

# BIOMEDICAL AI IN ACTION

## PRACTICAL WORKSHOPS FOR CLINICAL AND RESEARCH TRANSFORMATION

WEDNESDAY, DECEMBER 4, 2024  
UCLA Luskin Conference Center

8:15 AM	<b>Arrival/Registration + Light Breakfast</b>			
9:00 AM	<b>WELCOME REMARKS - "AI IN YOUR HANDS: SHAPING THE FUTURE OF HEALTHCARE"</b> Robert Jenders, Co-Director, Center for Biomedical Informatics, Charles Drew University & Brennan Spiegel, Director, Health Services Research, Cedars-Sinai			
9:30 AM	<b>THEME 1 - "AI IN CLINICAL PRACTICE: TRANSFORMING PATIENT CARE"</b> <b>Keynote Speaker:</b> Sumeet Chugh, Associate Director, Smidt Heart Institute, Cedars-Sinai			
10:05 AM	<b>Deep Dive 1</b> <b>Moral Machines? Addressing Ethical Challenges in Clinical AI</b>  <i>Virginia Bartlett</i> , Assistant Director, Center for Health Care Ethics, Cedars-Sinai  <i>Examine the ethical challenges and considerations of deploying AI in clinical settings. This session will discuss the balance between innovation and ethical responsibility, focusing on maintaining patient trust and safety. Engage with experts on how to navigate the moral implications of AI applications to ensure they are used justly and beneficially in healthcare.</i>	<b>Deep Dive 1B</b> <b>Smart Support: AI-Powered Tools for Improved Patient Engagement</b>  <i>Eric Cheng</i> , Chief Medical Informatics Officer, UCLA Health  <i>Explore how AI is transforming the landscape of patient-provider interactions through AI-assisted visit note scribing, efficient inbox management, and the customization of Large Language Models for nuanced patient communication. Learn how these technologies enable healthcare professionals to work faster, smarter, and deliver more personalized care.</i>	<b>Deep Dive 1C</b> <b>Benchmarking AI: Standards for Quality and Effectiveness in Healthcare</b>  <i>Laura Prichard</i> , Senior Data Scientist, UCLA Health & <i>Graciela Gonzalez-Hernandez</i> , Vice Chair for Research and Education, Computational Biomedicine, Cedars-Sinai  <i>Explore the evaluation processes required to assess the quality and utility of AI technologies in healthcare. This session will focus on establishing standards, conducting effective testing, and ensuring that AI tools meet clinical needs for accuracy and reliability. Learn about the essential methodologies and benchmarks for responsibly integrating AI into healthcare practices.</i>	<b>Deep Dive 1D</b> <b>Precision in Practice: AI-Enabled Diagnosis and Treatment Planning</b>  <i>William Hsu</i> , Professor, Radiological Sciences & Biomedicine, UCLA Health  <i>Delve into how AI enhances precision in differential diagnoses, image analysis, and treatment planning. Discover how these tools not only speed up medical assessments but also increase accuracy, providing clinicians with support in decision-making processes. This session will highlight how AI-driven solutions are reshaping the approach to patient care, enabling more targeted and effective treatments.</i>
11:30 AM	<b>Networking Lunch</b>			
12:15 PM	<b>THEME 2 – "AI IN RESEARCH: ADVANCING SCIENTIFIC INQUIRY AND DISCOVERY"</b> <b>Keynote Speaker:</b> Jason Moore, Professor and Chair, Computational Biomedicine, Cedars-Sinai			
12:50 PM	<b>Deep Dive 2A</b> <b>Precision Cohorts: AI Tools for Effective Clinical Trial Enrollment</b>  <i>Arash Naeim</i> , Chief Medical Officer, Clinical Research, UCLA Health & <i>Michael Farkouh</i> , Associate Dean, Research and Clinical Trials, Cedars Sinai & <i>Douglas Bell</i> , Professor, Medicine, UCLA Health  <i>Discover how AI is enhancing cohort selection for clinical trials by efficiently parsing vast patient registries to identify ideal candidates. This session will explore the technologies that enable precise and rapid patient enrollment, enhancing the design and outcomes of clinical trials. Learn about AI tools that are setting new standards in trial efficiency and accuracy.</i>	<b>Deep Dive 2B</b> <b>The Power of Words: Using NLP to Transform Unstructured Medical Data</b>  <i>Graciela Gonzalez-Hernandez</i> , Vice Chair for Research and Education, Computational Biomedicine, Cedars-Sinai  <i>Explore the capabilities of Natural Language Processing (NLP) in extracting insights from diverse text sources such as electronic health records, social media, and beyond. This session will showcase how NLP techniques can unveil hidden patterns, patient sentiments, and critical data points, driving advancements in medical research.</i>	<b>Deep Dive 2C</b> <b>Harnessing AI for Knowledge Discovery in Biomedical Research</b>  <i>Corey Arnold</i> , Professor, Radiological Sciences & Pathology and Laboratory Medicine, UCLA Health & <i>Omolola Ogunyemi</i> , VP of Research, Charles Drew University  <i>Examine how AI and machine learning are transforming the landscape of biomedical research by enabling extraction of novel insights from complex datasets. This session will explore the tools and methodologies that AI brings to the forefront of knowledge discovery, highlighting case studies where AI has identified patterns and predictions previously obscured in vast amounts of data.</i>	<b>Deep Dive 2D</b> <b>Foundation for AI Success: Developing Effective Training Sets for Biomedical Research</b>  <i>Nicholas Tatonetti</i> , Professor, Computational Biomedicine, Cedars-Sinai  <i>Gain insights into the process of developing robust training sets that are the backbone of successful AI applications in biomedical research. This session will cover strategies and challenges in curating high-quality data sets that ensure the accuracy and efficacy of machine learning models. Explore best practices for data selection, annotation, and validation to enhance the predictive power and reliability of AI tools.</i>
2:20 PM	<b>THEME 3 – "MITIGATING BIAS IN AI SYSTEMS"</b> <b>Keynote Speaker:</b> Melissa Wong, Director, Informatics and Artificial Intelligence Strategies, Cedars-Sinai			
2:55 PM	<b>Deep Dive 3A</b> <b>Evaluating for Evidence of Sociodemographic Bias in AI for Mental Health Support</b>  <i>Omer Liran</i> , Assistant Professor, Psychiatry and Behavioral Neurosciences, Cedars-Sinai & <i>Yee Hui Yeo</i> , Resident, IM Gastroenterology, Cedars-Sinai  <i>Critically examine AI applications in mental health support and learn to identify and address potential sociodemographic biases. This session will explore methodologies for detecting biases that may affect treatment outcomes across different populations. Participants will learn about tools and techniques for ensuring that AI-driven mental health interventions are equitable.</i>	<b>Deep Dive 3B</b> <b>AI in Genomics: Overcoming Bias to Enhance Genetic Insights</b>  <i>Jason Moore</i> , Professor and Chair, Computational Biomedicine, Cedars-Sinai  <i>Explore the challenges and solutions for ensuring fairness in AI-driven genomics research. This session will explore techniques for identifying and correcting biases that can influence genetic analysis and outcomes, particularly those that may disadvantage specific sociodemographic groups. Attendees will learn about the best practices and tools necessary to develop equitable AI systems that provide accurate and inclusive insights into genetic data.</i>	<b>Deep Dive 3C</b> <b>Clear Vision: Ensuring Fairness in AI-Driven Diagnostic Imaging</b>  <i>Speaker TBD</i>  <i>Discover how to ensure fairness in AI-enhanced diagnostic imaging. This session will address the detection and correction of biases that can skew imaging results and impact clinical decisions, particularly in diverse patient populations. Participants will learn about strategies and innovative tools that promote equitable and accurate imaging analysis across all demographic groups.</i>	<b>Deep Dive 3D</b> <b>Community Voices: Reducing Bias in AI for Community Health</b>  <i>Arleen Brown</i> , Professor, Medicine, UCLA Health & <i>Keith Norris</i> , Professor, Medicine, UCLA Health & <i>Alejandra Casillas</i> , Associate Professor, Medicine, UCLA Health  <i>Explore the intersection of community-driven research and AI in this session, which focuses on how participatory approaches can help prevent bias in AI applications in community health. Participants will engage with experts in community-based participatory research to learn about incorporating diverse community insights to enhance fairness and effectiveness of AI technologies.</i>
4:20 PM	<b>EXPERT INSIGHTS: FACULTY Q&amp;A WRAP-UP PANEL</b>			
5:00 PM	<b>CLOSING REMARKS: TOP 10 CONFERENCE TAKEAWAYS</b> Robert Jenders, Co-Director, Center for Biomedical Informatics, Charles Drew University & Brennan Spiegel, Director, Health Services Research, Cedars-Sinai			