



The 2nd European Motor Control Conference 2025

Date:
August 27th-29th, 2025

Host University:
Technical University of Munich

Conference Location:
TUM School of Medicine and Health
TUM Campus at Olympiapark
Am Olympiacampus 11, 80809 München

Organizers:
David Franklin, Raz Leib and Sae Franklin

European Motor Control Conference Proceedings

Day1 (August 27th, 2025) Wednesday

09:30-10:00 Registration and Coffee

10:00 Opening Remark : David Franklin (TUM)

Chair: David Franklin (TUM)

10:15 Talk 1 by Yiming Liu (TUM)

“Sensorimotor Communication in Human Collaboration under Asymmetric Information”

10:45 Coffee (15min)

Chair: Matteo Bertucco (University of Verona)

11:00 Talk 2 by Hari Teja Kalidindi (UCLouvain)

“When anticipation is not enough: Human reaching control in dynamic environments”

11:30 Talk 3 by Eric Maris (Donders Institute for Brain, Cognition and Behaviour)

“Internal sensory models allow for balance control using muscle spindle tension feedback”

12:00 Talk 4 by Pascal Nietschmann (TUM)

“Just like riding a bike? Learning to ride a reversed bicycle”

12:30 Lunch (90min)

Chair: Yiming Liu (TUM)

14:00 Talk A by Jeroen Smeets (Vrije Universiteit Amsterdam)

“The common basis of deciding and adjusting”

14:45 Talk 5 by Stephan Zahno (University of Bern)

“Humans can learn bimodal priors in complex sensorimotor behaviour”

15:15 Poster Session and Coffee

Chair: Clara Günter (TUM)

16:30 Talk 6 by Niklas Heimbürger (TUM)

“Lateralised motor control depends on arm posture and coupling”

17:00 Talk 7 by Alexandre Thyryon (UCLouvain)

“Nonlinear control models for human reaching movements”

17:30 Talk 8 by Jing Zhang (TUM)

“Transfer of motor memory depends on the weighting of context cues”

18:00 Dinner

Day2 (August 28th, 2025) Thursday

09:10-09:30 Welcome and Coffee

Chair: Christoph Schneider (University of Giessen)

09:30 Talk 9 by Abir Chowdhury (University of Giessen)

“The Earlier You Know, the Smoother You Act”

10:00 Talk 10 by Aslan Bellmann (Donders Institute, Radboud University)

“Forced to plan: Does movement effort alter the planning horizon of sequential reaching movements?”

10:30 Coffee (30min)

Chair: Patricia Capsi Morales (TUM)

11:00 Talk 11 by Sae Franklin (TUM)

“Examining Sensorimotor Control with a Simulated Inverted Pendulum”

- 11:30 Talk B by Philippe Lefevre (UCLouvain)
 “Sensorimotor coordination during and after long-term exposure to weightlessness”
- 12:15 Group Photo
- 12:30 Lunch (90min)
 Chair: Ziyu Chen (TUM)
- 14:00 Talk C by Matthew Millard (University of Stuttgart)
 “How muscle fiber impedance varies across the force-length relation”
- 14:45 Talk 12 by Christopher Herneth (TUM/MIRMI)
 “Challenges and Solutions in Upper Limb Prosthesis Design and Control”
- 15:15 Poster Session and Coffee
 Chair: Alexandra Reichenbach (Heilbronn University)
- 16:30 Talk 13 by Ziyu Chen (TUM)
 “Hands off the musculoskeletal model: Automated calibration of musculotendon path and dynamics”
- 17:00 Talk 14 by Jo-Yu Liu (Donders Centre for Cognition)
 “Optimal feedback control in steering”
- 17:30 Talk 15 by Philipp Gulde (TUM)
 “Extraction of clinically relevant movement data from IMUs”
- 18:00 Dinner

Day3 (August 29th, 2025) Friday

- 09:10-09:30 Welcome and Coffee
 Chair: Stephan Zahno (University of Bern)
- 09:30 Talk 16 by Veit Kraft (TUM)
 “Effects of acute cardiovascular and coordinative exercise on verbal function and attention”
- 10:00 Talk 17 by Luc Selen (Donders Centre for Cognition)
 “Implicit and explicit contributions to tuning curve shifts of reflex EMG in response to a visuomotor rotation”
- 10:30 Coffee (30min)
 Chair: Leonie Oostwoud Wijdenes (Radboud University; Donders Institute)
- 11:00 Talk D by Fabrice Sarlegna (CNRS)
 “Visual and somatosensory feedback loops for motor planning, online control and adaptation”
- 11:45 Talk E by Raz Leib (TUM)
 “Movement and Dynamics Are Represented in Different Coordinate Systems During Object Manipulation”
- 12:30 Lunch (90min)
 Chair: Veit Kraft (TUM)
- 14:00 Talk 18 by David Franklin (TUM)
 “The Control of Visually Guided Reaching”
- 14:30 Member Meeting and Coffee
- 15:00 Lab tours by Franklin Lab and Hermsdörfer Lab
 6 demos (vBOT, Kinarm, TMS, Living Lab, Reverse Bicycle and Phantom)
- 16:15 Social
- 17:30 End of the Conference

Poster Presentations

#1 François Lessage (UCLouvain)

“Sensory attenuation in Essential Tremor”

#2 Clara Braconnier (UCLouvain)

“Effects of transcutaneous vagus nerve stimulation on motor reflexes elicited by mechanical perturbations during reaching movements”

#3 Chaewoo Kim (UCLouvain)

“Graph-theoretic assessment of brain connectivity in Essential Tremor”

#4 Clémence Vandamme (UCLouvain)

“Modulation of gait control under metronomic constraints assessed by long-range autocorrelations in Parkinson's disease”

#5 Purva Joshi (Radboud University)

“Adaptation of steering behaviour to novel control delays”

#6 Giacomo Costa (University of Verona)

“The effects of localized neuromuscular fatigue on muscle synergies during upright standing”

#7 Simon Vandergooten (UCLouvain)

“Targeted arm movements in Space”

#8 Astrid Doyen (UCLouvain)

“Effects of costs and rewards on the flexibility of reaching control in PD”

#9 Fabrice Sarlegna (CNRS)

“Inconsistencies among neurophysiological, matching and metacognitive data on proprioception”

#10 Clara Günter (TUM)

“Grip and manipulation forces are controlled independently in a coupled bimanual task”

#11 Zheng Huang (University College London)

“Action initiation and conscious intention: are we aware of what we are about to do?”

#12 Amir Pour Mohammadi (UCLouvain)

“How Tactile Deformation Patterns Modulate Grip Force Control During Object Manipulation”

#13 Patricia Capsi Morales (TUM)

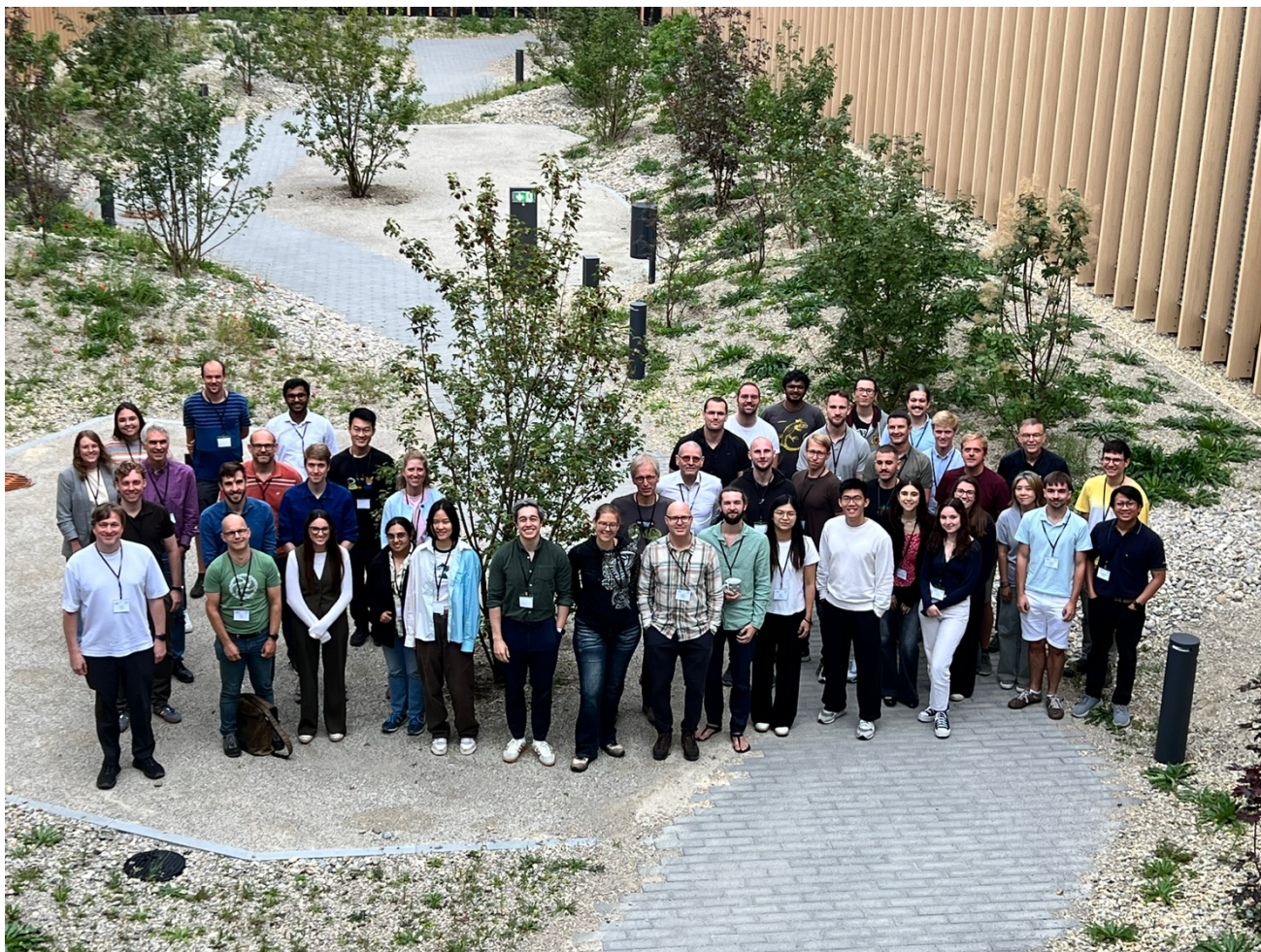
“Kinematic-Muscular Synergies in Object Manipulation: The Impact of Task Knowledge on Anticipatory Information during Reach and Grasp Phases”

#14 Johanna Happold (TUM)

“The Role of Common Neural Drive in the Volitional Dissociation of Motor Units”

#15 Christoph Schneider (Justus-Liebig-University Giessen)

“Bayesian inference as a framework for the sense of agency”



See you all in next summer at Belgium!

Best wishes,
Organizers