CCTSI CU-CSU Summit AGENDA

Research Innovations in Health AI

Donald M. Elliman Conference Center
Anschutz Health Sciences Building (AHSB)
University of Colorado Anschutz Medical Campus
Tuesday, August 13, 2024

7:50 a.m.  Breakfast

8:15 – 8:25 a.m.  Introductions and Goals
Ronald Sokol, MD, FAASLD
Director, Colorado Clinical and Translational Sciences Institute (CCTSI)
Chief Scientific Officer, Child Health
CU Distinguished Professor in Pediatric GI, Hepatology and Nutrition
University of Colorado Anschutz Medical Campus

8:25 – 8:35 a.m.  Welcome
John H. Sampson, MD, PhD, MHSc, MBA
Dean, University of Colorado School of Medicine
University of Colorado Anschutz Medical Campus

Thomas Flaig, MD
Vice Chancellor for Research
University of Colorado Anschutz Medical Campus

I: Keynote Presentations
Moderator: Ron Sokol, MD

8:35 – 9:20 a.m.  Medical AI in the Era of Large Language Models
Matthew Lungren, MD, MPH
Chief Data Science Officer
Microsoft Health and Life Sciences
9:20 – 9:30 a.m.    Q&A

9:30 – 10:00 a.m.  *Ethics and the Responsible Use of AI in Research*
Matthew DeCamp, MD, PhD
Associate Professor, Center for Bioethics and Humanities & Division of General Internal Medicine
Director of Research Ethics, CCTSI
University of Colorado Anschutz Medical Campus

10:00 – 10:10 a.m.    Q&A

10:10 – 10:30 a.m.  *Coffee Break with Networking and Poster Viewing*

**II: Research Innovations in AI — Highlights from Each Campus**  
*Moderator: Chris DeSouza, PhD*

10:30 – 10:45 a.m.  *Tapping into the Power of Veterinary EMR Data*
Tracy Webb, DVM, PhD
Associate Professor
College of Veterinary Medicine and Biological Sciences
Colorado State University

10:45 – 11:00 a.m.  *AI, ML, and Pediatric Sepsis*
Tellen D. Bennett, MD, MS
Vice Chair of Clinical Informatics, Department of Biomedical Informatics
University of Colorado Anschutz Medical Campus

11:00 – 11:15 a.m.  *Space Domain Awareness and Decision-Making*
Marcus J. Holzinger, PhD
Professor, J. Negler Endowed Professor
Ann & H. J. Smead Aerospace Engineering Department
University of Colorado Boulder

11:15 – 11:30 a.m.    Q&A and Panel Discussion
III: Lightning Talks
Moderator: Wendy Kohrt, PhD

11:30 – 11:35 a.m. Jade Young, Pre-Doctoral Trainee
*CellPhenoX: An explainable Cell-specific machine learning method to predict clinical Phenotypes using single-cell multi-omics*
Department of Biomedical Informatics
University of Colorado Anschutz Medical Campus

11:35 am – 11:40 a.m. Discussion

11:40 am – 11:45 a.m. Jaewon Kang, PhD
*Enhancing Independence: AI Voice Assistants and Smart Home Technology for Older Adults with Long-Term Mobility Disabilities*
Department of Occupational Therapy
Colorado State University

11:45 – 11:50 a.m. Discussion

11:50 – 11:55 a.m. Yuto Suzuki, Pre-Doctoral Trainee
*Computer Science, Advancing Drug Discovery with AI: An Integrated Fragment-Based Generative Model*
Department of Computer Science
University of Colorado Denver

11:55 – 12:00 noon Discussion

12:00 – 12:05 p.m. Hope Townsend, Pre-Doctoral Trainee
*Single-cell based integrative analysis of transcriptomics and genetics reveals robust associations and complexities for inflammatory diseases*
Molecular Cellular Developmental Biology & Computer Science
University of Colorado Boulder

12:05 – 12:10 p.m. Discussion

12:10 – 12:15 p.m. Sarah Nickles, BASc
*Development of a Mobile-Application-Based Diagnostic Test for Post-Traumatic Stress Disorder*
Department of Psychiatry
University of Colorado Anschutz Medical Campus

12:15 – 12:20 p.m. Discussion
12:20 – 1:20 p.m. Lunch/Poster Session/Networking

**IV: Generative AI in Science — Live Demonstration**
Moderator: Jayashree Kalpathy-Cramer, PhD
Objective: Live demonstration using a generative AI platform to answer a research question

1:20 – 1:50 p.m. Demonstration and Discussion

**V: Research AI Applications**
Moderator: Janine Higgins, PhD

1:50 – 2:10 p.m. *Using AI to Personalize and Optimize the Treatment of Craniosynostosis*
Antonio Porras, PhD, MSc
Assistant Professor
Department of Biostatistics and Informatics
University of Colorado Anschutz Medical Campus

2:10 – 2:30 p.m. *Research, AI, and Patient Care*
Jayashree Kalpathy-Cramer, PhD
Chief of Artificial Medical Intelligence in Ophthalmology
Director of Health Informatics, CCTSI
University of Colorado Anschutz Medical Campus

2:30 – 2:40 p.m. Q&A and Discussion

2:40 – 2:45 p.m. *Closing Remarks — Ronald Sokol, MD*