

Preliminary Program and Schedule

15th International Conference on Complex Acute Illness Aug. 10-14, 2016

Meeting Hosts/Organizers: Marie Csete and John Doyle (iccai.org)
Location of sessions: Beckman Institute on the Caltech campus

WEDNESDAY afternoon Aug 10th

Controls workshop: Starting at 1 pm, John Doyle to organize

Overview: A primer on the mathematics used by control engineers, with applications to medicine.

Confirmed workshop speakers:

- John Doyle (Caltech)
- John Delos (William & Mary)
- Paul Bogdan (USC Engineering)

THURSDAY Aug 11th

7:00-8:00 Breakfast

Prediction/Monitoring (8:00 – 10:00)

Moderator: Marie Csete

8:00-8:20 Randall Moorman (UVA): Update from UVA

8:20-8:30 Q&A

8:30-8:50 Ambuj Singh (UCSB) Critical alert monitoring

8:50-9:00 Q&A

9:00-9:20 Sally Blower (UCLA): Modeling the spread of infectious epidemics

9:20-9:30 Q&A

9:30-9:50 Niema Pahlevan (HMRI, Caltech) Waveform analysis for intrinsic frequencies—
rapid assessment of heart function and more

9:50-10:00 Q&A

10:00-10:30 COFFEE BREAK and Poster Set-up

10:30-10:50 Giuseppe Baselli (Politecnico di Milano): Advancement of the
ShockOmics EC Project

10:50-11:00 Q&A

11:00-11:20 Abstract Presentation – Li-Wei Lehman (MIT)

11:20-11:30 Q&A

THURSDAY Aug 11th (continued)

11:30 – 12:30 Rapid fire 2 min poster preview talks: Federico Aletti, Marta Carrara, Wangde Dai, Jianru Shi, Bela Suki, and Edmund Tse

12:30-2:00 Poster session, Vendor Exhibition & Lunch sponsored by ***Biotech Vendor Services and their Suppliers***

Moderators: Cohen, Csete, Vodovotz and volunteers
(see Marie Csete)

******A best poster prize will be given at the Saturday banquet ******



Clotting/inflammation (2:00 – 4:00)

Moderator: Mitchell Cohen

2:00-2:20 Damien Kudela: Topical materials to halt arterial bleeding: Picking the next best applications

2:20-2:30 Q&A

2:30-2:50 Linda Petzold: Towards a better understanding of coagulopathy in trauma

2:50-3:00 Q&A

3:00-3:20 Josh Tobin (USC): Simulation for optimal trauma resuscitation

3:20-3:30 Q&A

3:30-3:50 Andrea Loewendorf PhD (HMRI): Immune basis for pre-eclampsia

3:50-4:00 Q&A

4:00-4:30 VERY LIGHT COFFEE BREAK

4:30-4:50 Rachel Callcut: Applying big analytics to the critically injured

4:50-5:00 Q&A

4:30-4:50 Abstract Presentation – Ruben Zamora (University of Pittsburgh)

4:50-5:00 Q&A

OPENING RECEPTION:

Tournament House (Wrigley Mansion) – Headquarters of the Tournament of Roses
Bus leaves Caltech (on Wilson St. near Beckman Institute) @ 6pm.

6:30-9:30 Rose Tournament House reception

Bus leaves to return to Caltech at 9:30pm.

FRIDAY Aug 12th

8:00-9:00 Breakfast

NEURO/host session

Moderator: Mitchell Cohen

9:00-9:20 George Zouridakis (University of Houston): Brain Activation Profiles in mTBI: Evidence from EEG, MEG, and DTI MRI

9:20-9:30 Q&A

9:30-9:50 Noah Gross (HMRI): Acute control over experimental migraine

9:50-10:00 Q&A

10:00-10:30 COFFEE BREAK

10:30-10:50 Richard Andersen (Caltech): The brain-machine interface: Lessons from first patients

10:50-11:00 Q&A

11:00-11:20 Paul Verschure (Barcelona): From brain theory and robotics to the clinic: A case study in neurorehabilitation

11:20-11:30 Q&A

11:30-11:50 John Doyle (Caltech): The brain in action and homeostasis

11:50-12:15 FULL PANEL DISCUSSION

12:15-1:00 LUNCH

CULTURAL PROGRAM (afternoon)

- Bus to Jet Propulsion Lab departs on Wilson Rd near Beckman Institute at 12:30 pm
 - Prior approval required
 - tour: 1:00pm – 3:30pm
- Car to Gamble House (driven by Dr. Andrea Loewendorf) departs at 2:30 pm for a 3:00pm tour and return to Caltech after the tour.

DINNER/EVENING ON YOUR OWN

SATURDAY Aug 13th (Saturday Session Moderators: Giuseppe Baselli)

- 7:30-8:30 Breakfast
- 8:30-8:50 Jim Sonner (UCSF Emeritus, HMRI) Synaptic function and the lipid bilayer: Just how does general anesthesia work? Not how you think!
- 8:50-9:00 Q&A
- 9:00-9:45 Scott Fraser (USC): Plenary: Can we measure metabolics in real time?
9:45-10:00 Q&A
- 10:00-10:20 Bob Kloner (HMRI): Applications of remote ischemic conditioning in medicine
10:20-10:30 Q&A
- 10:30-10:50 Mike Harrington (HMRI): Neuronal Excitability and Dysfunction in Concussion and Migraine
10:50-11:00 Q&A
- 11:00-11:20 Bela Suki (Boston U): Control of mitochondrial dynamics and morphology
11:20-11:30 Q&A
- 11:30-12:00 Abstract Presentation – Charles Fisher (Applied Research Associates, Inc.)
- 12:00-1:00 LUNCH
- 1:00-1:20 Marie Csete: Multipronged approach to early sepsis detection--Use everything you can lay your hands on
1:20-1:30 Q&A
- 1:30-1:50 Mitch Goldstein (Loma Linda University): NASCAR racing strategies in the design of optimal neonatal ventilation
1:50-2:00 Q&A
- 2:00-2:20 Null: Neonatal ICU
2:20-2:30 Q&A
- 2:30-2:50 Marc Klau, MD (Kaiser, Pasadena): A new vision for medical education
2:50-3:00 Q&A
- 3:00-3:30 COFFEE BREAK
- 3:30-5:00 Abstract Presentation – Manuela Ferrario (Politecnico di Milano)

SATURDAY BANQUET DINNER

6:00pm – 10:00pm (Awarding of poster prize)
Walk to Constance Hotel

SUNDAY MORNING Aug 14th (8:30-11:30)

7:30-8:30 Breakfast

8:30-10:00 Do we need a new definition of sepsis? What will new definitions buy us?
JAMA 2016. 315(8):801-10
Organized by Mitch Cohen

10:00-10:30

- Editor, Journal of Critical Care (Philip Lumb)
- Editor, Physiological Measurement (Randall Moorman)
- Editor, Journal of Cardiovascular Pharmacology and Therapeutics (Bob Kloner)

10:30 SCAI Business meeting and 2016 ICCAI adjournment (including preview of 2017 in Milano)

