

Annual Report Programme Committee Systems & Control (MSc) – 2021/2022

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1. Programme committee

A. Members

In the academic year 2021/2022 the program committee Systems & Control (PC-S&C) consisted of the following members:

Staff: Ronald Aarts (co-chair), Francesco Nex, Sarthak Misra (co-chair).

Students: Bhanu Teja Chidura (until 39th meeting), Alejandro Lopez Tellez, Vignesh Balaji Vijayan.

In addition the programme director (PD), Maarten Korsten, and the programme coordinator, Jorien Berendsen, are invited to attend the meetings. The minutes are prepared by a (non-member) student.

In this academic year, the PC-S&C gradually became more involved in the Robotics MSc programme (ROB) starting in September 2022. For this reason also the programme director, Jan Broenink, and the programme coordinator, Heidi Muijzer-Witteveen, of this new programme are invited to attend the 42nd and next meetings.

B. New members

Student member Bhanu Teja Chidura graduated already before the 39th meeting. Hence there was a vacancy for a new third student member. In spite of various attempt to attract a new student member, the vacancy could not be filled. Towards the end of the academic year this action was paused as it was expected that the PC would continue as a combined PC for the S&C and ROB. Within that perspective it has been decided to look for new PC student members once students have enrolled for the new programme as well.

C. Communication

The staff members represent different groups from different faculties contributing to the programme. Although it is not possible to arrange that all groups are represented in the programme committee, there are numerous informal and formal contacts between staff members across the various groups and faculties. Such contacts facilitate communication about possible educational issues.

The minutes of the meetings are published on the PC's web site shortly after approval (typically in the next PC meeting). In addition the agenda and advices can also be found on the web site.

2. Meetings

In the academic year 2021/2022 there have been 6 regular meetings and one “ad hoc” meeting. All meetings were attended by one or both program directors (PD). The program coordinator(s) joined the meetings when possible. Even though the restriction due to the COVID-19 pandemic have been relaxed, it has been decided to continue the meetings online in Teams to reduce travelling.

An overview of agenda items is as follows:

Ad hoc meeting – 14 September 2021

- Advice on the new MSc Robotics programme. There appeared to be an urgent need for this advice for which reason the meeting was arranged on a fairly short time scale to discuss only this topic. The meeting has not been prepared in the usual way and no minutes have been made. Hence it is not counted as the 39th meeting.

39th PC-meeting – 17 January 2022

- Developments regarding the start of the Robotics programme with consequences for the Systems & Control programme.
- Changes in the courses of the Systems & Control programme due to the start of the Robotics programme. Inventory of the necessary changes in the Education and Examination Rules of S&C
- Quality monitoring system for Systems & Control.

40th PC-meeting – 28 February 2022

- Course evaluation reports Q1/1A:
 - A. 201900093 Control System Design for Mechatronics (M-EE course).
 - B. 201600070 Machine Learning I (M-ITech course).
 - C. 191210930 Measurement Systems for Mechatronics (M-EE course).
 - D. 191211080 Systems Engineering (M-EE course).
 - E. 201400427 Transducer Science (M-EE course).
- Quality agreement of the EEMCS faculty.

41st PC-meeting – 4 April 2022

- Course evaluation reports Q1/1A:
 - A. 191157750 Engineering Acoustics (M-ME course).

- Course evaluation reports Q2/1B:
 - B. 201300004 Robotics for Medical Applications.
 - C. 201600071 Machine learning II (M-ITech course).
 - D. 201800177 Deep Learning – From Theory to Practice (M-AM course).
 - E. 191210920 Optimal Estimation in Dynamic Systems (M-EE course).
 - F. 191211090 Real time software (M-EE course).
 - G. 191561620 Optimal control (M-AM course).
- Course programme 2022-2023 with changes due to the start of the Robotics programme.

42nd PC-meeting – 12 May 2022

- Need to check all 14 compulsory courses at the start of the new Robotics programme.
- Combined Final Projects.
- Master EER part A, Faculty Section.
- Course evaluation reports Q1 and Q2:
 - A. 2191561560 Systems and Control (Mastermath course).
 - B. 201500009 Electric Vehicle System Design (M-IDE course).
- Feasibility of the S&C curriculum in 2022/2023 (due to changes required for Robotics programme).

43rd PC-meeting – 2 June 2022

- Master EER part B, Programme Section Systems & Control.
- Master EER 2022-2023 part B, Programme Section Robotics.
- Course evaluation reports Q1 and Q2:
 - A. 201900037 Flexible Multibody Dynamics (M-ME course).

44th PC-meeting – 29 August 2022

- Discontinuation Master's programme Systems and Control. There was an urgent need for an advice on this topic, for which reason this extra meeting has been scheduled at the end of the academic year.
- Proposal for adaptation of the EER-S&C regarding compulsory courses.

3. Advices

A. Asked

In the academic year 2021/2022 7 officially asked advice has been given:

- (14 September 2021) Positive advice, with some considerations, regarding the initiative to start the MSc Robotics.
- (12 May 2022) Advice about the scheduling of 2B courses.
- (12 May 2022) Positive advice EEMCS EER-A.
- (2 June 2022) Positive advice EER-B S&C and Robotics.
- (2 June 2022) Positive advice proposed compulsory courses MSc Robotics.
- (29 August 2022) Positive advice adaptation EER.
- (29 August 2022) Positive advice discontinuation S&C programme.

B. Not asked

In the academic year 2021/2022 various topics have been discussed with the program directors (PD) during the PC meetings, see e.g. the list with agenda items in section 2. No formal letters have been sent on these topics.

4. Course evaluations

Apart from the internship and graduation project only a relatively small number of courses is formally offered by the Systems and Control programme. Hence, most courses, including the courses in the core programme, are offered by other programmes. In many cases course have already been evaluated on behalf of that programme. Compared to earlier academic years, more effort has been put in collecting such evaluations, which succeeded for the courses listed in section 2. No actions had to be taken because of insufficient quality.

5. Self-evaluation

The PC would like to improve on the following aspects:

- Setting up better arrangements regarding course evaluations in other programmes. There is no need to redo an evaluation that has already been taken care of by a PC of another programme, but it should be verified that the educational quality has been evaluated adequately.
- Having three student members in the PC. We will try to attract students from the new Robotics programme.