

M³ Seminar 2019

Organizers:	Tamim Asfour (KIT Karlsruhe)
	Syn Schmitt (University of Stuttgart)
	Daniel Häufle (University of Tübingen)
Guest speakers:	Winfried Ilg , Computational Sensomotrics, University of Tübingen
	Maziar Sharbafi , Locomotion Lab, TU Darmstadt
	Charlotte Le Mouel , Dynamic Locomotion Group, MPI Intelligent Systems Stuttgart

Agenda

Wednesday, 08.05.2019, Karlsruhe

Location	Adenauerring 2 (Gebäude 50.20), 76131 Karlsruhe	
Web site	http://h2t.anthropomatik.kit.edu/530.php	
Time	Speaker	Topic
10:00	Isabel Ehrenberger and Fabian Peller-Konrad	Start of the Seminar and Introduction
10:15	Lukas Kaul	Humanoid Robotics Research
12:00	Lunch	
13:00	Lab Tour	
14:30	Lukas Kaul	Balancing and Push Recovery in Humans and Humanoids
15:15	Jonas Beil	Kinematisch kompatible Gelenkmechanismen für Exoskelette der unteren Extremitäten
16:00	Isabel Ehrenberger and Fabian Peller-Konrad	Proposition of seminar projects and conclusion

Thursday, 09.05.2019, Stuttgart

Auditorium Location		Seminarraum, Allmandring 30, 70569 Stuttgart	Google Maps
		Footpath from S-Bahn station University	
Time	Speaker	Topic	
10:00	Syn Schmitt	Introduction to Computational Biophysics and Biorobotics m3_seminar_stuttgart_schmitt_2019.pdf	
10:30	Charlotte Le Mouel	Postural adjustments for mobility and balance in humans	
11:30	Isabell Wochner	Optimality Principles in Arm Movements m3seminar_isabell.pdf	
12:15	Simon Wolfen	Bioinspired pneumatic muscle spring units mimicking the human motion apparatus m2vip-praes.pdf	
13:00	Lunch		
14:00	Lab Tour		
14:30	Syn Schmitt	Hands-On our seminar projects m3_projects_stuttgart.pdf	
16:00	Syn Schmitt	End of the seminar	

Friday, 10.05.2019, Tübingen

Location	Otfried-Müller Str. 23, 72076 Tübingen, DZNE building, Seminar room on the main floor	
Parking	If you come by car, there are parking spots at the side of the main road (Schnarrenbergstr.)	
Web site	https://www.hih-tuebingen.de/mocom	
Time	Speaker	Topic
10:15	Daniel Häufle	Introduction (we will start a bit later considering train travel times)
10:30	Maziar Sharbafi	Guest Speaker from TU Darmstadt: Modeling evolution for bipedal locomotion: template based neuromuscular model for balancing
11:30	Winfried Ilg	Neurodegenerative diseases and motor control
12:45	Lunch	
14:00	Daniel Häufle	Role of biomechanics in movement control
15:30		Demo of Projects
16:00	Signup for projects, organization and conclusion	

Modalities

Students are required to:

- participate in the three seminar days
- work in groups on one project for four weeks
- create a wiki project report with a podcast video **deadline: four weeks after beginning of the project**

Project proposals

Projects offered by KIT	Contact	Main Location
tba		Karlsruhe

Projects offered by Uni Stuttgart	Contact	Main location
Movement simulation	Syn Schmitt	U Stuttgart
Muscle parameters	Syn Schmitt	U Stuttgart
EP-control on arm movements	Syn Schmitt	U Stuttgart
Braitenberg Vehicles	Syn Schmitt	U Stuttgart
Ataro Vision (?)	Syn Schmitt	U Stuttgart

Projects offered by Uni Tübingen	Contact	Main location
Soft robotics project	Daniel Häufle	U Tübingen
Pneumatic muscle's project	Daniel Häufle	U Tübingen
Compass gait walker	Daniel Häufle	U Tübingen
Simulation of motor control	Daniel Häufle	U Tübingen

If you are interested in one of our project topics, please contact the respective supervisor(s) to schedule a date!

M^3 Seminar [main page](#).

More information will be available soon

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<https://biomechanicsbiorobotics.info/wiki/> - **wiki**

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