UNIVERSITEIT TWENTE.

FACULTEIT ELEKTROTECHNIEK WISKUNDE & INFORMATICA
DATE: 31 JANUARY 2021

OUR REF: EEMCS2022/BOZ/10807/MJ

Minutes 39th meeting PC-S&C
Monday 17 January 2022, 11:00 – 12:30

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Present: Ronald Aarts (chairman), Sarthak Misra, Francesco Nex, Bhanu Teja Chidura, Maarten Korsten (programme director, PD), Jorien Berendsen (programme coordinator, PC) and Marissa Jonker (minutes maker)

10   Absent with notice: Alejandro Lopez Tellez, Vignesh Balaji Vijayan

1. Opening
The chairman opens the meeting at 11:03

2. Minutes
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- Meeting 36 on 1 March 2021, not available yet.
- Meeting 37 on 12 April 2021, not available yet.
     Chairman will check again if they are available.
- Meeting 38 on 19 May 2021
     These minutes are approved.

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3. Announcements, incoming and outgoing mail
• Mail from HR about adjusted participation compensation scheme UT (File 03).
For employees who are member of programme committees, their group gets a refund. *Not* only for EEMCS.

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4. Overview of the developments regarding the start of the Robotics programme
• Consequences for the Systems & Control programme (File 04).
Not much new is mentioned about the Robotics programme.

PD: There is a risk that the Robotics programme will not start in September 2022. The site visit
30   (online) of the NVAO accreditation committee has not been scheduled yet and the committee may have remarks, so the start date is still uncertain. There will be a start of S&C in September. Formally, there will be S&C in 2023, as the announcement for the discontinuation of S&C will not be in time. Once the Robotics programme starts, we hope there are no new students for S&C as the communication about the S&C programme will stop. This all depends on when the
35   Robotics programme starts, hopefully in 2022. Once the Robotics programme starts, S&C enrolled students can choose to switch to Robotics.

Nex: clear we want to move to Robotics, but both options should be open for now. Probably it will result in more work for teachers due to having 2 programmes.

Programme committee and examination board. Chairman says that an initial programme
40   committee has been proposed by Jan Broenink with only staff members from the current S&C PC. At this moment it is unclear how this will be arranged for the students. PD: Once the

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Robotics programme has started there are Robotics students and these can also be asked to join for the programme committee. For now the PC-S&C will also be the PC for Robotics.

5. **Overview of the changes in the courses due to the start of the Robotics programme** (File 45   05).

PD summarizes what happens to the compulsory courses: it seems that there are quite a lot of changes between the programmes, but the real changes on course level are limited to the compulsory courses of the Robotics programme. In S&C, 2 courses are involved (Modelling and Simulation (Mod&Sim) + Control System Design for Mechatronics (CSDfM). Mod&Sim is 50   still in discussion in the Robotics programme. It might be combined with Modern Robotics. Last week there was a meeting with teachers of Mod&Sim. Mod&Sim will be an elective course in the Robotics programme, but will be kept the same as last year for S&C. We wait for more information about changes in Mod&Sim and Modern Robotics for the Robotics programme.

55   CSDfM will be discontinued in its current setup. It will be combined with an analogous course in the Mechanical Engineering programme: CSD for Robotics. Both cannot be kept in the same programme due to overlap. Final result for CSDfR will have to be looked at, then CSDfM will be discontinued.

System Identification and Parameter estimation (SiPe) will be extended with machine learning 60   elements. It has to be checked if there is still enough of the old course in the new course.

Integration Project and the Philosophy courses will be unchanged.

Regarding the requirement of additional course in control: Most courses will be kept unchanged. So there will be enough possibilities for the students to choose.

Nex asks if the years above the courses in the table (at the Compulsory courses section) 65   correspond to S&C (for 2021-2022), and to Robotics (2022-2023)? PD answers that in 2022-2023, the course list in the table will be used.

Nex asks if courses will be moved to different quartiles. PD answers that there needs to be a more thorough check for courses and their quartiles. SiPe is shifted to Q4. Mod&Sim might be scheduled in Q3. It has to checked if that's possible. If not, then Q4 might be overloaded. This 70   is a problem that should be checked. AI for autonomous robots (Nex's course), now in Q3, will be moved to Q4.

Chairman: The core courses of Robotics master will have challenge based learning (CBL). For programmes which do not have CBL, it should be checked if they can be examined correctly. PD: it depends on what the CBL contents of a course would be (if it's interesting from students 75   of other programmes to participate, or if they need prior knowledge). Chairman: for the Robotics programme there are 3 tracks. From these tracks, students should be able to team up for CBL.

Transition rules: No additional comments.
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Time schedule EER: Issued by the faculty council. In the past (until last year), they would like to receive all documents by the 1st of May to discuss it in faculty council. Part B is discussed in parallel in the faculty council and programme committee. This gives the PC more time for this discussion.

85   Meeting dates are proposals for us to meet, to have enough time to supply documents to faculty board.

6. Extension of the quality monitoring system for Systems & Control
90 • The number of courses organised by Systems & Control is relatively limited. As an example, all compulsory courses for S&C are organised by other programmes. The PD would like to discuss options to monitor these courses, using the evaluation results from the programme committees of the organising programmes.

PD: This initiative arose from remarks of the central examination board of EEMCS. The examination board made a remark that the PC is responsible for monitoring quality of courses,
95 also those organised by other programs. Our examination board should guarantee that the quality of the exam was good. Suggestion: Try to create some evaluation for courses of other programmes. Not to redo the work done by the other programmes, but report the results of those evaluations to our PC and examination board. This will be done next meeting. Finally, give a report of the checks for each quarter. We can just consult our rules.

100 Next meeting: report about these courses of Q1. Then discuss how the quality committee would work.

Chairman mentions the QAC (Quality Assurance Committee), which exists at Electrical Engineering. It is a shared effort of the Programme Committee and the Examination board. This would be something to consider from September onward when the Robotics programme
105 starts, can be left aside for now.

Proposed schedule: at the date of the next meeting the course evaluations of Q1 would be available. We should also have a look at courses of other faculties. The meetings will a bit later such that the evaluations of for example mechanical engineering are available. All core courses and courses on the electives table will be checked.

110 Are there ITC courses that need to be checked? Nex will have to check for that. PD: most courses from ITC that are in SC are officially organized by SC (but will have to be checked).

7. PC-SC members
Current staff members will stay for the coming year.
Students: Bhanu has already graduated, Vignesh will be there until September, Alexander
115 probably too. An announcement for new student members will be posted on the SC Canvas page.

8. Next meetings (setting meeting dates)
Next meeting: 28th of Feb at 12:30. Topic: course evaluations.
120 Future meeting dates will follow.

9. Any other business/Questions at the end of the meeting
Nex asks if there is new information about the accreditation of Robotics. There was an e-mail from Jan Broenink last week, that there is no known date yet. Chairman answers that there is
125 no new information yet.

10. Closure
Chairman closes meeting at 11:55

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130   **Action points**

Nr	Description	From meeting	Who
77	Write an annual report for 2017-2018	07/05/2019	Chairman
103	Write an annual report for 2019-2020	29/06/2020	Chairman
105	Look for new student member in Q4	01/03/2021	All/students
106	Letter to renew membership of staff members	01/03/2021	Aarts
107	Feedback on EEMCS Quality Agreements	01/03/2021	Aarts
108	Recommendation EER	12/04/2021	Aarts
109	Check arrangements for the P-drive and/or attach documents to the P-drive.	12/04/2021	Aarts
110	Check if the minutes of meeting 37 are available	17/01/2022	Chairman
111	Recompile to-do list (with to-do's from previous meetings) to add to this list	17/01/2022	Chairman
112	Make annual report of previous course years	17/01/2022	Chairman
113	Check if current staff members were appointed to PC-SC last year.	17/01/2022	Chairman
114	Contact chairman of programme committee of mechanical engineering about the availability of course evaluations	17/01/2022	Chairman
115	Send email to student members of PC until when they will stay	17/01/2022	Chairman
116	Check if there are ITC courses that need to be checked for evaluation.	17/01/2022	Nex
117	Check announcement for new student PC members	17/01/2022	Student members
118	Post announcement on Canvas page	17/01/2022	P-coordinator