STUDENT POSTER DAY

2025

Keynote and Poster Presentation

March 18, 2025

FSU | INSTITUTE FOR SUCCESSFUL LONGEVITY
OFFICE OF THE PROVOST

Welcome

Welcome to the ISL Student Poster Day 2025! We are excited to bring together students, faculty, and researchers to celebrate the outstanding work being done in the field of longevity and aging. This event serves as a platform for undergraduate, graduate, and post-doctoral researchers to showcase their contributions, engage in meaningful discussions, and receive valuable feedback from faculty and peers. As the landscape of aging research continues to evolve, fostering the next generation of researchers is essential to advancing knowledge and developing impactful solutions that enhance the health and well-being of older adults.

At the Institute for Successful Longevity, we are dedicated to supporting interdisciplinary research and collaboration that addresses the multifaceted challenges of aging. This year, we are especially proud to have expanded the event to include undergraduate students, broadening participation and fostering a deeper engagement with longevity research at all levels. We are also honored to have Dr. Rui Zhang as our keynote speaker, whose expertise in biomedical informatics and AI-driven health research is shaping the future of precision aging and digital health interventions. In addition, we are pleased to welcome Provost Clark, who will share remarks recognizing the significance of student-led research in advancing aging studies.

I would like to extend my gratitude to all of the students presenting today, as well as to the faculty mentors who have guided their research. A special thank you to our judges for their time and expertise in evaluating these projects. I hope this event sparks new ideas, fosters meaningful collaborations, and inspires you to continue pushing the boundaries of aging research.

Best wishes for a successful and engaging ISL Student Poster Day!

Zhe He, PhD, FAMIA
Director, Institute for Successful Longevity
Florida State University

Schedule

12 PM – 12:05 PM: Welcome Speech

12:05 PM – 12:10: Introduction of Keynote

12:10 PM - 1 PM: Dr. Rui Zhang's Keynote

1 PM – 2:00 PM: Reception and Poster Session

2:00 PM – 3 PM: Provost Clark remarks and Award Ceremony

Keynote

"The Future of Health Science: Impact of Artificial Intelligence and Larger Language Models Advancing on Nutrition, Aging, and Cancer Research"

In this seminar, Dr. Zhang will provide an overview of his ongoing research projects aimed at advancing clinical research across various domains developing innovative artificial intelligence (AI) methods. Focusing on the nutrition domain, the seminar will delve into Dr. Zhang's foundational work in establishing a terminology, knowledge base and AI methodologies employed to extract efficacy and safety information from diverse sources, contributing to a comprehensive understanding of dietary supplement safety.

In the aging domain, Dr. Zhang will discuss the applications of AI to repurpose Complementary and Integrative Health (CIH) approaches for Alzheimer's disease. Shifting to the cancer domain, Dr. Zhang will introduce cancer-domain language models developed to extract cancer phenotypes. This advancement holds significant implications for predicting cardiotoxicity related to cancer treatment. Additionally, the seminar will also highlight their recent work advancing large language models on various biomedical informatics and clinical tasks.

Rui Zhang, PhD, FACMI, FAMIA

Professor and Founding Chief, Division of Computational Health Sciences, University of Minnesota

Dr. Zhang is Professor and Founding Chief of Division of Computational Health Sciences in the Medical School at the University of Minnesota. He is named as McKnight Presidential Fellow (a distinguished professorship). He hold several leadership roles, including co-Chair of AI and Data science for Healthcare (AID-H) working group within the UMN's Data Science Initiative, and Scientific co-Director of Innovative Methods & Data Science (IMDS) program at the Center for Learning Health System Sciences, the Director of Natural Language Processing/Information Extraction (NLP/IE) research program in the Institute for Health Informatics, and previously Director of NLP at UMN's Clinical and Translational Science Institute. Dr. Zhang's research is at the forefront of integrating novel artificial intelligence (AI) with healthcare, focusing on analyze multi-modal biomedical big data, including electronic health records, biomedical literature, patient-generated data, and biomedical knowledge bases. His research has been fully supported by multiple National Institutes of Health (NIH) grants with a total cost over $20 million as a Principal Investigator, focusing on transformative AI projects such as mining safety use of dietary supplements (two NCCIH R01s), discovering drug repurposing of Alzheimer's disease (NIA R01), predicting breast cancer treatment related cardiotoxicity (NCI R01), identifying medical language bias in kidney transplantation (NIDDK R01), minority-enriched risk predictive models on All of Us data (NIHMD R21) and LLM to develop knowledge graph on complementary and integrative health (NCCIH U01). Dr. Zhang's research has paved the way for groundbreaking advancement in personalized medicine in multiple clinical domains to better patient care. His work has been recognized on a national scale including Journal of Biomedical Informatics Editor's Choice, nominated for Distinguished paper in American Medical Informatics Association (AMIA) Annual Symposium and Marco Ramoni Distinguished Paper Award for Translational Bioinformatics, reported by The Wall Street Journal, and interviewed by CBS News. Dr. Zhang was inducted to Fellow of American College of Medical Informatics (FACMI) in recognition of his significant and sustained contributions to the field of biomedical informatics. He is also Fellow of AMIA and the current Chair of AMIA Natural Language Processing (NLP) Working Group.

Poster Presentations

Judges: Ravinder Nagpal, Lynn Panton, Zilong Xie

Ronast Subedi, Graduate Student, Computer Science
Source-Free Domain Adaptation (SFDA) for Predicting Adherence to Computer-based Cognitive Training Programs Among Older Adults

Yuanying Pang, Graduate Student, School of Information
Predicting Adherence to Gamified Cognitive Training Using Early Phase Game Performance Data: Towards a Just-in-time Adherence Promotion Strategy

Steven Medarev, Graduate Student, Biomedical Sciences
Age-related Endothelial Dysfunction Reflects Disruption of Adiponectin-S1P Mediated Mechanotransduction

Victoria Valko, Undergraduate Student, College of Communication & Information
Optimizing Digital Health Tools: LabGenie's Patient-Centered Visual Design

Leila Khalili, Graduate Student, Health, Nutrition, and Food Sciences
SRole of Akkermansia muciniphila in Tumor Progression and Immunity: Insights from Mouse Models

Gwoncheol Park, Graduate Student, Health, Nutrition, and Food Sciences
A Dietary Intervention Improves Neurocognitive Function with Brain Metabolic and Transcriptomic Modulations via Gut-biome-brain Axis in a Preclinical Alzheimer's Model

Christin Domeier, Graduate Student, Health, Nutrition, and Food Sciences
Renin-Angiotensin-Aldosterone System and Acute Kidney Injury Markers After Mild Dehydration in Young and Older Female Adults

Cole Patoine, Graduate Student, Health, Nutrition, and Food Sciences
Distinct Gut Microbiome and Metabolomic Signatures Linked to Cognitive Improvement in Older Adults After Mediterranean and Modified Mediterranean Ketogenic Diets

Blake Bridges, Graduate Student, Health, Nutrition, and Food Science
Physiological changes in Aging Male and Female Mice with Chronic Consumption of Alcohol

Alayne Thompson, Graduate Student, Health, Nutrition, and Food Sciences
Nutrient Intake with Exercise Training in Postmenopausal Women with Prediabetes and Obesity

Balu Bhasuran, Postdoctoral Scholar, School of Information
Preliminary Analysis of the Impact of Lab Results on Large Language Model Generated Differential Diagnoses

Sadio Fenner, Graduate Student, Health, Nutrition, and Food Sciences
BMR, RER, and VO2 Max are not Affected by 12 Weeks of Either Resistance or Endurance Training in Postmenopausal Women

Xiaoyu Wang, Graduate Student, Statistics
Lab-AI: Using Retrieval Augmentation to Enhance Language Models for Personalized Lab Test Interpretation in Clinical Medicine

Avery Tangen, Graduate Student, Health, Nutrition, and Food Science
Effects of Early-life Alcohol Consumption and Aerobic Exercise on Aging Outcomes