

2024 A2 NATIONAL SYMPOSIUM PROGRAM

March 19-20, 2024

University of Pennsylvania,
Smilow Center for Translational Research
3400 Civic Center Blvd, Philadelphia, PA 19104
Arthur H. Rubenstein Auditorium and Commons

funded by the National Institute on Aging





NATIONAL SYMPOSIUM

Empowering Innovation in AI/Tech + Aging

MARCH 19-20, 2024

UNIVERSITY OF PENNSYLVANIA | PHILADELPHIA, PA



HOSTED BY:



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

WHY YOU SHOULD ATTEND

LEARN

about the latest tech innovations in aging and AD/ABRD

MEET

with a2 Pilot Awards decision-makers, VCs, and capital allocators

CONNECT

with AgeTech innovators and startups

UNDERSTAND

the latest aging research perspectives and AI ethics issues

POSTER PITCH COMPETITION

An exclusive showcase of the latest a2 Pilot Awards innovators from Cohort 2

JUDGES:



Jun Jeon, MD

Khosla Ventures



Katherine Baird, MBA

AI Fund



Matt Nelson, PhD

Deerfield Management



Michele Washko, MBA

Life Sciences Greenhouse Investments

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FEATURED SPEAKERS:



Justin Clapp, PhD, MPH



Joel Dudley, PhD



Todd Haim, PhD



Dee Fowlkes



Ross Koppel, PhD, FACMI, FIAHSI



Susan Jackewicz



Amanda Lazar, PhD



Kishore Kuchibhotla, PhD



Oded Nov, PhD



Lily Liu



Marie Maloney



Reuben Ng, PhD



Andrew Toy



Ipsit V. Vahia, MD

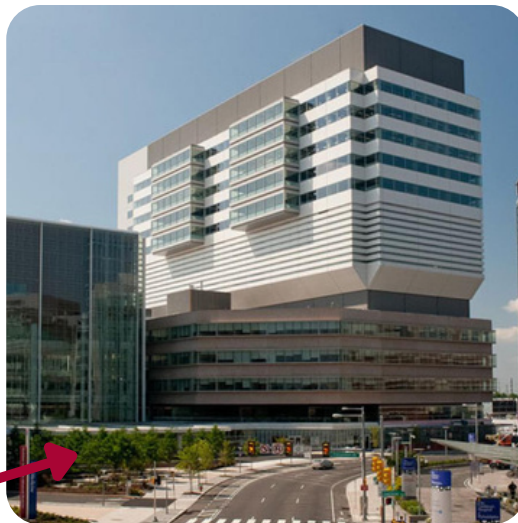


Suchi Saria, PhD

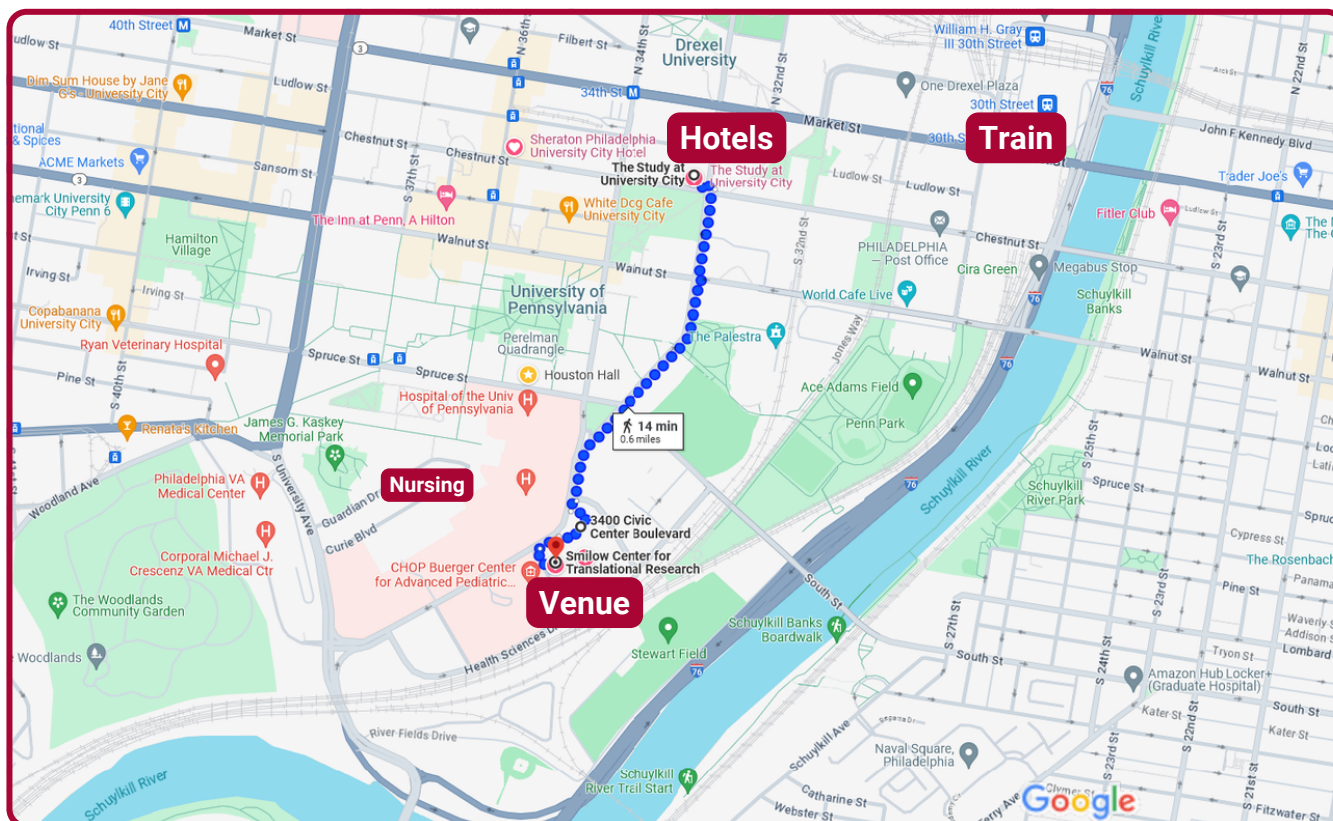


Rui Zhang, PhD, FAMIA

SMILOW CENTER FOR TRANSLATIONAL RESEARCH, 3400 CIVIC CENTER BLVD, PHILADELPHIA, PA 19104



**Enter at Perelman Center for Advanced Medicine (PCAM).
Elevator or escalator for access to mezzanine level.
Follow corridor to the right to connect to Smilow.
Please check-in at registration desk.**



JOINING VIRTUALLY

Link to Livestream:

<https://mediasite.med.upenn.edu/mediasite/Channel/2nd-annual-a2-national-symposium>

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Virtual participation is limited to viewing the livestream.

There is no interactive component for this year's symposium.

Some recordings will be added to the post-event blog on the [a2Collective website](#).

Meeting Agenda - March 19, 2024

8:00am	<i>Registration / Check-In / Breakfast</i>
9:10am	Welcome Remarks Antonia M. Villarruel, PhD, RN, FAAN , Margaret Bond Simon Dean of Nursing, University of Pennsylvania Partha Bhattacharyya, PhD , AITC Program Official, Program Director, Division of Behavioral and Social Research, National Institute on Aging
9:30am	The Super Evolution Is Here Joel Dudley, PhD , Innovation Endeavors Moderator: Nitesh K. Choudhry, MD, PhD, Harvard Medical School
10:30am	<i>Coffee Break</i>
11:00am	Perspectives on the Growth of AI <ul style="list-style-type: none">• Amanda Lazar, PhD, University of Maryland<ul style="list-style-type: none">◦ How Stereotypes of Aging Prevent Older Adults from Accepting Technologies• Rui Zhang, PhD, FAMIA, University of Minnesota<ul style="list-style-type: none">◦ AI-Driven Repurposing Pharmacological and Non-Pharmacological Interventions for Alzheimer's Disease Moderator: Deepak Ganesan, PhD, University of Massachusetts Amherst
12:00pm	<i>Networking Opportunities and Lunch</i>
1:30pm	Stakeholder Engagement: Lived Experience Panel <ul style="list-style-type: none">• Dee Fowlkes• Susan Jackewicz• Lily Liu• Marie Maloney Moderator: Lisa M. Walke, MD, University of Pennsylvania

Meeting Agenda - March 19, 2024 (continued)

2:30pm	Reverse Pitch: Funders and Dealmakers
3:00pm	<i>Coffee Break</i>
3:15pm	“Fast” Pitches: Poster Presentation Preview Moderator: Marylyn D. Ritchie, PhD, University of Pennsylvania
4:30pm	Poster Presentations in Commons Area <ul style="list-style-type: none">• Judges Include:<ul style="list-style-type: none">◦ Katherine Baird, MBA, AI Fund◦ Jun Jeon, MD, Khosla Ventures◦ Matt Nelson, PhD, Deerfield Management◦ Michele Washko, MBA, Life Sciences Greenhouse Investments

Meeting Agenda - March 20, 2024

8:00am	<i>Registration / Check-In / Breakfast</i>
9:00am	Panel - Funding and Entrepreneurship for Technology for Aging <ul style="list-style-type: none">• Todd Haim, PhD, Director, Office of Strategic Extramural Programs, National Institute on Aging• Reuben Ng, PhD, Lee Kuan Yew School of Public Policy, National University of Singapore<ul style="list-style-type: none">◦ Harnessing R&D Funding for Technology Implementation in Aging Populations Moderator: Rose M. Li, PhD, MBA, Rose Li & Associates Inc.

Meeting Agenda - March 20, 2024 (continued)

10:00am	Fireside Chat with Suchi Saria, PhD , Johns Hopkins University Moderator: George Demiris, PhD, University of Pennsylvania
11:00am	Panel - Using Technology to Measure Lucidity and Consciousness <ul style="list-style-type: none">• Justin Clapp, PhD, University of Pennsylvania• Kishore Kuchibhotla, PhD, Johns Hopkins University• Ipsit V. Vahia, MD, Harvard Medical School Moderators: Jason Karlawish, MD & Emily Largent, PhD, University of Pennsylvania
12:00pm	<i>Announcement of Poster Competition Winner</i>
12:15pm	<i>Networking Opportunities and Lunch</i>
1:30pm	Generative AI and Aging: The Era of ChatGPT <ul style="list-style-type: none">• Oded Nov, PhD, New York University<ul style="list-style-type: none">◦ Interacting with AI advice for Better Decision-Making• Ross Koppel, PhD, University of Pennsylvania<ul style="list-style-type: none">◦ For Older Adults at Home: Use of AI to Safely Allow Access for Healthcare Workers, Maintenance Staff, Family, and Others Moderator: Rama Chellappa, PhD, Johns Hopkins University
2:30pm	AI and Aging: Helping Everyone Live Their Best Life Andrew Toy , Clover Health Moderator: Peter Abadir, MD, Johns Hopkins University
3:30pm	Closing Remarks

Speaker and Panelist Profiles



Justin Clapp, PhD, MPH is Assistant Professor of Anesthesiology & Critical Care and Medical Ethics & Health Policy and Associated Faculty in Anthropology at the University of Pennsylvania. A linguistic and medical anthropologist, his research uses ethnographic and other qualitative methods along with anthropological theory to examine bioethical issues. Much of his work focuses on treatment decision making in surgery, critical care, and dementia.



Joel Dudley, PhD is a partner at Innovation Endeavors and an experienced leader, medical professional, researcher, and entrepreneur. Joel previously served as the Chief Scientific Officer at Tempus, a company focused on bringing the power of data and artificial intelligence to healthcare. Before joining Tempus, Joel was an Associate Professor of Genetics and Genomic Sciences and founding Director of the Institute for Next Generation Healthcare at the Icahn School of Medicine at Mount Sinai. He also served as Executive Vice President for Precision Health for the Mount Sinai Health System.

Prior to joining Innovation Endeavors, Joel co-founded Onegevity Health (acquired by Thorne), a company developing health intelligence platforms for preventative health, and NuMedii, a company developing machine learning and A.I. approaches for drug discovery. Joel has published 200+ peer-reviewed research papers that have been referenced and featured in the New York Times, Wall Street Journal, Scientific American, MIT Technology Review, CNBC, and other popular media outlets. Joel earned a BS in Microbiology from Arizona State University and an MS and Ph.D. in Biomedical Informatics from the Stanford University School of Medicine.



Dee Fowlkes is a stakeholder of the Johns Hopkins AITC and has been a family caregiver for over 25 years to her parents and grandparents, who were diagnosed with Colon Cancer, Leukemia, and Alzheimer's Disease. Her experience includes the last 6 years of her dad's life as his 24-hour caregiver and attended 4 years of intense education about caregiving, dementia, and Alzheimer's Disease. She understands how the different stages affect both the loved ones and family caregivers at different stages. Dee Fowlkes was an advocate, spoke before several Maryland hearings on behalf of caregivers and the mandatory education for healthcare professionals on dementia, became a Certified Johns Hopkins Medical Lay Health Educator along with other accomplishments, and created her own TIZ I Health & Wellness Program for ages 50 and up.



Todd Haim, PhD, is the NIH National Institute on Aging (NIA) Senior Advisor on Biomedical Innovation and the Director of the NIA Office of Strategic Extramural Programs (OSEP). He leads a dynamic team focused on coordinating and continuing to enhance NIA's training, career development, and small business seed funding (SBIR/ STTR) programs. Under Todd's leadership, NIA's seed and career development funding programs have grown significantly and incorporated more resources to enable awardee success. Todd previously was Program Director at the National Cancer Institute (NCI) SBIR Development Center. Prior to NCI, he was a Christine Mirzayan Science and Technology Policy Fellow at the National Academy of Sciences and a postdoctoral fellow at Pfizer. Todd graduated from Albert Einstein College of Medicine in January 2007 with a Ph.D. in biomedical research and obtained a certificate in technology commercialization from John Hopkins' Carey Business School in 2011. He has received several prestigious awards and honors, including the 2014 NCI Leadership Development Award, several NIA, NCI, and NIH Director's Awards, and the New Jersey Governor's Award for Volunteerism in the Field of Health.



Susan Jackewicz is a stakeholder at PennAITech. She has been a family caregiver for two generations of relatives, diagnosed with Vascular Dementia, Lewy body Disease, and Alzheimer's. She understands the family care experience across locations (acute hospital, SNF, ALF, memory care, community services, hospice) and in-home care. Her undergraduate degree in design influences her care work and growing optimism around research and technology for improving lives. Professionally Susan has been a Director and Operations Executive in the consumer retail, publishing, and nonprofit industries. She served 9 years as Community Advisory Board member for a rehabilitation hospital in Sarasota, Florida. In 2014 she was involved with beta testing one of the first in-home health sensors for a Silicon Valley startup. Her personal interests include the Quantified Self movement and wearables, botanical art, and plant morphology.



Ross Koppel, PhD, FACMI, FIAHSI, has been at the University of Pennsylvania since 1991, where he has taught Sociology and Medical Informatics. His work on healthcare information technology (HIT) is focused on patient safety, the integration of HIT with clinical workflow, usability, implementation, and evaluation. His work has altered the profession's understanding how to improve human-computer interactions and their impact on patient safety. His hundreds of articles on the HIT usability, workflow, and ethics in JAMA, JAMIA, Annals of Internal Medicine, NEJM, Health Affairs, etc. are considered seminal works. His work combines ethnographic research, extensive statistical analysis, surveys, observations, interviews, plus organizational and financial analyses. Prof. Koppel is a Senior Fellow at the University of Pennsylvania's Institute for Biomedical Informatics, a Fellow of the International Academy of Health Sciences Informatics; a Distinguished Fellow of the American College of Medical Informatics; a Senior Fellow of the Center for Public Health Initiatives, a Senior Fellow of the Leonard Davis Institute for Healthcare Economics.



Kishore Kuchibhotla, PhD is an Assistant Professor of Psychological and Brain Sciences, Neuroscience and Biomedical Engineering at Johns Hopkins University. The overarching mission of his lab is to understand the intrinsic mechanisms underlying learning and flexibility in the healthy brain so as to inform efforts to reverse engineer mechanistic disruptions in the dementia brain. Our approach combines studies in rodents and humans. As part of the AITC, Kishore and his team are aiming to systematically assess the features, incidence, and predictability of cognitive fluctuations and lucid intervals in human patients using a novel, app-based measurement approach that be used within the home and local environment. This work is complemented by mechanistic studies of context-dependent memory processes in mouse models of AD. He earned bachelor degrees in Physics and Brain/Cognitive Science and minored in Political Science at the Massachusetts Institute of Technology. He went on to earn his PhD in Biophysics at Harvard University under the mentorship of Drs. Brian Bacskai and Bradley Hyman. Kishore completed his postdoctoral work at the Skirball Institute at NYU with Dr. Robert Froemke.



Amanda Lazar, PhD is an Assistant Professor in the College of Information Studies with an affiliate appointment in the Department of Computer Science at the University of Maryland, College Park. She received her PhD from the University of Washington in Biomedical and Health Informatics. Dr. Lazar's research in the field of Human-Computer Interaction is informed by her background in health informatics and engineering. She studies the design of technology for older adults, and focuses on including the perspectives of end-users in design. Much of her work focuses on technology for meaningful engagement and purpose for people with dementia. Her work has been supported by the National Science Foundation (NSF), including a CAREER grant, and the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR).



Lily Liu is a member of the Family Caregiver Stakeholder Core at the Johns Hopkins University (JHU) AI & Technology Collaboratory (AITC) for Aging Research. She has had more than 20 years of lived experience as a family caregiver for her parents, one with an acute illness and the other with a chronic illness (Parkinson's Disease and dementia), initially as a long-distance caregiver and most recently as a 24/7, hands-on caregiver during the pandemic. Lily describes herself as a 1.5-generation immigrant family caregiver, a personal profile that has prompted her to become a public speaker on caregiving issues, in English, Mandarin Chinese and bilingually, to help others from diverse backgrounds who face linguistic, cultural and other barriers. In her advocacy on behalf of other family caregivers, Lily wears a red dragon pin as she urges these individuals to seek information and resources to empower themselves on their caregiving journey in order to transform themselves from a "Draggin' Caregiver" to a "Dragon Caregiver."



Marie Maloney is a caregiver to frail elderly parent and parent with dementia. Following my experiences as a caregiver, I firmly believed that technology could be used to impact elder care positively. My most relevant experience in this field was being a Chief Information Officer (CIO) at a Fully Integrated Dual Eligible Special Needs Plan (FIDESNP). This experience allowed me to work with dedicated clinicians and provide technology that enabled better care for our most vulnerable population. The technology used allowed clinicians and caregivers to provide fully integrated care addressing medical, social and emotional needs allowing patients to age at home.



Reuben Ng, PhD is a Harkness Fellow in Healthcare Policy and Practice at the University of Pennsylvania. He is the first from Asia to be honored with the prestigious award since its inception in 1925. He is concurrent an Assistant Professor at the Lee Kuan Yew School of Public Policy in Singapore and the Principal's Visiting Fellow at Mansfield College, Oxford University. He is an expert in ageism, aging policy, Technology and AI implementation.



Oded Nov, PhD is the Morton Topfer Professor in Technology Management and the chair of the Technology Management & Innovation Department at New York University's Tandon School of Engineering, with courtesy appointments at the Department of Computer Science & Engineering, and the NYU Grossman School of Medicine. He received my PhD at Cambridge University and his research focuses on social computing, human-computer interaction and the future of work. Prof. Nov is a recipient of the National Science Foundation CAREER Award, and his research has been supported by the NSF, NIH, the National Academies Keck Initiative, the MacArthur Foundation, and Google.



Suchi Saria, PhD, holds the John C. Malone endowed chair and is the Director of the Machine Learning, AI and Healthcare Lab at Johns Hopkins. She is also the Founder and CEO of Bayesian Health. Her research has pioneered the development of next generation diagnostic and treatment planning tools that use statistical machine learning methods to individualize care. She has written several of the seminal papers in the field of ML and its use for improving patient care and has given over 300 invited keynotes and talks to organizations including the NAM, NAS, and NIH. Dr. Saria has served as an advisor to multiple Fortune 500 companies and her work has been funded by leading organizations including the NIH, FDA, NSF, DARPA and CDC. Dr. Saria's has been featured by the Atlantic, Smithsonian Magazine, Bloomberg News, Wall Street Journal, and PBS NOVA to name a few. She has won several awards for excellence in AI and care delivery. For example, for her academic work, she's been recognized as IEEE's "AI's 10 to Watch", Sloan Fellow, MIT Tech Review's "35 Under 35", National Academy of Medicine's list of "Emerging Leaders in Health and Medicine", and DARPA's Faculty Award. For her work in industry bringing AI to healthcare, she's been recognized as World Economic Forum's 100 Brilliant Minds Under 40, Rock Health's "Top 50 in Digital Health", Modern Healthcare's Top 25 Innovators, The Armstrong Award for Excellence in Quality and Safety and Society of Critical Care Medicine's Annual Scientific Award.



Andrew Toy is the Chief Executive Officer at Clover Health. As a technology-first Medicare company, Clover focuses on making great healthcare affordable to all of America's seniors, whether they are on Medicare Advantage or Original Medicare. Clover does this through its technology platform, Clover Assistant, which it provides to Primary Care physicians. Clover Assistant helps PCPs identify and manage chronic disease earlier through a combination of clinical rules, machine learning and data sharing. Andrew is a recognized leader in Healthcare innovation, and has testified before the Congress Ways and Means subcommittee on Healthcare as an industry expert. Prior to Clover, Andrew was at Google working on the Google Cloud team and was responsible for Developer Platform and Intelligence features. Previously, he led Android for Work – the enterprise platform for Android, which he joined via the acquisition of his previous startup Divide, where he was a founder. Andrew holds both a B.S. and M.S. in Computer Science from Stanford University, where he has also served as an associate lecturer.



Ipsit Vahia, MD, is the interim chief of the Division of Geriatric Psychiatry and director of Digital Psychiatry Translation at McLean Hospital. He is also director of the Technology and Aging Laboratory. His research focuses on the use of technology and informatics in the assessment and management of older adults and currently, he oversees a clinical and research program on aging, behavior, and technology. He has published extensively in major international journals and textbooks. Dr. Vahia is a Distinguished Fellow of the American Association for Geriatric Psychiatry and serves on the Geriatric Psychiatry Committee of the American Board of Psychiatry and Neurology. He serves on the editorial boards of five journals including the Journals of Gerontology: Medical Sciences. He is a recipient of prestigious awards including the 2016 AAGP Barry Lebowitz Award and the 2014 APA Hartford-Jeste Award.



Rui Zhang, PhD, FAMIA, is Founding Chief of Division of Computational Health Sciences at the University of Minnesota Medical School. He is the Director of Natural Language Processing (NLP/IE) research program and Scientific Co-Director of Innovative Methods & Data Science program at the Center for Learning Health System Sciences. His primary research interest includes clinical NLP, text mining, literature-based discovery, clinical informatics, and complementary and alternative medicine informatics. He has been a PI on multiple National Institutes of Health R01 grants including repurposing drug and non-drug interventions for Alzheimer's disease (NIA), constructing a dietary supplement knowledge graph (NCCIH), multimodal learning for mining safety use of supplements (NCCIH), and imbalanced learning for cancer cardiotoxicity prediction (NCI). He has published over 100 papers, and his work has been featured by JBI and The Wall Street Journal. Dr. Zhang has served on the Editorial Board of multiple journals including JAMIA, BMC Med Infor & Dec Making, JHIR.

Pitch/Poster Competition Judges



Katherine Baird is an Associate on AI Fund's building team, specializing in validating business ideas and launching new companies. With a background in neuroscience, she has a passion for artificial intelligence and has worked on various startups and AI projects in healthcare, fintech, consumer, and more. Her expertise spans problem validation, market analysis, pricing, go-to-market strategies, and UX development. Katherine holds an MBA from Northwestern's Kellogg School of Management and a bachelor's from the University of Virginia.



Jun Jeon, is a Principal on the investment team, Jun focuses on life sciences and healthcare investments. He continually pushes the needle towards a more equitable and healthier future by investing in and operating with founders. Jun has dedicated more than 10 years to bench and clinical research in areas such as immuno-oncology, microfluidics, iPSCs, rare diseases, and clinical trials. His research has generated numerous peer-reviewed publications and has been funded by many university awards as well as NIH research fellowships (IRTA and MRSP). Previously, Jun worked for Oshi Health and Octant Bio in business development and new product opportunity roles. While pursuing his medical degree at the University of Pennsylvania, he cofounded biotech pre-accelerator, Bio Launch (now Nucleate Philly), to move innovative ideas from academic labs to market. He later tied these operational experiences together at an early-stage VC firm, AlleyCorp, where he worked on incubations and investing around digital health and life sciences opportunities. He obtained an M.D. from the University of Pennsylvania and a bachelor's degree in chemical and biomolecular engineering from Johns Hopkins University.



Matthew Nelson, PhD, is a Vice President, Genetics and Genomics, Deerfield Discovery and Development, and joined the firm in 2019. He is also Chief Executive Officer of Deerfield's affiliate, Genscience, a tech-focused company to improve integration of genetic evidence into drug discovery. Prior to joining Deerfield in 2019, Dr. Nelson spent almost 15 years at GlaxoSmithKline and was most recently the Head of Genetics. Prior to GlaxoSmithKline, Dr. Nelson was the Director of Biostatistics at Sequenom. He is co-author on >80 publications, including several cited >1,000 times. He began his career as an information scientist at Esperion Therapeutics. Dr. Nelson was an Adjunct Associate Professor of Biostatistics at the University of North Carolina from 2010 to 2016. He holds a Ph.D. in Human Genetics and an M.A. in Statistics from the University of Michigan and obtained his B.S. in Molecular Biology from Brigham Young University.



Michele Washko, is President & CEO, Life Sciences Greenhouse Investments Michele Washko served as Vice President, Strategic Services, for Life Sciences Greenhouse Investments (LSGPA.com) from 2005 until 2015 and returned to the organization in 2022 to take on the role of President and CEO. In the interim, she worked for Geisinger Health System's Institute for Advanced Application; founded Life Science Innovations, a boutique consulting firm; and served as COO, then CEO, of Respana Therapeutics, Inc. Ms. Washko holds a BA from Emory University, an MBA from Penn State University, and a certificate in Executive Leadership from M.I.T.

MODERATOR PROFILES



Peter Abadir, MD

Dr. Peter Abadir is the 2021 Salisbury Family CIM/HAP Scholar. He is an Associate Professor of Geriatric Medicine and Gerontology at the Johns Hopkins University School of Medicine, with a joint appointment in the School of Engineering. His area of clinical expertise is geriatric medicine. Dr. Abadir's research interests include changes in the renin angiotensin aldosterone system with aging, and the development of new technologies that will improve the health and well-being of

older adults. He has been recognized by the Hopkins Department of Medicine with the W. Leigh Thompson Excellence in Research Award, and is the co-director of the new Gerotech Incubator Program.

Dr. Abadir serves as Co-Principal Investigator for JH AITC.



Partha Bhattacharyya, PhD

Dr. Partha Bhattacharyya serves as the Chief Data Officer at the National Institute on Aging (NIA), where he spearheads the Office of Data Resource and Analytics within the Division of Behavioral and Social Research. In this current role, he coordinates and implements research infrastructure and data initiatives, both within the division and across NIA. He manages NIA's AD/ADRD Health Care Systems Collaboratory, Artificial Intelligence and Technology Collaboratories for Aging Research, and

behavioral economics interventions and pragmatic trials portfolio, and is responsible for the development of NIA's AD/ADRD Real-World Data Platform.



Rama Chellappa, PhD

Dr. Chellappa, a Bloomberg Distinguished Professor in Electrical and Computer Engineering and Biomedical Engineering at Johns Hopkins University and Chief Scientist at the Johns Hopkins Institute for Assured Autonomy, is a pioneer in the area of artificial intelligence.

Dr. Chellappa's research has shaped the field of facial recognition technology, including the development of detailed face models based on shape, appearance, texture, and bone and muscle structure. He also is known as an expert in machine learning, a branch of artificial intelligence that instructs computer systems to perform tasks based on patterns and inferences. Chellappa has worked on gait analysis, which can apply to an enormous range of uses—everything from diagnosing Parkinson's disease to human identification at a distance.

Dr. Chellappa serves as Co-Principal Investigator for JH AITC.



Niteesh Choudhry, MD, PhD

Dr. Niteesh K. Choudhry is a professor of Medicine at Harvard Medical School, a professor in the Department of Health Policy and Management at the Harvard T.H. Chan School of Public Health and executive director for the Center for Healthcare Delivery Sciences at Brigham and Women's Hospital (BWH), where he also a practicing hospitalist. He is also director of Implementation Research and Education and associate director for Postgraduate Education in Clinical and Translational Science for Harvard Catalyst.

He directs two NIA-funded research centers: the Roybal Center for Therapeutic Optimization using Behavioral Science, that is the evaluating the impact of principle-driven interventions to improve medication adherence and the Massachusetts Artificial Intelligence and Technology Center that fosters the development of AI-enhanced technologies to support healthy aging at home for older adults and individuals with Alzheimer's disease.

Dr. Choudhry serves as Co-Principal Investigator for MassAITC.

**George Demiris, PhD**

Dr. Demiris is the Penn Integrates Knowledge Mary Alice Bennett University Professor at the University of Pennsylvania, with joint faculty appointments in Penn Nursing's Department of Biobehavioral Health Sciences and the Perelman School of Medicine's Department of Biostatistics, Epidemiology, and Informatics.

Dr. Demiris's research focuses on the use of information technology to support older adults and their family caregivers and explore innovative solutions to promote independent aging and patient and family engagement. He is a co-founder of the Hospice Caregiver Research Network, an initiative led by researchers from various academic disciplines committed to designing and testing interventions to support family caregivers of patients at the end of life. Another area of his research includes the use of behavioral sensing, smart home, and Internet of Things technologies to promote independence for community-dwelling older adults and their families. He leads the Penn Collaboratory for Community Co-Creation (Penn4C).

Dr. Demiris serves as Co-Principal Investigator for PennAITech.

**Deepak Ganesan, PhD**

Dr. Ganesan is a Professor and Donna M. and Robert J. Manning Faculty Fellow in the Department of Computer Science at the University of Massachusetts Amherst. He directs the Center for Personal Health Monitoring at UMass Amherst, a center developed to accelerate the development and commercialization of low-cost, multi-function, wearable, wireless sensor systems for personalized health care and biometric monitoring.

Dr. Ganesan's research focuses on novel platforms and algorithms for mobile and wearable health sensing, learning and inference on multi-modal sensor data, and micro-powered sensors. One of his current projects is on computational textiles, which seeks to imperceptibly modify everyday loose-fitting sleepwear with gel electrodes, fine-grained pressure sensing, and triboelectric sensing capability to monitor cardi-respiratory rhythm, eye movements, brain signals, and physical function.

Dr. Ganesan serves as Co-Principal Investigator for MassAITC.

**Jason Karlawish, MD**

Dr. Karlawish is a Professor of Medicine at the University of Pennsylvania Perelman School of Medicine, physician, and writer. He cares for patients at the Penn Memory Center, which he co-directs, and studies and writes about issues at the intersections of bioethics, aging, and the neurosciences.

Dr. Karlawish has investigated the development of Alzheimer's disease treatments and diagnostics, biomarker-based concepts of disease, informed consent, quality of life, research and treatment decision making, and voting by people with cognitive impairment and residents of long-term care facilities. In a widely read essay in the *Journal of the American Medical Association*, he introduced the concept of "desktop medicine," a theory of medicine that recognizes how risk and its numerical representations are transforming medicine, medical care, and health. He is the author of *The Problem of Alzheimer's: How Science, Culture, and Politics Turned a Rare Disease into a Crisis and What We Can Do About It*.

Dr. Karlawish serves as Co-Principal Investigator for PennAITech.

**Emily Largent, JD, PhD, RN**

Dr. Largent is the Emanuel and Robert Hart Assistant Professor of Medical Ethics and Health Policy at the University of Pennsylvania Perelman School of Medicine. She holds a secondary appointment at Penn Law.

Dr. Largent's work explores ethical and regulatory aspects of human subjects research as well the social, legal, and ethical considerations that arise when research findings are translated into care. She has a particular focus on neurodegenerative diseases, including Alzheimer's disease. Her work is supported by grant awards from the National Institute on Aging. Dr. Largent is a member of the Greenwall Faculty Scholars Program Class of 2023 and the 2023 recipient of the Baruch A. Brody Award & Lecture in Bioethics.

Dr. Largent serves as the Ethics and Policy Core Lead for PennAITech.



Rose Maria Li, PhD, MBA

Dr. Li has more than 30 years of experience in science management and research administration. She is the President and CEO of Rose Li & Associates, which provides scientific communications, research and analysis, and multimedia and event services to a range of research-focused organizations. She is also serving her second term as the governor-appointed Chair of the Maryland State Commission on Aging.

Prior to founding Rose Li and Associates, Dr. Li served the National Institutes of Health (NIH) in various leadership roles, including as Senior Policy Advisor to the NIH Office of Extramural Research, Special Assistant for Policy Development with the NIH Office of Communication and Public Liaison, Chief of the Population and Social Processes Branch within the National Institute on Aging (NIA) Division of Behavioral and Social Research, and Health Scientist Administrator with the Eunice Kennedy Shriver National Institute of Child Health and Human Development.

Dr. Li serves as Principal Investigator of the a2 Collective Coordinating Center in support of the NIA Artificial Intelligence and Technology Collaboratories for Aging Research program.



Marylyn D. Ritchie, PhD

Marylyn D. Ritchie, PhD is a Professor with tenure in the Department of Genetics, Director of the Center for Translational Bioinformatics, Director for the Institute for Biomedical Informatics at the University of Pennsylvania School of Medicine. Dr. Ritchie is also Director for the Division of Informatics, Department of Biostatistics, Epidemiology, and Informatics at the University of Pennsylvania School of Medicine and Vice President for Research Informatics at the University of Pennsylvania Health

System. Dr. Ritchie is a translational bioinformatics scientist, biomedical informatician, and computational human geneticist with a focus on developing novel approaches for understanding the relationship between our genome and human phenotypes.

Dr. Ritchie serves as the Networking and Mentoring Core Lead for PennAITech.



Antonia M. Villarruel, PhD, RN, FAAN

Dr. Antonia M. Villarruel is the Margaret Bond Simon Dean of Nursing at the University of Pennsylvania School of Nursing and Director of the School's WHO Collaborating Center for Nursing and Midwifery Leadership. As a bilingual and bicultural nurse researcher, Dr. Villarruel has extensive research and practice experience with diverse Latino and Mexican populations and communities, health promotion and health disparities research and practice. She incorporates a community-based participatory approach to her research. Specifically, her research

focuses on the development and testing of interventions to reduce sexual risk among Mexican and Latino youth. She has been the PI and Co-PI of seven randomized clinical trials concerned with reducing sexual and other risk behaviors. In addition to her research, Dr. Villarruel has assumed leadership in many national and local organizations. Dr. Villarruel currently Chairs the National Academy of Medicine (NAM) and Robert Wood Johnson Foundation (RWJF) Health Policy Fellowship Program, co-Chairs the Strategic Advisory Committee of the AARP/RWJ Center for Health Policy Future of Nursing Campaign for Action and is the former chair of the National Academy of Sciences Roundtable on the Promotion of Health Equity. She has received numerous honors and awards including International Nurse Researcher Hall of Fame from Sigma Theta Tau International, membership in the American Board of Internal Medicine, selection as a Fellow in the American Academy of Nursing, the Global Philadelphia Association's Globy Award for Educational Leadership and is an elected Fellow of the College of Physicians of Philadelphia.



Lisa M. Walke, MD, MSHA, AGSF

Dr. Walke is the William Maul Measey –Truman G. Schnabel, Jr., M.D. professor of geriatric medicine and gerontology and Chief of the Division of Geriatric Medicine at the University of Pennsylvania Perelman School of Medicine. Her scholarship focus is the development, implementation and analysis of innovative models of care for older adults. She earned an undergraduate degree in Sociology from Harvard University, a medical degree from the Mount Sinai School of Medicine and a master's degree in

Healthcare Administration from the University of New Haven. She was an Internal Medicine resident at Montefiore Medical Center and a Geriatric Medicine and Clinical Epidemiology fellow at Yale before serving on the Yale faculty from 2003-2018. She became an American Geriatrics Society (AGS) fellow in 2014 and was named AGS Outstanding Mid-Career Clinician Educator of the Year in 2017. She serves on the Association of Directors of Geriatric Academic Programs Board since 2019 and the American Board of Internal Medicine Geriatric Medicine Board since 2020.

Dr. Walke serves as the Stakeholder Engagement Core Lead for PennAITech.

FOURTH ANNUAL



a2 PILOT AWARDS



NON-DILUTIVE FUNDING FOR

AI/TECH+AGING

including Alzheimer's Disease and Related Dementias

The a2 Pilot Awards are funded by the National Institute on Aging, part of the National Institutes of Health.



APPLICATION PERIOD:

3.1.2024
to
4.30.2024

*5PM ET

APPLY: www.a2pilotawards.ai

The 4th annual a2 Pilot Awards, sponsored by the a2 Collective and backed by the National Institute on Aging, is accepting applications from March 1 to April 30, 2024. This program funds projects that apply artificial intelligence (AI) to enhance well-being, health outcomes, and care for older adults, including those with Alzheimer's disease and related dementias (AD/ADRD), and their caregivers. A total of \$40 million has been allocated to support innovative technology demonstration projects in this area over 5 years. We invite prospective applicants to participate in the a2 National Symposium March 19-20 at the University of Pennsylvania, and join a Q&A webinar on March 25 for an overview of the application process and program details.

A2 COLLECTIVE PRESENTS

March 25, 2024 @ 12 p.m. ET



Q&A WEBINAR



REGISTER HERE: a2pilotawards.ai/r1webinar

MARK YOUR CALENDARS FOR THE NEXT

 **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

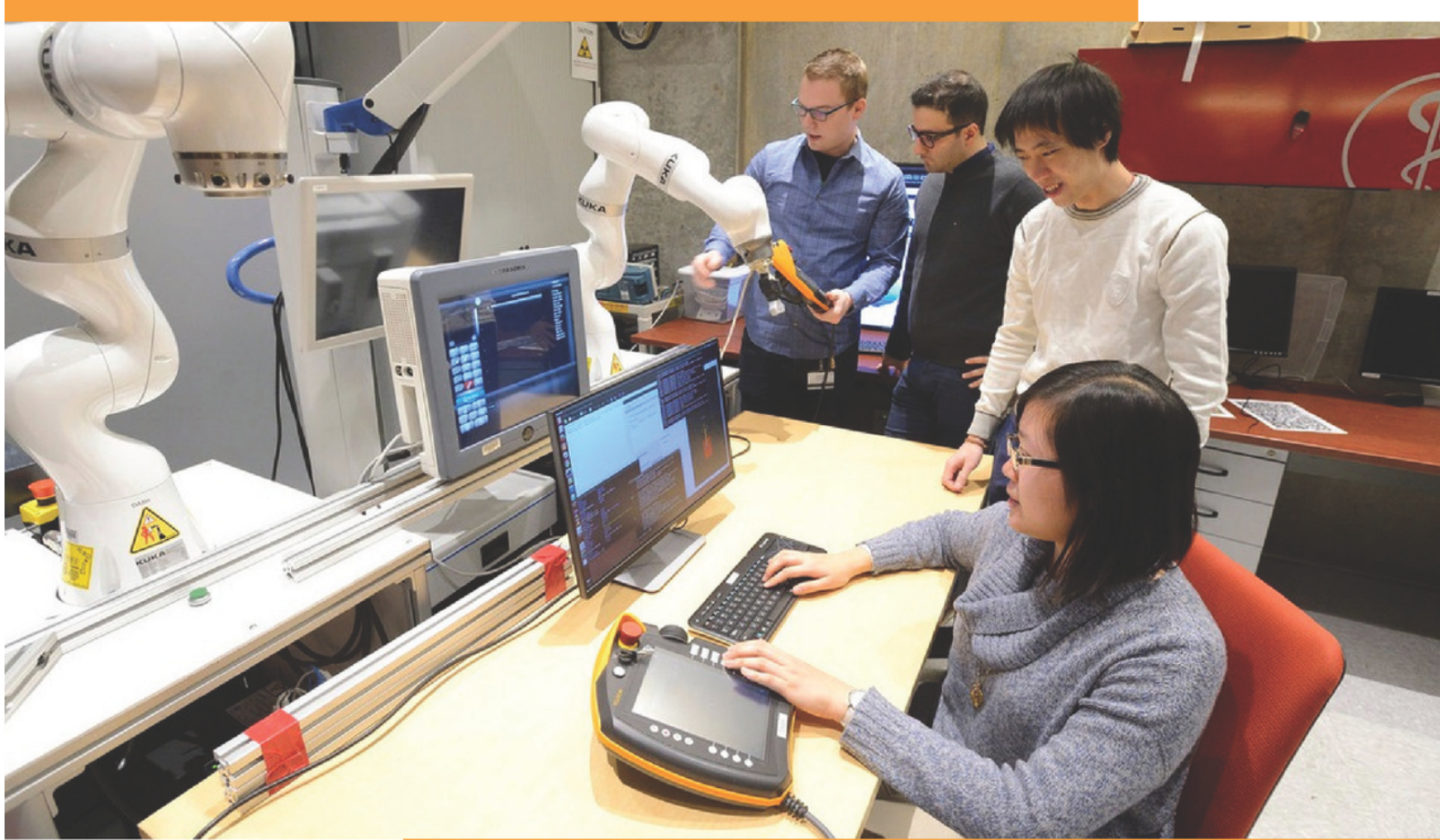
WHEN: Spring 2026

WHERE: Washington, D.C.



SAVE THE DATE

a2collective.ai/symposium



The JH AITC is a national resource funded by the National Institutes of Health to promote the development and implementation of novel artificial intelligence (AI) and technology approaches to improve the health and well-being of older adults. Building on the wealth of engineering and clinical resources available across the schools of the Johns Hopkins University, we have established the human capital and research infrastructure necessary to facilitate the work of investigators and businesses from across the country in this space.

The JH AITC provides pilot funds for AI/tech development efforts as well as access to relevant stakeholder groups, teach and AI use design expertise, assistance with adaptation of technology platforms that can host EHR, data gathering and analytical expertise, and human subjects research infrastructure for conditions related to Alzheimer's Disease and general aging. In addition, we provide a comprehensive list of relevant technologies and uses of AI, training as appropriate, business network resources, and access to a broad array of human subjects research infrastructure for recruitment and testing. Finally, this AITC can facilitate access to a broad range of underserved older adults, including those in rural and urban areas of the U.S., for stakeholder feedback and for testing of new uses of AI/tech that may improve their health and well-being.

Who We Are

Center Leadership



Peter M. Abadir, MD

Co-Principal Investigator
Administrative Core,
Clinical Translation
and Validation Core



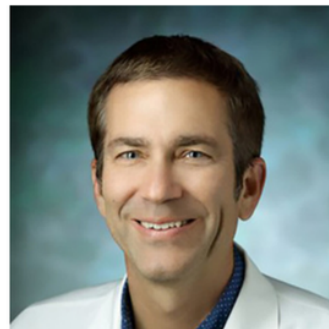
Alexis Battle, PhD

Co-Principal Investigator
Administrative Core



Rama Chellappa, PhD

Co-Principal Investigator
Administrative Core,
Clinical Translation
and Validation Core



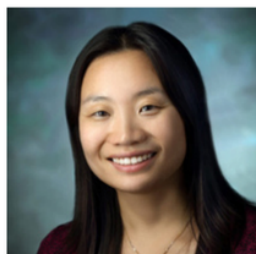
Jeremy D. Walston, MD

Co-Principal Investigator
Administrative Core,
Pilot Core B

Core Leaders



Thomas Cudjoe, MD
Co-Director,
Stakeholders Core



Nancy Schoenborn, MD, MHS
Co-Director,
Stakeholders Core



Alicia I. Arbaje, MD, MPH, PhD
Co-Director,
Technology Identification
and Training Core



Phillip Phan, PhD
Director,
Networking
and Mentoring Core



Quincy Samus, PhD
Director,
Pilot A (AD/ADRC)



Najim Dehak, PhD
Co-Director,
Pilot A (AD/ADRC)



Esther Oh, MD, PhD
Co-Director,
Pilot A (AD/ADRC)



Suchi Saria, PhD
Co-Director,
Pilot B
(Geriatrics)



Christopher Chute, MD, PhD
Director,
Data Integration
and Quality Core



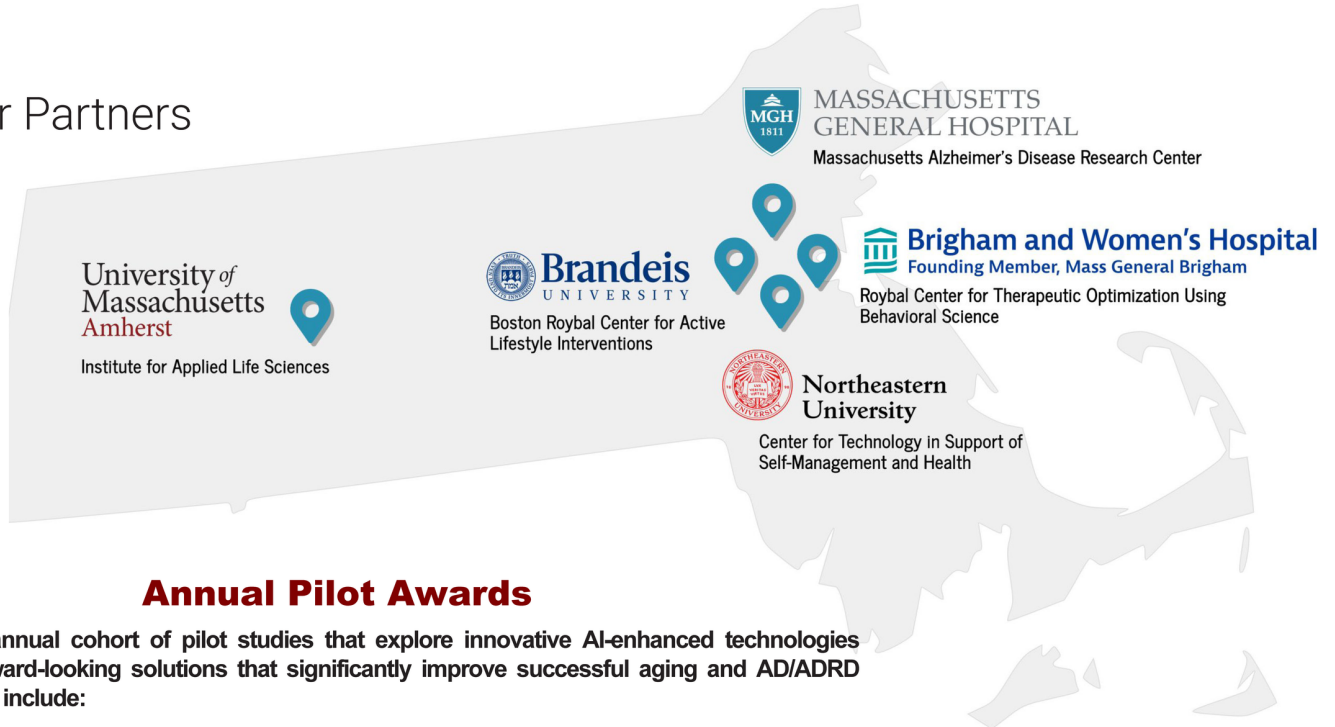
Mathias Unberath, PhD
Co-Director,
Technology Identification
and Training Core



Catalyzing AI & technology to support healthy aging at home for older adults and people with Alzheimer's Disease & dementia

MassAITC fosters interdisciplinary research on development, validation, and translation of AI-enhanced technologies to improve connections between older adults, caregivers, and clinicians to support healthy aging and people living with Alzheimer's Disease and related dementias at home.

Our Partners



Annual Pilot Awards

We support an annual cohort of pilot studies that explore innovative AI-enhanced technologies and propose forward-looking solutions that significantly improve successful aging and AD/ADRD care. Focus areas include:

- AI-enhanced devices with lower burden, less algorithmic bias, improved accuracy, improved access and enhanced usability for patients and caregivers
- AI-enhanced data analytic solutions to distill multi-modal sensor data into interpretable and actionable information to enhance care and improve decision making
- Data-driven visualizations to summarize and/or visualize the potential deluge of multi-modal health monitoring data for patients, caregivers and/or clinicians



Learn more @
massaitc.org



Penn
UNIVERSITY OF PENNSYLVANIA

Artificial Intelligence and
Technology Collaboratory
for Healthy Aging



The overarching goal of the Penn Artificial Intelligence and Technology (PennAITech) Collaboratory for Healthy Aging is to identify, develop, evaluate, commercialize, and disseminate innovative technology and artificial intelligence (AI) methods and software to support older adults and those with Alzheimer's Disease (AD) and Alzheimer's Disease and Related Dementias (ADRD) in their home environment. The Collaboratory is motivated by the need for a comprehensive pipeline from technology-based monitoring of older adults in the home, collection and processing monitoring data, integration of those data with clinical data from electronic health records, analysis with cutting-edge AI methods and software, and deployment of validated AI models at point of care for decision support.

A central focus of the PennAITech Collaboratory, as part of the a2 Collective, is to advance this vision through the solicitation, review, and funding of pilot grants focused on technology and AI development to advance the science of care management and aging in place for vulnerable older adults or those with AD/ADRD receiving skilled home and community-based services. Funded pilot projects will be supported through cores focused on administration, stakeholder engagement, technology identification and training, clinical translation and validation, networking, and ethical and policy issues.

The fourth annual a2 Pilot Awards competition is open for Spring 2024.
See website for more information: <https://www.a2collective.ai/>

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