hospital
- 9:45am**      **Engagement of Caregivers of Patients with Alzheimer's in Tiktok**  
Mary Ramos, Kennesaw State University
- 10:05am**      **Using Design to Empower Students to be a Force of Change: Designing Interdisciplinary Experiences to Address the Needs of AD and Dementia Patients**  
Kimberly Mitchell, University of Tennessee-Knoxville



- 10:25am**      **Systematic Review at the Intersection of Voice User Interfaces (VUI) and Older Adults**  
Brodrick Stigall, Clemson University
- 10:45am**      **Bridging the Digital Divide: Supporting Older Adults through Digital Access and Training**  
Dottie Lyvers, Knox County Office on Aging
- 11:30am**      **Pat Summitt Foundation: Continuing the Legacy**  
Morgan Vance, Pat Summitt Foundation
- 11:45am**      **Break & Lunch setup**
- 12:00pm**      **Lunch Provided**
- 1:15pm**      **Design and Initial Experiments of a Socially Assistive Robotic System for Addressing Apathy in Older Adults in Long-term Care Communities**  
Nilanjan Sarkar, Vanderbilt University and Lorraine C. Mion, The Ohio State University
- 2:00pm**      **Deep Learning Methods in the Study on Cellular Aging: Challenges and Opportunities**  
Hong Qin, University of Tennessee-Chattanooga
- 2:20pm**      **Understanding Referents' Relationships in Referential Communication of People with Alzheimer's Disease Using Vision and Language Learning**  
Ziming Liu, University of Tennessee-Knoxville
- 2:40pm**      **Fair and Privacy-Preserving Alzheimer's Disease Diagnosis Based on Spontaneous Speech Analysis Via Federated Learning**  
Jian Liu, University of Tennessee-Knoxville
- 3:00pm**      **Characterizing Activity Pattern Anomalies with Underlying Health Impairment Using Counterfactuals**  
Sreenivasan Ramasamy Ramamurthy (Presenter) and Nirmalya Roy, University of Maryland-Baltimore County
- 3:20pm**      **Break**
- 3:30pm**      **Patient-generated Health Data Uptake in Health-Information Interested Hospitals of Early Adopter States of Dementia Friendly Programs**  
Ibukun Fowe, Florida State University
- 3:50pm**      **Envisioning Adaptive POMDP Dialogue Policies for Dementia Care**  
Rebecca Passonneau and Ruihao Pan, Pennsylvania State University
- 4:10pm**      **Applying the New World Kirkpatrick Model to Evaluate an Online Training Course Introducing a Multi-Sensory Device**  
Jennifer Perion, University of Tennessee-Knoxville
- 4:30pm**      **Medication Adherence Monitored by an Electronic Pillbox as a Clinically Meaningful Functional Outcome in an Intervention Trial: The I-CONNECT Project**  
Hiroko Dodge, Oregon Health University
- 4:55pm**      **Practical approaches to technology development and deployment with dementia caregivers**  
Karen Rose, The Ohio State University
- 5:45pm**      **Final wrap up & closing**