

IFAC TC4.5 on Human-Machine Systems Meeting 2020

Date: Sep. 03, 2020

Venue: Virtual (zoom) meeting

Participants (maybe incomplete):

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Agenda:

1. IFAC WC2020

Jianhua Zhang introduced the number (#27) of accepted papers from TC4.5 on IFAC WC2020 (Berlin). Within CC4, we had the least number of accepted contributions compared with TC4.2 on Mechatronic Systems (#142) and TC4.3 on Robotics (#134). The low number of attendance may be due to the virtual congress under covid pandemics in 2020 as well as the broad multi-disciplinary nature of the TC. Everyone agreed that we may be smaller, but have formed a very active and focused community.

Considering the broad scope of our TC, we may need to revise the future paper review guidelines in order to encourage and accommodate the (perhaps not very mathematically formalized) papers from non-control (e.g., psychology or social science) fields or industry practitioners.

The CC4 Chair, Andreas Kugi, will check possibilities for journal publications of the selected papers of IFAC CC4 events. If this can be achieved, more researchers will likely be interested in publishing their new results on our symposium.

All TC members are strongly encouraged to actively mobilize your department/group staff and academic contacts to contribute to our next symposium.

2. Cooperation with other TCs and measures of improving the visibility of our TC

Researchers from other fields (for example social sciences) should be invited to our events because in almost all scientific fields involving human factors, modeling is a universal research question which falls within the key scopes of our TC.

Prof Frédéric Vanderhaegen suggested that the role of human and organizational factors in Industry 4.0 is a good topic for our TC, which can be explicitly mentioned in the updated TC scope, so that we may be able to attract researchers in that particular domain to our next symposium. Also in the updated scope, we plan to add the social and ethical issues.

In terms of cooperations, we need to strengthen cooperation with IFAC TC9.2 on Social Impact of Automation (<https://tc.ifac-control.org/9/2/members>, in particular, in the area of human-automation interaction) and TC5.1 on Manufacturing Plant Control (<https://tc.ifac-control.org/5/1/members>, Chair: Marco Macchi, email: marco.macchi@polimi.it, e.g., in the application area of chemical or nuclear plant). Also in the future we should try to set up collaborations with TC3.2 on Computational Intelligence in Control, TC7.4 on Transportation Systems, TC7.5 on Intelligent Autonomous Systems, TC8.2 on Biological and Medical Systems and possibly other TCs in CC9 on Social Systems. Obviously these TCs have some overlapped scopes with our TC.

On the other hand, we can have closer collaboration with IFAC Workshop on Cyber-Physical and Human Systems (CPHS), which takes place in Beijing, China this year.

Prof Dirk Soeffker made the comment ‘I see this is an active TC and I will contribute in the future...’.

3. HMS Symposium 2022

Dr Tamsyn Edwards introduced in detail her careful plan and well-thought vision for applying for the next symposium of this TC. It seems that the preparations for the formal application are currently well under way. Regarding the application and subsequent organization, she will get full support from the TC chair team and other experienced members, if needed. The deadline for application submission needs to be strictly observed.

After this TC meeting, the CC4 Chair, Prof, Andreas Kugi, suggested the possibility to arrange the exact date of HMS2022 in San Jose, California, USA in such a way that participants from abroad can easily attend both HMS 2022 and MECHATRONICS 2022 in September 2022. This is a good idea to attract more attendees of our next symposium.

During next symposia, we should invite plenary speakers from industry more regularly, so that their groups may become regular participants of our future events. Also some high-quality HMS tutorials should be invited as plenary talks to improve the visibility of our TC to a wide audience.

4. TC Awards

When possible, we should apply to IFAC to set up two TC awards: Outstanding Contributions award & Young Scientists award (tentative names).