



24th International Conference on Complex Acute Illness

**Promoting access to public health in resource-constrained ICUs:
from innovative monitoring to AI-driven decision support**

São Paulo, Brazil, September 9 –11, 2026

endorsed by



Preliminary program

Wednesday, September 9th, 2026

09:00	Opening Remarks Sven Zenker (University Hospital Bonn, Germany) Federico Aletti (FICSAE Albert Einstein, Sao Paulo, Brazil)
09:30	Keynote Lecture Luciano Azevedo (FICSAE Albert Einstein, Sao Paulo, Brazil, Brazil) <i>“Caring for the critically ill: from supportive therapy to precision medicine”</i>
10:30	Session 1 Beyond high-resource ICUs: towards equitable access to state-of-the-art critical care <i>(Chairs: TBC)</i> Vitaly Herasevich, Mayo Clinic, U.S.A. – <i>“AMP and CEDAR as hospital wide surveillance”</i> Adriano Pereira, FICSAE Albert Einstein, Sao Paulo, Brazil – <i>TBC</i> <i>TBC</i> Round Table & Panel Discussion
12:00	Lunch Break
13:30	Session 2 Intracranial Dynamics for Neurocritical Monitoring <i>(Chairs: Robert Stevens, U.S.A.; Gilles Clermont, U.S.A.)</i> Stein Silva, University of Toulouse, France – <i>“Computational multimodal mapping in severe brain injury”</i> Peter Smielewski, University of Cambridge, United Kingdom – <i>“Precise and personalised cerebral blood flow management”</i> Thomas Heldt, Massachusetts Institute of Technology, U.S.A. – <i>“Mathematical models of intracranial physiology”</i> Gustavo Frigieri, Brain4Care, Brazil – <i>“Novel approaches for intracranial dynamics monitoring”</i>

Edilberto Amorim, UCSF, U.S.A. – “Novel EEG biomarkers for neurological prediction”

Round Table & Panel Discussion

16:30

Selected Abstracts

17:30

SCAI Business Meeting

Thursday, September 10th, 2026

09:00

Keynote Lecture

Shamim Nemati (University of California San Diego, U.S.A.)

“The Future is Here: Implementing Agentic AI in Clinical Practice”

10:00

Session 3

AI and pulmonary/critical care

(Chairs: David Albers, U.S.A.; Ian Wong, U.S.A.)

Jana de Wiljes, TU Ilmenau, Germany -TBC

Peter Sottile, University of Colorado, U.S.A. -TBC

TBC

11:30

Session 4

Multiscale Modeling to forward the use of ECMO in critical care

(Chairs: J.T. Green, U.S.A.; Seth Schobel, U.S.A.)

Chris Rackaukus, JuliaHub, U.S.A., *“Toward solving the inverse problem in the ICU”*

Pat Walker, Uniformed Services University of the Health Sciences, U.S.A. – *“Changing the paradigm of resuscitation in critical illness with VA-ECMO”*

Alonso Alvarez, Laboratório Nacional de Computação Científica, Brazil – *“A Multiscale View of Circulation: Linking Heart, Respiration, and Intracranial Pressure Dynamics”*

13:00

Lunch Break

14:30

Session 5

Foundational Models and beyond in Critical Care

(Chairs: Maximilian Oremek, Germany; TBC)

Robert Stevens, Johns Hopkins University, U.S.A. – *“Leveraging foundational models for prediction in intensive care”*

Xiao Hu, Emory University, U.S.A. – *“Foundation models in critical care: chance or peril?”*

Yanjun Gao, University of Colorado, U.S.A. – *“Teaching Foundational Models in Critical Care”*

16:00

Selected Abstracts / Student Session

17:00

Session 6

Translational AI: From Paper via Procurement to Implementation

(Chairs: Vitaly Herasevich, U.S.A.; Chris Hinske, Germany)

Svetlana Herasevich, Mayo Clinic, U.S.A. – “*Workforce Augmentation (AI as a Partner)*”

Adel Bassily Marcus, Yale University, U.S.A. – “*New AI opportunities in Epic*”
TBC

Friday, September 11th, 2026

09:00

Session 7

Cardiovascular Modeling: towards next-generation monitoring

(Chairs: TBC)

Becton Dickinson – TBC

Riccardo Barbieri, Politecnico di Milano, Italy – “*Clinical Decision Support Systems in Critical Care for hemodynamic support: current perspectives and future directions*”

André Fujita, USP, Sao Paulo, Brazil – “*Granger causality and heart rate variability: from theory to applications in critical illness*”

Manuela Ferrario, Politecnico di Milano, Italy – “*Decoding the Arterial Tree in the Intensive Care Unit: Pulse Wave Analysis, Wave Reflections, and Clinical Applications*”

10:30

Session 8

Back-to-the-future: mechanistic modeling to unravel acute illness

(Chairs: Manuela Ferrario, Italy; Federico Aletti, Brazil)

Alexandre Steiner, USP, Sao Paulo, Brazil – “*A new hypothesis on the mechanism of septic shock: role of tissue autoregulation*”

Reinaldo Salomao, UNIFESP, Brazil – “*Towards precision medicine in sepsis: unravelling the heterogeneity of the metabolic regulation of immune function*”

John T. Green, Uniformed Services University of the Health Sciences, U.S.A. – “*The challenges of multiscale modeling: the Cardiac Sarcoplasmic Reticulum as a case study*”

12:00

Lunch Break

13:30

Selected Abstracts

16:00

Awards and Concluding Remarks

Friday night: Social Dinner (20h00)