

ICCAI 2024

Maximizing Clinical Impact of Algorithmic Innovation (AI) in Critical Illness: Artificial Intelligence From Academia & Industry to Government

Co-hosted by the Uniformed Services University with support from HJF

Sponsored by *Nihon Kohden Digital Health Solutions, LLC*

| | Day 1 | Day 2 | Day 3 |
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| Time | Wed, 4 Sep | Thu, 5 Sep | Fri, 6 Sep |
| 8:00 - 8:30 | | Poster Viewing | Poster Viewing |
| 8:30 - 9:00 | Opening Ceremony | Poster Viewing | Poster Viewing |
| 9:00 - 10:00 | Keynote Improving Outcomes through AI and Human Machine Teaming. Suchi Saria Bayesian Health | Keynote Artificial Intelligence in Critical Care: Perspectives as Investigator and as Editor. Timothy Buchman, Emory University | Keynote Patients' Rights in the Time of AI Barbara Evans University of Florida |
| 10:00 - 12:00 | Session 1: Evaluation and Deployment Approaches for ML-based Clinical Applications (Chair: Vitaly Herasevich, co-Chair: Robert Stevens) | Session 3: Data: Collection, Quality, Harmonization and Benchmarking (Chair: Seth Schobel, co-Chair: Gamze GURSOY) | Session 5: Fusing Model-Driven and Data Approaches (Chair: Aldo Faisal, co-Chair: Soojin Park) |
| 10:00 - 10:30 | Health Information Technology Evaluation: How to prove that it works. (Vitaly Herasevich, Mayo Clinic) | Moving Towards Trust, Validation and Generalizability in Clinical AI (Sean Manion, AI MINDSystems Foundation) | Foundational Model for Physiologic Data (Xiao Hu, Emory University) |
| 10:30 - 11:00 | Bringing AI to the Bedside: Implementation of Machine Learning Applications in Critical Care (Ankit Sakhuja, Mount Sinai) | Designing Patient-facing, Personalized, and Trustworthy Biomedical Real-time AI Tools (Sage Arbor, Duke Clinical Research Institute) | Translational Insights into the Complexity of Acute Illness from the Fusion of Data-driven and Mechanistic Modeling (Yoram Vodovotz, University of Pittsburgh) |
| 11:00 - 11:30 | The AI Value Proposition in Intensive Care: Strategies for Real-world Implementation (Robert Stevens, Johns Hopkins) | Observational Data Transformation & Quality Implementing the OMOP Common Data Model (Davera Gabriel, Evidentli) | Pseudo-Bayesian Approach to Model-based Intracranial Pressure Estimation (Thomas Heldt, MIT) |
| 11:30 - 12:00 | Panel Discussion | Panel Discussion | Panel Discussion |
| 12:00 - 12:30 | Abstract Session A1 | Formal Poster Presentations | |

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| 12:30 - 14:00 | Lunch break and poster viewing | | |
| 14:00 - 15:30 | Session 2: Data assimilation for Mechanistic Models of Physiology - From Theory to Clinical Impact (Chair: David Albers, co-Chair: Manuela Ferrario) | Session 4: Decision Support That Works (Chair: Steve Rees, co-chair: Alan Morris) | Session 6: Regulatory and Normative Aspects of AI in Clinical Decision Support (Chair: Chris Scully; co-chair: Gilles Clermont) |
| 14:00 - 14:30 | Model-based personalized glycemic management for clinical decision support (Melike Sirlanci Tuysuzoglu, University of Colorado) | We are Irrational Humans – The Need for Decision Support (Alan Morris, University of Utah) | The Evolving Regulatory Environment: The US Perspective (Chris Scully, FDA) |
| 14:30 - 15:00 | Learning glucose dynamics from real world Type 1 Diabetes data: leveraging qualitative and quantitative expert knowledge (Matthew E. Levine, Broad Institute of MIT/Harvard) | The Intersection of Replicable Decision Support, Interoperability, and the Potential Benefit of Federal Incentives for Digitally Tracked Quality Measures (Chris Horvat, University of Pittsburgh) | The Evolving Regulatory Environment: A European Perspective (Sven Zenker, University of Bonn) |
| 15:00 - 15:30 | Aligning computational models with human reasoning in diagnostic and treatment decisions (Lena Mamykina, Columbia University) | Vulnerability of Knowledge Captured on Local Platforms, the need for managed, freely available, knowledge bases. (Scott Evans, University of Utah) | Translating AI Technology for Use in Clinical Applications (Laura Brosch, USU) |
| 15:30 - 16:00 | Abstract Session A2 | Formal Poster Presentations | Concluding Remarks and Prize Award Ceremony (Sven Zenker) |
| 16:00 - 18:00 | SCAI Business Meeting (all attendees) | Abstract Session A3 | |