

IEEE Control Systems Society
Technical Committee on Healthcare and Medical Systems

Minutes of the TC meeting on December 15 at 16:00, 2015 at the 54th IEEE CDC Osaka

Submitted by Caterina Scoglio, Chair
December 21, 2015

Attendees:

Alexander Medvedev,	Uppsala Universitet, Sweden
Cesar Martin	Arizona State University, USA
Laura Giarre'	Universita' di Palermo, Italy
Frank Doyle	Harvard University, USA
Reza Tafreshi	Texas A&M, University at Qatar, Doha, Qatar.
Mathukumalli Vidyasagar	University of Texas at Dallas, USA
Filippo Cacace,	Universita' Campus Bio-Medico di Roma, Italy
Pasquale Palumbo	National Research Council, Italy
Valerio Cusimano	National Research Council, Italy
Giovanni Palombo	Universita' dell'Aquila, Italy,

The meeting started at 4:00 pm with participants introducing themselves.

The meeting chair Filippo Cacace, on behalf of Caterina Scoglio who was not in Osaka, presented the activities of the last six months and some options for future activities.

Past activities

- Article for CSM about our TC activities, submitted in October - the initial February 16 issue page proofs have just been approved - it will go to the printers in early January.
- Two proposals for invited sessions for ACC 2016 Boston have been submitted:
 - *Application of control theory in legged locomotion*; organizers: Robert D. Gregg and Koushil Sreenath
 - *Mathematical modeling of diseases and medical intervention effects*; organizers Caterina Scoglio and Alexander Medvedev
 - Possibility to organize a special session (volunteers are needed) with NIH NSF program directors

Future activities

The subsequent discussion focused on the possibility of organizing invited sessions in forthcoming conferences MSC 2016, CDC 2016.

- Alexander Medvedev proposed to organize a session on the topic of “Control of therapies”, that could include theoretical aspects like feedback and feedforward control strategies, impulsive control, hybrid systems.
- Laura Giarre' proposed to organize an invited session for an application-oriented conference, like MSC 2016, in the area of “Control technologies for health-care systems” focusing among other topics on localization, networks of health-care providers and services. MSC 2016 is in September, and the deadline for invited session proposals is April 2016.
- Frank Doyle suggested to contact his collaborator Eyal Dassau to organize an invited session on artificial pancreas.
- Pasquale Palumbo suggested that another interesting topic could be related to modeling and parameter identification for populations of patients of specific disease, for example diabetes. The aim would be to adapt therapies to specific patients by means of real-time measurements and parameter identification. Moreover, another interesting topic could be that of developing performance measurement techniques for the control of therapies.

There was a general agreement that in the next CDC we could organize a couple of invited sessions on bio-medical topics, concerning both theoretical and application issues, and an invited session for MSC 2016 could be launched as well. Alexander Medvedev, Pasquale Palumbo and Laura Giarre' are willing to try to organize them. It would be interesting to engage someone of the group of Frank Doyle, like Eyal Dassau, in organizing such sessions. Frank Doyle is going to serve as president of the CSS and will be very busy this year.

We plan to hold the next TC meeting during ACC 2016 in Boston, USA.