

## IEEE/ACM CHASE 2024 Conference Program

Day 1 (Wednesday, June 19, 2024) – Conference

8:00-8:45	<b>Breakfast</b>
8:45-9:00	<b>Open Remarks</b>
9:00-10:00	<b>Keynote Speech 1: Dr. Fei Wang, Cornell University</b>
10:15-11:15	<p><b>ACM Health Session (60 minutes)</b></p> <ol style="list-style-type: none"> <li>1. Inferring Activity Patterns from Sparse Step Counts Data with Recurrent Neural Networks</li> <li>2. Self-supervised Representation Learning on Electronic Health Records with Graph Kernel Infomax</li> <li>3. WalkingWizard - A truly wearable EEG Headset for Everyday Use</li> <li>4. Passive and Context-Aware In-Home Vital Signs Monitoring Using Co-Located UWB-Depth Sensor Fusion</li> </ol>
11:15-11:30	<b>Coffee Break</b>
11:30-12:45	<p><b>Conference Session I (75 minutes) - Disease Diagnosis and Prediction</b></p> <ol style="list-style-type: none"> <li>1. Adaptive Attention Aware Fusion for Human-in-Loop Behavioral Health Detection</li> <li>2. Biomarker Trajectory Prediction and Causal Analysis of the Impact of the Covid-19 Pandemic on CVD Patients using Machine Learning Methods</li> <li>3. Using Mobile Daily Mood and Anxiety Self-ratings to Predict Depression Symptom Improvement</li> <li>4. Assessing Perceived Stress, Sleep Disturbance, and Fatigue Among Pilot and Non-Pilot Trainees</li> <li>5. Automating Weak Label Generation for Data Programming with Clinicians in the Loop</li> </ol>
12:45-14:00	<b>Lunch</b>
14:00-15:15	<p><b>Conference Session II (75 minutes) - Smart Sensing for Health Applications</b></p> <ol style="list-style-type: none"> <li>1. Enabling Coexistence of Indoor Millimeter-Wave Networking and Human Activity Sensing</li> <li>2. M4X: Enhancing Cross-View Generalizability in RF-Based Human Activity Recognition by Exploiting Synthetic Data in Metric Learning</li> <li>3. Gait-Guard: Turn-aware Freezing of Gait Detection for Non-intrusive Intervention Systems</li> <li>4. APC: Contactless Healthy Sitting Posture Monitoring with Microphone Array</li> <li>5. UbiHeart: A Novel Approach for Non-Invasive Blood Pressure Monitoring Through Real-Time Facial Video</li> </ol>
15:15-15:30	<b>Coffee Break</b>

15:30-16:35	<p><b>Short Paper Session 1 (65 minutes) – Smart Sensing for Healthcare</b></p> <ol style="list-style-type: none"> <li>1. Sound Tagging in Infant-centric Home Soundscapes</li> <li>2. AudioInsight: Detecting Social Contexts Relevant to Social Anxiety from Speech</li> <li>3. Multimodal Speech Recognition using EEG and Audio Signals: A Novel Approach for Enhancing ASR Systems</li> <li>4. Enhancing Dementia Care with Social Robot-Guided Music Interventions</li> <li>5. ToPick: Time-of-Pickup Measurement for the Elderly using Wearables</li> </ol>
16:45-17:50	<p><b>Short Paper Session 2 (65 minutes) – Health Data Management</b></p> <ol style="list-style-type: none"> <li>1. Semantic Learning and Attention Dynamics for Behavioral Classification in Police Narratives</li> <li>2. Automated Scene Classification in Endoscopy Videos Using Convolutional Neural Networks</li> <li>3. A Quantized Parsimonious CNN Model for Sleep Polysomnogram Data Streams</li> <li>4. Decentralized Electronic Health Records Management via Redactable Blockchain and Revocable IPFS</li> <li>5. EQS-Band Human Body Communication through Frequency Hopping and MCU-Based Transmitter</li> </ol>

**Day 2 (Thursday, June 20, 2024) – Conference**

7:30-8:30	<b>Breakfast</b>
8:30-9:30	<b>Keynote Speech 2: Dr. Yiran Chen, Duke University</b>
9:45-10:30	<p><b>Conference Session III (45 minutes) – Therapy and Rehabilitation</b></p> <ol style="list-style-type: none"> <li>1. Towards User Compliance and Reciprocity Within Human-Robot Interaction Through Completion of a Pregiving Favor</li> <li>2. MicroXercise: A Micro-Level Comparative and Explainable System for Remote Physical Therapy</li> <li>3. CBSA: A Deep Transfer Learning Framework for Assessing Post-Stroke Exercises</li> </ol>
10:30-10:45	<b>Coffee Break</b>
10:45-11:30	<p><b>Conference Session IV (45 minutes) - AI for Healthcare</b></p> <ol style="list-style-type: none"> <li>1. ChatDiet: Empowering Personalized Nutrition-Oriented Food Recommender Chatbots through an LLM-Augmented Framework</li> <li>2. Systematically Assessing the Security Risks of AI/ML-enabled Connected Healthcare Systems</li> <li>3. Explainable AI and Transformer Models: Unraveling the Nutritional Influences on Alzheimer's Disease Mortality</li> </ol>
11:30-13:00	<b>Lunch</b>
13:00-14:30	<b>NSF Panel</b>

14:45-15:30	<b>Lightning Talk</b>
15:30-15:45	<b>Coffee Break</b>
15:45-17:00	<b>Conference Session V (75 minutes) – Smart Technology for Healthcare</b> <ol style="list-style-type: none"> <li>1. TinyMSI: A cost-effective handheld device for non-contact diabetic wound monitoring</li> <li>2. Reconstructing Human Gaze Behavior from EEG Using Inverse Reinforcement Learning</li> <li>3. Illuminating Precise Stencils on Surgical Sites using Projection-based Augmented Reality</li> <li>4. ReActHE: a Homomorphic Encryption Friendly Deep Neural Network for Privacy-Preserving Biomedical Prediction</li> <li>5. A Deep-Learning-Based Multi-modal ECG and PCG Processing Framework for Label Efficient Heart Sound Segmentation</li> </ol>
17:30-19:30	<b>Award Ceremony, Reception &amp; Demo/Poster Session</b>

**Day 3 (Friday, June 21, 2024) Morning: Conference; Afternoon: Workshop**

7:45-8:45	<b>Breakfast</b>
8:45-9:45	<b>Keynote Speech 3: Dr. George Demiris, University of Pennsylvania</b>
10:00 – 11:00	<b>Conference Session V (60 minutes) - Health Data Management and Analysis</b> <ol style="list-style-type: none"> <li>1. EHRFlow: A Visual Analytics Approach to Studying Healthcare professionals' Communication Effectiveness and Efficiency</li> <li>2. Semi-Path: An Interactive Semi-supervised Learning Framework for Gigapixel Pathology Image Analysis</li> <li>3. Patient Flow Modeling and Simulation to Study HAI Incidents in an Emergency Department</li> <li>4. HealthGAT: Node Classifications in Electronic Health Records using Graph Attention Networks</li> </ol>
11:00-11:15	<b>Coffee Break</b>
11:15-12:20	<b>Short paper Session 3 (65 minutes) – AI/MI for Healthcare</b> <ol style="list-style-type: none"> <li>1. Multi-Level Cancer Profiling through Joint Cell-Graph Representations</li> <li>2. Integrating Wearable Sensor Data and Self-reported Diaries for Personalized Affect Forecasting</li> <li>3. On Large Visual Language Models for Medical Imaging Analysis: An Empirical Study</li> <li>4. Accurate Body Pose Matching for Individuals with Stroke using Siamese Networks</li> <li>5. Leveraging Large Language Models to Annotate Activities of Daily Living Captured with Egocentric Vision</li> </ol>
12:20-12:45	<b>Conference Closing: Farewell from the General Chair</b>
<b>1st Interdisciplinary Workshop on Smart Textile Technologies and Metamaterials for Healthcare</b>	