EPFL

MICRO 453- Robotics practicals

Introduction session
Monday, February 20th

Mohamed Bouri

REHAssist research group

Teachers :

Bouri Mohamed (**coordinator**)
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Boero Giovanni
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Micera Silvestro
Mondada Francesco
Sakar Mahmut Selman
Jean-Paul Kneib

Topic	Title	Assistants	Lab/Gr
1	Microrobots for astrophysics observation	Maxime Romabach; Malak Galal	LASTRO
2	Teaching Robots to Accomplish a Manipulation Task	sthithpragya.gupta@epfl.ch; Peng Baiyu	LASA
3	LiniX Linear Actuators	Nicolas Furrer;	REHAssist
4	**Micro Delta**	Nicolas Péteut	
5	Haptics	Özge Orhan, Ali Manzoori	REHAssist
7	OMRON robotics - Robot programming	Evgenia Roussinova; Gionatta Rizzi (Omron)	REHAssist
8	Programming and characterization of a modular fish robot	Alessandro Crespi	BIOROB
10	Artificial Muscles	shuhang.zhang@epfl.ch; Bokeon.Kwak@epfl.ch	LIS
11	ROS basics	manuel.bernallecina@epfl.ch; Valentina.ferraioli@epfl.ch; kunal.masse@epfl.ch	Mobots
15	Noise	Reza Farsi	LMIS1
16	Myoelectric Control of a Robotic Hand Prosthesis for Upper Limb Amputees	vincent.mendez@epfl.ch; Xiangyu Xu;	TNE
18	2DoF Helicopter (AERO) modeling, control and implementation	Johannes Waibel; Roland Schwan; Shaohui Yang; fenglong.song@epfl.ch	LA3
20	Acoustic levitation system	Lorenzo Noseda; junsun.hwang@epfl.ch	MICROBS

The goal of these practicals is to **gain expertise with focused labs on robotics**.

❑ All information about these practicals is available on the moodle page.

❑ Practicals take place on Monday afternoon, between 13:15 and 17:00. The location depends on the robotic practical. Some practicals are on campus (C), and some on the Geneva campus (GC).   The travel costs to Geneva are covered by EPFL (the section is paying them).

❑ The first session (February 19, 2023, 13:15, @ **room CO2**) introduces the content of each robotic practical and the organization of the course.

❑ Practicals are made by groups of three students each.

❑ **List of groups:**

https://docs.google.com/spreadsheets/d/1sdai6nNGascl8BA8i19q_f2rWRO54zn4e8_UpiwhBso/edit#gid=0

Rules on the evaluation of the student work:

❑ The goals and the detailed criteria of evaluation of the student's work is indicated clearly for each exercise lab.

❑ The effort required in "theory", "design/programming", and "experimentation/analysis" are specified.

❑ Most exercises will be terminated by a report. The reports will be uploaded on Moodle at the latest one week after the exercise.

❑ Each group of students will get a mark on Moodle. The criteria and the related marks are summarized in a notation sheet. The mark can have a granularity of 0.1.

❑ Marks from TPs taking two weeks will be weighted by a factor of two. Marks from TPs taking three weeks will be weighted by a factor of three.

❑ The evaluation considers differences between group members when applicable.

❑ The presence in the practical is mandatory and may affect the final grade. Any absence should be announced and justified

10 robotics labs are involved

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44 programs are available, **P1** to **P44.**

Each group will choose from these 44 programs (P01 to P44), using the wish application during the session of 20.02.2023.

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