Penn
University of Pennsylvania
Artificial Intelligence and Technology Collaboratory for Healthy Aging

Newsletter - April 2024 - Issue 7

Welcome to PennAITech

We are welcoming you to our seventh newsletter of the Penn Artificial Intelligence and Technology Collaboratory for Healthy Aging (PennAITech). PennAITech, funded by the National Institute on Aging, is committed to developing, evaluating, commercializing, and disseminating innovative technology and artificial intelligence systems to support older adults and those with Alzheimer's Disease and Related Dementias. Our Year 4 pilot award competition is underway, the submission deadline for Round 1 is April 30.
In this newsletter we update you on recent events. We had a successful workshop on the role of Generative AI and Large Language Models and invited national experts in AI, informatics, ethics, policy and aging to explore guidelines and frameworks for the development of LLM models specifically in gerontology and for older adults with dementia and their families. The workshop was sponsored by PennAITech and the School of Nursing, it was held December 5-6, 2023 on the Penn campus.

In March, we held the second annual a2 National Symposium. We heard from multiple stakeholders who shared their perspectives from industry, academic and clinical sites while exploring opportunities and challenges in the funding, design, implementation, evaluation and commercialization of AI and other technology systems for healthy aging and to support persons with Alzheimer's Disease and related dementias. Awardees from the three Collaboratories (PennAITech, MassAITC and JHU AITC) attended the symposium, presented posters describing their work and participated in a pitch competition. The symposium was a great success and we are looking forward to the third annual symposium that will be held in April 2025 in Boston.
We continue with our webinar series for 2023-2024; all recorded sessions are available on our YouTube channel. In this issue we feature Dr. John Holmes, chair of our IAB. As always, we invite you to follow our social media platforms, including our YouTube channel and reach out with any questions or suggestions.

George Demiris

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funded by the National Institute on Aging Grant Nr. P30AG073105

Meet the Team

Principal Investigators

George Demiris, PhD, FACMI

Jason Karlawish, MD

Jason H. Moore, PhD, FACMI

Aging Focus Pilot Core

Kathryn H. Bowles PhD, FACMI, FAAN

Pamela Z. Cacchione, PhD, CRNP, FAAN

The overarching goal of the Aging Focus Pilot Core is to promote the advancement of science using technology and artificial intelligence to optimize quality of life and healthcare management for older adults living in their homes independently, as well as those receiving skilled home and community-based services. This Core solicits, selects, and manages pilot studies that develop or test AI and technology applications to detect risks, predict needs, address disparities, improve access to care, and support decision making for chronic illness management and safe aging in place.

AD/ADRD Focus Pilot Core

Lauren Massimo PhD, CRNP

Dawn Mechanic-Hamilton, PhD

The overarching goal of the Alzheimer's Disease and Alzheimer's Disease Related Dementias (AD/ADRD) Focus Pilot Core is to promote the advancement of science and engineering for predictive analytics, clinical decision support, or the care of adults with AD/ADRD. This Core solicits, reviews, and supports pilot studies that develop or advance the use of AI and technology for AD/ADRD predictive analytics, clinical decision support, or the care of adults with AD/ADRD.

Meet the Supporting Core Team

Networking and Mentoring Core

The overarching goal of the Networking and Mentoring Core is to support activities intended to facilitate networking and mentoring for the awardees of the Aging and AD pilot projects, all of whom are invested in Artificial Intelligence (AI) approaches and technology for aging adults, including those with Alzheimer's disease or related dementias (AD/ADRD).
This Core organizes and supports consortium networking activities and communicates with the broader scientific community.

Marylyn D. Ritchie, PhD

Roy Rosin

Technology Identification and Training Core

Li Shen, PhD, FAIMBE

Ryan Urbanowicz, PhD

The overarching goal of the Technology Identification and Training Core is to use evidence from the literature, stakeholder and expert inputs to identify the technology needs of older Americans, as well as develop training activities for artificial intelligence (AI) and technology for scientists, engineers, clinicians, medical professionals, patients, policy makers, and investors.

Ethics and Policy Core

Emily Largent, JD, PhD, RN

Anna Wexler, PhD

The overarching goal of the Ethics and Policy Core is to shift the current ethics and policy paradigm by focusing on issues that arise at the intersection of aging and of AI methods and technologies for healthy aging. The Core will work in close collaboration with the other PennAITech Collaboratory Cores to address four key issues: (1) promoting the autonomy of older adults by balancing considerations of usefulness and intrusiveness; (2) protecting older adults in light of vulnerability due to cognitive and functional decline; (3) mitigating bias and addressing health disparities, such as racial disparities and urban-rural disparities; and (4) safeguarding the data privacy of older adults.

Clinical Translation and Validation Core

The goal of the Clinical Translation and Validation Core is to use the science and practice of geriatrics and gerontology to assess the feasibility and clinical utility of artificial intelligence (AI) methods for clinical decision support and of new technology for monitoring aging adults in their home. This Core provides an expert panel to assess the feasibility and clinical value of new artificial intelligence models for predictive analytics and clinical decision support and of new technologies designed to monitor aging adults and those with AD/ADRD. It provides a testbed for new technologies designed to monitor aging adults and those with AD/ADRD with an emphasis on underserved and rural populations.

Jason Karlawish, MD

Rebecca T. Brown, MD, MPH

Stakeholder Engagement Core

The overarching goal of the Stakeholder Engagement Core (SEC) is to ensure that technology solutions and AI approaches proposed and developed by the PennAITech Collaboratory are maximally adoptable by and accessible to their end users by soliciting ongoing stakeholder input and involving all key parties throughout all phases of the development and testing processes. The Core maintains a technology consortium (consisting of technology companies, startups, venture capital firms, and angel investors) that provide guidance and collaboration opportunities for pilot projects and a platform for potential dissemination and commercialization of innovative tools.

George Demiris, PhD, FACMI

Lisa M. Walke, MD, MSHA

Internal Advisory Board (IAB)

John Holmes, PhD, FACE, FACMI

The Internal Advisory Board (IAB) plays an important role in providing perspective and detailed advice and recommendations to the leadership team and the core directors. The IAB is chaired by Dr. John Holmes who is a Professor of Informatics and Epidemiology with significant experience in artificial intelligence and clinical decision support. We have assembled a team of local Penn experts representing three key areas of expertise. The first area, Biomedical Informatics and Artificial Intelligence, includes Drs. John Holmes (Professor of Informatics, AI expert), Ross Koppel (Professor of Sociology, EHR expert), Konrad Kording (Professor of Computer Science and Neuroscience, AI expert), Insup Lee (Professor of Computer Science and Engineering) and Danielle Mowery (Chief Research Information Officer). The second area, Geriatrics and Medicine, includes Drs. Mark Neuman (Anesthesiologist specializing in older adults), Matt Press (Medical Director of Primary Care), and Ramy Sedhom (Palliative Care, Geriatric Oncology, Penn Medicine Princeton Health). The third area, Home Care, includes Danielle Flynn (Director, Penn Medicine Home Health), Nancy Hodgson (Professor of Nursing), Bruce Kinosian (Division of Geriatrics), and Brian Litt (Director, Penn Center for Health, Devices, and Technology).

TEAM MEMBER SPOTLIGHT:

John H. Holmes, PhD, FACE, FACMI, FIAHSI
Professor of Medical Informatics in Epidemiology,
Department of Biostatistics, Epidemiology, and Informatics
University of Pennsylvania Perelman School of Medicine
Associate Director for Medical Informatics
Penn Institute for Biomedical Informatics

Tell us about your research interests. Describe some of your research projects.

My research interests lie at the intersection of biomedical informatics, epidemiology, and public health. Focusing primarily on methodology, I have worked extensively in the development of novel machine learning algorithms for the discovery in large surveillance and other datasets of patterns of exposures that may be associated with health outcomes. Much of this work has been in the domain of evolutionary computation, which seeks to use computational approaches to optimization and knowledge discovery that is informed by Darwinian theory as well as reinforcement learning and network models. Lately, I have been involved in agent-based modeling that incorporates these methods to simulate large-scale populations of individuals (agents) interacting with each other and environments in non-linear, dynamical, and temporal contexts. Specifically, I have been working on developing these models to simulate neighborhood effects on social determinants of health.

Given my training in information science, I am also interested in the structure and function of information and how it is used for biomedical research. I am currently working on three projects that utilize these interests. I am the site principal investigator of the NIH-funded Cardiovascular Biorepository for Type 1 Diabetes Program (CaRe-T1D), where my team is building a fully integrated research storefront to support a wide variety of diabetes researchers. We also work on a related project, the Network for Pancreatic Organ Donors with Diabetes (nPOD), funded by the Juvenile Diabetes Research Foundation. On the third project, I lead the Data Integration Core for Developing a P4 Medicine Approach to Obstructive Sleep Apnea, a program project funded by the NIH Heart, Lung, and Blood Institute.

What is your role within PennAITech?

I am the chair of the Penn AITech Internal Advisory Board (IAB). The IAB provides guidance to the program leadership (Principal Investigators and Core Directors) about strategy and process as the program proceeds over its five-year term.

What do you see as the role of artificial intelligence and technology in biomedicine and health care in the next few years?

The field of artificial intelligence is exploding. Previously focused primarily on rule-based systems and inference, it now includes a number of domains such as machine learning, network science, causal theory, statistics, linguistics, and cognitive science, to name just a few. Of particular interest is anything associated with natural language, as seen in the exponential growth of generative AI, including large language and foundation models. I saw this just recently at the AI in Medicine meeting held in early July at the University of Utah. The majority of the posters and many of the papers reported on significant work being done with these approaches to a large landscape of biomedical problems from molecular modeling, to identifying adverse events associated with drugs and devices, to predicting falls in the elderly. I feel that the trajectory is very strong in the continued development of these approaches, most especially as they apply to health and healthcare, where the majority of the information generated and used in these domains is text, not structured (numeric), data.

What advice do you have for innovators and entrepreneurs who are embarking on works harnessing the potential of AI or other technologies for aging?

I have two pieces of advice for those embarking on using or developing AI for aging. First, be very cautious of the hype about AI. There is an incredible amount of information- even misinformation- that appears daily in the media but also the grey and preprint literature. Everyone seems to want to work in or write about the power of AI to solve this problem or that, without the circumspection and critical assessment that are required for an honest appraisal of what AI can- and can't- accomplish. Innovators and entrepreneurs, as well as academics and students attracted to AI, need to develop a strong sense of critical evaluation of the field and its myriad methods and implementations. All of us working in AI need to be very realistic in presenting our work, in order to avoid over-promising its abilities to solve problems in health, especially in aging.
Second, do not hesitate to look at older AI methodologies! There are numerous examples of these that have been resurrected in new contexts and with additional functionality that demonstrate their utility and usefulness in various contexts. One example is the incorporation of the older rule-based knowledge representation and symbolic reasoning methods in the quest to develop explainable deep learning as well as generative AI approaches. There are many other examples as well. In summary, my advice is to become very familiar with the literature, and do not restrict that search only to recent articles; there is a lot to learn from the AI pioneers of the 1950s through the early 2000s.

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INTRODUCING OUR 2023-2024 PILOT AWARDEES

Gary Weissman

Advancing Diagnostic Excellence for Older Adults through Collective Intelligence and Imitation Learning

University of Pennsylvania

Maria Valero

GlucoCheck: A Non-invasive & AI-assisted Blood Glucose Monitoring Device for Older Adults

Kennesaw State University

Tony C Carnes

Real-time remote monitoring of confirmed medication adherence

etectRx

Maryam Zolnoori

A speech-processing algorithm for automatic screening of African American patients with mild cognitive impairment and early dementia in home health settings

Columbia University Medical Center and VNS Health

Jane Chung

A Device Free WiFi Sensing System to Assess Daily Activities and Mobility in Low-Income Older Adults with and without Cognitive Impairment

Virginia Commonwealth University

Xinyu Zhang

Non-Intrusive, Fine-Grained In-Home Daily Activity Transcription for Alzheimer's Monitoring

University of California San Diego

Aidong Zhang

Fairness and Robust Interpretability of Prediction Approaches for Aging and Alzheimer's Disease

University of Virginia

Clara Berridge

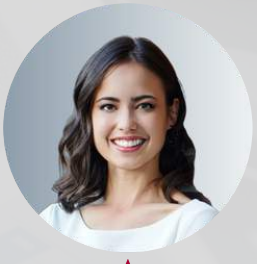
Talking tech with dementia care dyads: Improving a self-administered tool to support informed decision

University of Washington

Sandeep Patil

Prevention of Patch Poisoning in Elderly Alzheimer's Patients

Vaaji LLC



Julie Faieta

Health App Review Tool: Connecting those Affected by Alzheimer's to Needed Technology Support

University of Pittsburgh

funded by the National Institute on Aging Grant Nr. P30AG073105

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Artificial Intelligence and Technology Collaboratory for Healthy Aging

CLICK HERE TO LEARN MORE ABOUT OUR 2022-2023 PILOT AWARDEES

Desh Mohan
Patient-Surrogate Alignment in Digital Advance Care Planning
Koda Health

Robin Austin
Designing Usable Technologies via Data-Driven Whole-Person User Personas
University of Minnesota

Richard Everts
RGBd + Thermal Computer Vision Platform for Home Monitoring and Telehealth
Bestie Bot

Robin Brewer
Conversational Care Technologies
University of Michigan

David Yonce
Physiological Detection and Monitoring of Alzheimer's Disease
Cogwear

David Stout
AI-Assisted Fall Detection and Remote Monitoring for Seniors with ADRD
Iris Technology Inc

Lorens Helmchen
AI-Enabled Conversations to Manage Psychotropic Medication
The George Washington University

Veerawat Phongtankuel
Detecting respiratory distress in patients with advanced ADRD
Weill Cornell Medicine

Emma Rhodes
Feasibility of Digital Monitoring to Detect Autonomic Markers of Empathy Loss in bv FTD
University of Pennsylvania

Maja Mataric
An Accessible Machine Learning-based ADRD Screening Tool for Caregivers
University of South California

Kendra Ray
A Music-Based Mobile App to Combat Neuropsychiatric Symptoms in People Living With ADRD
AutoTune Me

Jennifer Portz
Leveraging Patient Portals to Support Caregivers
University of Colorado/ Kaiser Permanente

funded by the National Institute on Aging Grant Nr. P30AG073105

We have assembled a group of experts in the fields of gerontology, geriatrics, LLMs, Artificial Intelligence, and bioethics to participate in a two-day roundtable discussion to discuss challenges and opportunities in the use of LLMs and Generative AI in gerontology and explore how to promote transparency in the design of LLMs for gerontology, guidelines to inform appropriate use of LLMs for systems that target older adults, persons with dementia, family members, clinicians and other stakeholders, how system designers and evaluators can address age-related bias (and digital ageism) in AI, and how ChatGPT will affect the future of gerontological research.

CHATGPT AND AGING: IMPLICATIONS OF GENERATIVE AI FOR GERONTOLOGY

WORKSHOP

December 5-6, 2023
University of Pennsylvania, Houston Hall
3417 Spruce Street, Philadelphia, PA 19104
funded by the National Institute on Aging
(Grant Nr. P30AG073105)

WORKSHOP PARTICIPANTS

Chris Callison-Burch, PhD
Associate Professor,
Computer and Information Science,
University of Pennsylvania

Ryan Calo, JD
Lane Powell and D. Wayne Gittinger Professor, School of Law,
University of Washington

Jonathan H. Chen, MD
Assistant Professor of Medicine (Biomedical Informatics),
Stanford University

George Demiris, PhD
Mary Alice Bennett University Professor,
University of Pennsylvania

Jina Huh-Yoo, PhD
Associate Professor,
Information Science,
Drexel University

Ari Friedman MD, PhD
Assistant Professor,
Emergency Medicine,
University of Pennsylvania

Rebecca Krupenevich, PhD
Program Official
NIH NIA's Division of Behavioral and Social Research (BSR)

Amanda Lazar, PhD
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Information Studies,
University of Maryland

Marion Leary, PhD, MPH, RN
Director of Innovation,
School of Nursing,
University of Pennsylvania

Susan Reinhard, PhD, RN, FAAN
Senior Vice President and Director,
AARP Public Policy Institute & Chief Strategist, Center to Champion Nursing in America and Family Caregiving Initiatives

Steven E. Waldren, MD, MS
Chief Medical Informatics Officer,
American Academy of Family Physicians

Anna Wexler, PhD
Assistant Professor,
Medical Ethics and Health Policy,
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Hannah Cho
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University of Pennsylvania

Oonjee Oh
PhD Student
School of Nursing,
University of Pennsylvania

Jennifer Forbes-Nicotera
Program Manager
School of Nursing,
University of Pennsylvania

Nancy Greene
Data Project Manager
School of Nursing,
University of Pennsylvania

Starting the Conversation: Implications of Generative AI for Gerontology

The discussion explored the following questions:

- Can Large Language Models be used to address social isolation and loneliness for older adults?
- What are guidelines to inform appropriate use of LLMs for systems that target older adults, persons with dementia, family members, clinicians and other stakeholders?
- How can we promote transparency in the design of LLMs for gerontology?
- How can system designers and evaluators address age-related bias (and digital ageism) in AI?
- How does ChatGPT affect the future of gerontological research?

Thank you for joining us for the 2nd annual a2 National Symposium. We heard from multiple stakeholders who shared their perspectives from industry, academic and clinical sites while exploring opportunities and challenges in the funding, design, implementation, evaluation and commercialization of AI and other technology systems for healthy aging and to support persons with Alzheimer's Disease and related dementias. Links to the agenda, program and poster images are available on our website.

Forward with four words

In her opening remarks, **Antonia M. Villarruel, PhD, RN**, University of Pennsylvania, helped chart next steps by offering a rubric of four "H" words linked to key considerations to guide us forward through the coming era.

- **Hype**: While AI seems capable of answering every problem, how can we cut through hyperbole to understand both the limitations and unintended consequences of its use?
- **Hope**: Where does AI hold most potential for discovery, diagnosis, and supportive care?
- **Harmony**: How can emerging technology enhance, support, and amplify research and clinical care? How can it support people who need help right now?
- **Humility**: Setting aside our individual and institutional goals, how can we tap into our collective interests and make the best decisions for individuals and families?

"There are four kinds of people in the world:
Those who have been caregivers;
those who currently are caregivers;
those who will be caregivers;
and those who will need caregivers."

Rosalynn Carter
Former First Lady

The a2 Pilot Awardees Pitch and Poster Session was a highlight for both awardees and attendees. Congrats once more to the TRACE Biometrics Team.

Thank you again for joining us for the 2nd annual a2 National Symposium in Philadelphia and virtually across the world. Please checkout the a2Collective blog for more details and highlights about the event: https://www.a2collective.ai/blog-posts/ai-and-aging-a-foundation-for-progress

a2 COLLECTIVE

PRESENTS

MARK YOUR CALENDARS FOR THE NEXT

a2 NATIONAL SYMPOSIUM

Empowering Innovation in AI/Tech + Aging

THIRD ANNUAL a2 NATIONAL SYMPOSIUM

Hosted by MassAITC / Co-hosted by a2 Collective Coordinating Center, JH AITC, PennAITech

WHEN: April 3-4, 2025
WHERE: Boston, MA

FOURTH ANNUAL a2 NATIONAL SYMPOSIUM

Hosted by a2 Collective Coordinating Center / Co-hosted by JH AITC, MassAITC, PennAITech

WHEN: Spring 2026
WHERE: Washington, D.C.

PennAITech

Johns Hopkins AI & Technology Collaboratory for Aging Research

MassAITC

a2 COLLECTIVE COORDINATING CENTER

The a2 National Symposium is primarily funded by the National Institute on Aging, part of the National Institutes of Health.

SAVE THE DATE

a2collective.ai/symposium

SELECTED PUBLICATIONS

WORK BY OUR TEAM

01.

Leveraging informative missing data to learn about acute respiratory distress syndrome and mortality in long-term hospitalized COVID-19 patients throughout the years of the pandemic.
Getzen E, Tan AL, Brat G, Omenn GS, Strasser Z; Consortium for Clinical Characterization of COVID-19 by EHR (4CE) (Collaborative Group/ Consortium); Long Q, **Holmes JH**, Mowery D. AMIA Annu Symp Proc. 2024 Jan 11;2023:942-950. eCollection 2023. PMID: 38222425

02.

Artificial Intelligence and Technology Collaboratories: Innovating aging research and Alzheimer's care.
Abadir P, Oh E, Chellappa R, Choudhry N, **Demiris G**, Ganesan D, **Karlawish J**, Marlin B, Li RM, Dehak N, Arbaje A, Unberath M, Cudjoe T, Chute C, **Moore JH**, Phan P, Samus Q, Schoenborn NL, Battle A, Walston JD. Alzheimers Dement. 2024 Apr;20(4):3074-3079. doi: 10.1002/alz.13710. Epub 2024 Feb 7. PMID: 38324244

03.

Ethical issues in direct-to-consumer healthcare: A scoping review.
Nagappan A, Kalokairinou L, **Wexler A**. PLOS Digit Health. 2024 Feb 13;3(2):e0000452. doi: 10.1371/journal.pdig.0000452. eCollection 2024 Feb. PMID: 38349902

04.

Does cognitive impairment moderate the relationship between social isolation and anxiety? A 5-year longitudinal study of a nationally representative sample of community residing older adults.
Hwang Y, **Massimo L**, Aryal S, Hirschman KB, **Cacchione PZ**, Hodgson NA. BMC Geriatr. 2024 Jan 15;24(1):63. doi: 10.1186/s12877-024-04685-z. PMID: 38225544

05.

Caring for Patients with Functional Impairment in Middle Age: Perspectives from Primary Care Providers and Geriatricians.
Schmucker AM, Reyes-Farias D, Nicosia FM, Xu E, B Potter M, Karliner LS, **Brown RT**. J Gen Intern Med. 2024 Mar 15. doi: 10.1007/ s11606-024-08701-1. Online ahead of print. PMID: 38489004

06.

A Pragmatic, Investigator-Driven Process for Disclosure of Amyloid PET Scan Results to ADNI-4 Research Participants.
Erickson CM, **Karlawish J**, Grill JD, Harkins K, Landau SM, Rivera-Mindt MG, Okonkwo O, Petersen RC, Aisen PS, Weiner MW, **Largent EA**. J Prev Alzheimers Dis. 2024;11(2):294-302. doi: 10.14283/jpad.2024.33. PMID: 38374735

PUBLICATIONS

07.

The genetic architecture of multimodal human brain age.
Wen J, Zhao B, Yang Z, Erus G, Skampardoni I, Mamourian E, Cui Y, Hwang G, Bao J, Boquet-Pujadas A, Zhou Z, Veturi Y, **Ritchie MD**, Shou H, Thompson PM, **Shen L**, Toga AW, Davatzikos C. Nat Commun. 2024 Mar 23;15(1):2604. doi: 10.1038/s41467-024-46796-6. PMID: 38521789

08.

The Technology in Caring Questionnaire: Development and Psychometric Properties.
Kiselica AM, Lin SSH, Ranum R, Mikula CM, Hermann G, Boone A, Scullin M, **Mechanic-Hamilton D**, Wolf T, Stevens A, Benge JF. Alzheimer Dis Assoc Disord. 2024 Jan-Mar 01;38(1):77-84. doi: 10.1097/WAD.0000000000000604. Epub 2024 Jan 22. PMID: 38277628

09.

Alzheimer's in the modern age: Ethical challenges in the use of digital monitoring to identify cognitive changes.
Erickson CM, **Wexler A**, **Largent EA**. Inform Health Soc Care. 2024 Jan 2;49(1):1-13. doi: 10.1080/17538157.2023.2294203. Epub 2023 Dec 20. PMID: 38116960

10.

The Listening Guide: Illustrating an underused voice-centred methodology to foreground underrepresented research populations.
Morgan BE, Hodgson NA, **Massimo LM**, Ravitch SM. J Adv Nurs. 2024 Feb 28. doi: 10.1111/jan.16054. Online ahead of print. PMID: 38415935

11.

Gene-SGAN: discovering disease subtypes with imaging and genetic signatures via multi-view weakly-supervised deep clustering.
Yang Z, Wen J, Abdulkadir A, Cui Y, Erus G, Mamourian E, Melhem R, Srinivasan D, Govindarajan ST, Chen J, Habes M, Masters CL, Maruff P, Fripp J, Ferrucci L, Albert MS, Johnson SC, Morris JC, LaMontagne P, Marcus DS, Benzinger TLS, Wolk DA, **Shen L**, Bao J, Resnick SM, Shou H, Nasrallah IM, Davatzikos C. Nat Commun. 2024 Jan 8;15(1):354. doi: 10.1038/s41467-023-44271-2. PMID: 38191573

12.

Algorithmic identification of persons with dementia for research recruitment: ethical considerations.
London AJ, **Karlawish J**, **Largent EA**, Hey SP, McCarthy EP. Inform Health Soc Care. 2024 Jan 2;49(1):28-41. doi: 10.1080/17538157.2023.2299881. Epub 2024 Jan 10. PMID: 38196387

PUBLICATIONS

13.

Risk prediction: Methods, Challenges, and Opportunities.
Li R, Duan R, He L, **Moore JH**. Pac Symp Biocomput. 2024;29:650-653. PMID: 38160314

14.

Determining the Innovativeness of Nurses Who Engage in Activities That Encourage Innovative Behaviors.
Leary M, **Demiris G**, Brooks Carthon JM, **Cacchione PZ**, Aryal S, Bauermeister JA. Nurs Rep. 2024 Apr 3;14(2):849-870. doi: 10.3390/nursrep14020066. PMID: 38651478

15.

Digital markers of motor speech impairments in spontaneous speech of patients with ALS-FTD spectrum disorders.
Shellikeri S, Cho S, Ash S, Gonzalez-Recober C, Mcmillan CT, Elman L, Quinn C, Amado DA, Baer M, Irwin DJ, **Massimo L**, Olm CA, Liberman MY, Grossman M, Nevler N. Amyotroph Lateral Scler Frontotemporal Degener. 2024 May;25(3-4):317-325. doi: 10.1080/21678421.2023.2288106. Epub 2023 Dec 5. PMID: 38050971

16.

Application of a Human Factors and Systems Engineering Approach to Explore Care Transitions of Sepsis Survivors From Hospital to Home Health Care.
Oh S, Sang E, Stawnychy MA, Garren P, You SB, O'Connor M, Hirschman KB, Hodgson N, Cranston T, Jablonski J, O'Brien K, Newcomb M, Spahr M, **Bowles KH**. Hum Factors. 2024 Jan 3:187208231222399. doi: 10.1177/00187208231222399. Online ahead of print. PMID: 38171592

17.

Polygenic risk scores for cardiometabolic traits demonstrate importance of ancestry for predictive precision medicine.
Kember RL, Verma SS, Verma A, Xiao B, Lucas A, Kripke CM, Judy R, Chen J, Damrauer SM, Rader DJ, **Ritchie MD**. Pac Symp Biocomput. 2024;29:611-626. PMID: 38160310

18.

What Makes a Better Life for People Facing Dementia? Toward Dementia-Friendly Health and Social Policy, Medical Care, and Community Support in the United States.
Gaster B, **Largent EA**. Hastings Cent Rep. 2024 Jan;54 Suppl 1:S40-S47. doi: 10.1002/hast.1554. PMID: 38382038

The national a2 Pilot Awards competition is hosted annually by the a2 Collective and funded by the National Institute on Aging (NIA), part of the National Institutes of Health, through the Artificial Intelligence and Technology Collaboratories (AITC) for Aging Research program. NIA has earmarked $40 million to fund technology demonstration projects that utilize artificial intelligence (AI) approaches and technology to improve care and health outcomes for older Americans, including persons with Alzheimer's disease and related dementias (AD/ADRD), and their caregivers.

The application information found here is relevant to the fourth annual a2 Pilot Awards competition, which is accepting applications from March 1 to April 30, 2024 (5 p.m. ET). To view projects selected for award in past competitions, visit our Awardees page. If you have any questions about the application process, please email us here. For any specific questions about your pilot project scope or collaborating with an AITC, we suggest that you email the AITC directly to establish a dialogue.

Office Hours:
Available March 26-April 12;
request a meeting slot via email:
pennaitech@nursing.upenn.edu
Please include focus of
Aging or AD/ADRD in request.

Key Dates

Round 1	Round 1 Applications Open	Mar 1, 2024
	Q&A Webinar with AITC Leadership	Mar 25, 2024 @ 12-1 p.m. ET View Recording
	Round 1 Applications Deadline	Apr 30, 2024 @ 5 p.m. ET
	Round 1 Applications Decisions	Jun 14, 2024
Round 2 (Invite-only)	Round 2 Webinar	Jul 1, 2024 @ 12-1 p.m. ET
	Round 2 Applications Deadline	Jul 30, 2024 @ 5 p.m. ET
	Round 2 Applications Decisions	Mid-September 2024
	NIA Approvals	Fall 2024
	Projects Expected to Begin	Early 2025

Our webinar series continues for 2024:

Penn
University of Pennsylvania
Artificial Intelligence and Technology Collaboratory for Healthy Aging

Decision-Making in Dementia Care: Preferences of People with Memory Loss

Anne M. Turner, MD, MLIS, MPH, FACMI

Professor, Health Systems and Population Health & Biomedical Informatics and Medical Education
University of Washington, Seattle

THURSDAY, APRIL 4
12-1PM EST

Click HERE for Full Series Webinar Information

PennAITech

funded by the National Institute on Aging Grant Nr. P30AG073105

Penn
University of Pennsylvania

Artificial Intelligence and Technology Collaboratory for Healthy Aging

WEBINAR SERIES 2023-2024

The purpose of this webinar series is to foster a dialogue exploring clinical, ethical and technological opportunities and challenges associated with the use of technology to promote aging, and to introduce different perspectives at the intersection of informatics and gerontology.

September 7, 2023
Brendan McEntee
MITRE

October 5, 2023
Matthew McCoy
University of Pennsylvania

November 2, 2023
Constantin Aliferis
University of Minnesota

December 7, 2023
Ab Brody
New York University

January 4, 2024
Yuri Quintana
Harvard University

February 1, 2024
Sean Mooney
University of Washington

March 7, 2024
Irene Y. Chen
UC Berkeley and UCSF

April 4, 2024
Anne Turner
University of Washington

May 2, 2024
Sophie Scott
University College London

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Fei Wang
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Penn
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Mayur Naik, PhD

Professor and Graduate Chair
Computer and Information Science
University of Pennsylvania

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University College London

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Artificial Intelligence and Technology Collaboratory for Healthy Aging

Technology solutions may prove to be useful in helping people age independently and stay safe at the residence of their choice, manage their health care needs and communicate with family members and health care providers. The *Penn Artificial Intelligence and Technology Collaboratory for Healthy Aging* (**PennAITech**) is a program that fosters innovation to support aging. **We are looking for family caregivers, namely, adults who are taking care of a loved one, relative or friend who is over the age of 65 years, to participate in our stakeholder engagement group and give us feedback about many different ideas and projects.** No previous experience with technology is necessary. We will provide remuneration at $50 per hour, and anticipate participation for up to 10 hours per year based on interest and availability.

For more information, please contact:

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Phone: 215-746-8361

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