

# Medical Robotics Week 2023 – Workshop Days

Tuesday, 22. Aug. 2023 - Workshop Day 1		
<b>Workshop 1 (Day1)</b> Practical industry workshop for TwinCat3 (Beckhoff AG) and Matlab/Simulink (Mathworks) <i>Seminar room 01.006</i>		
<b>8:30</b>	9:00	<b>Registration</b> and coffee
<b>9:00</b>	9:10	<b>Welcome</b> Georg Rauter
<i>Seminar room 01.006</i>		
<b>9:10</b>	9:30	<b>Introduction to real-time systems</b> Tobias Bachmann
<i>Seminar room 01.006</i>		
<b>9:30</b>	9:50	<b>Reading schematics of control cabinets</b> Georg Rauter
<i>Seminar room 01.006</i>		
<b>9:50</b>	10:10	<b>Software installation and programming platform</b> Georg Rauter
<i>Seminar room 01.006</i>		
<b>10:10</b>	10:40	<b>First steps in Matlab/Simulink</b> Vasco Lenzi
<i>Seminar room 01.006</i>		
<b>10:40</b>	11:00	<b>Coffee break</b>
<b>11:00</b>	12:40	<b>My first Matlab/Simulink program in TwinCat3</b> Georg Rauter
<i>Seminar room 01.006</i>		
<b>12:40</b>	14:00	<b>Lunch break</b>
<b>14:00</b>	15:40	<b>Safety in TwinCAT 3</b> Georg Rauter
<i>Seminar room 01.006</i>		
<b>15:40</b>	16:00	<b>Coffee break</b>
<b>16:00</b>	17:40	<b>Implementing a servo motor in Matlab/Simulink for TwinCat3</b> Georg Rauter
<b>17:40</b>		<b>Voluntary GetTogether (Tell)</b>



<b>Wednesday, 23. Aug. 2023 - Workshop Day 2</b>					
<b>Workshop 1 (Day 2)</b> Practical industry workshop for TwinCat3 (Beckhoff AG) and Matlab/Simulink (Mathworks) <i>Seminar room 01.006</i>			<b>Workshop 2 (Afternoon)</b> Young Surgineers <i>Seminar room U1.197</i>		
9:00	10:40	<b>Development of a state machine for a servo motor in Matlab/Simulink for TwinCat3</b> Georg Rauter			
<i>Seminar room 01.006</i>					
10:40	11:00	<b>Coffee break</b>			
11:00	12:40	<b>Implementation of basic controllers in Matlab/Simulink for control of a servo motor in TwinCAT3</b> Georg Rauter			
<i>Seminar room 01.006</i>					
12:40	14:00	<b>Lunch break</b>			
14:00	15:40	<b>TwinCat3 Vision</b> Tobias Bachmann	13:00	14:30	<b>Young Surgineers Session</b>
<i>Seminar room 01.006</i>			<i>Seminar room U1.197</i>		
15:40	16:00	<b>Coffee break</b>	14:30	15:00	<b>Coffee break</b>
16:00	17:20	<b>Demonstration of visual servoing using Matlab/Simulink</b> Vasco Lenzi	15:00	16:45	<b>Young Surgineers Session</b>
<i>Seminar room 01.006</i>			<i>Seminar room U1.197</i>		
17:20	17:35	<b>Demonstration of visual servoing using Matlab/Simulink in TwinCAT3 Vision</b> Georg Rauter	15:45	17:00	<b>Coffee break</b>
<i>Seminar room 01.006</i>			17:00	18:00	<b>Young Surgineers Session</b>
17:35	17:40	<b>Wrap up and Conclusions</b> Georg Rauter	<i>Seminar room U1.197</i>		
<i>Seminar room 01.006</i>					
			18:30	20:00	<b>Vorstandssitzung</b> Only CURAC board
			<i>Seminar room U1.197</i>		
20:30		<b>Voluntary GetTogether (Isaac)</b>			

# Medical Robotics Week 2023 – CURAC Days

Thursday, 24. Aug. 2023 - CURAC Day 1			
CURAC Day 1 <i>Auditorium U1.131</i>		Innovation Booster Robotics event (Afternoon) <i>Seminar room U1.197</i>	
7:30	08:30	<b>Präsidiumssitzung</b> Only CURAC presidium	
<i>Auditorium U1.131</i>			
8:30	9:00	<b>Registration</b> and coffee	
9:00	9:25	<b>Welcome</b> Georg Rauter	
<i>Auditorium U1.131</i>			
9:25	9:30	<b>Welcome</b> Lukas Engelberger (President of the Gesundheitsdirektorenkonferenz)	
<i>Auditorium U1.131</i>			
9:30	10:15	<b>KeyNote 1</b> Aude Billard (EPFL, Switzerland) «Robotic assistance for 4-handed manipulation with application to Laparoscopic Surgery»	
<i>Auditorium U1.131</i>			
10:15	10:30	<b>Industry Pitches</b> Guest	
<i>Auditorium U1.131</i>			
10:30	11:00	<b>Coffee break</b> and industry exhibition	
11:00	12:00	<b>Session 1: Topic 1</b> 4x 15min Talk with Title and Speakers	
<i>Auditorium U1.131</i>			
12:00	12:30	<b>Poster Session 1: Short presentation to posters</b> 10x 3min Talk with Title and Speakers	
<i>Auditorium U1.131</i>			
12:30	14:00	<b>Lunch break</b> and industry exhibition	
14:00	14:45	<b>KeyNote 2</b> Franziska Mathis-Ullrich (FAU, Erlangen, Germany) «Towards Natural Co-Operation with Surgical Robotics»	<b>14:00</b>   <b>15:45</b> <i>Seminar room U1.197</i> <b>Innovation Booster Robotics event</b>
14:45	15:45		
<i>Auditorium U1.131</i>			
15:45	16:15	<b>Coffee break</b> and industry exhibition	
16:15	17:00	<b>KeyNote 3</b> Ryo Takeda (Hokkaido University, Sapporo, Japan) «The Importance of Numerical Estimation and Experimental Verification of Clinical Applicable Biomechanical Research: From Blood Vessels to Ligament Tissues»	<b>16:15</b>   <b>17:00</b> <i>Seminar room U1.197</i> <b>Innovation Booster Robotics event</b>
17:00	18:00		
<i>Auditorium U1.131</i>			
18:00	21:00	<b>Get together</b> <a href="#">Spitalstrasse 41, 4056 Basel</a>	
<i>Main entrance, Biozentrum, University of Basel</i>			



## Friday, 25. Aug. 2023 - CURAC Day 2

CURAC Day 2 and members assembly <i>Auditorium U1.131</i>		Lunch symposium <i>Seminar room U1.197</i>	
8:00	8:30	Registration and coffee	
8:30	9:15	<b>KeyNote 4</b> Jaydev Prataprai Desai (Georgia Tech, Atlanta, USA) «Robotic Transcatheter Delivery of Mitral Valve Implant»	
<i>Auditorium U1.131</i>			
9:15	10:15	<b>Session 3: Topic 4</b> <b>4x 15min Talk with Title and Speakers</b>	
<i>Auditorium U1.131</i>			
9:15	10:30	<b>Poster Session 2: Short presentation to posters</b> 5 x 3min Talk with Title and Speakers	
<i>Auditorium U1.131</i>			
10:30	11:00	Coffee break and industry exhibition	
11:00	11:45	<b>KeyNote 5</b> Nassir Navab (TU Munich, Munich, Germany) «The Path from Intelligence Amplification to Artificial Intelligence in Computer Assisted Interventions»	
<i>Auditorium U1.131</i>			
11:45	12:30	Guided poster round	
<i>Hall U1Q1 &amp; U1Q2</i>			
12:30	14:00	13:00	14:00
<i>Hall U1Q1 &amp; U1Q2</i>		<i>Auditorium U1.131.</i>	Lunch symposium Main sponsor: Stäubli
14:00	14:45	<b>KeyNote 6</b> Tobias Keck (Universitätsklinikum Schleswig Holstein, Lübeck, Germany) «Potential von Robotik und AI in der klinischen Chirurgie»	
<i>Auditorium U1.131</i>			
14:45	15:45	<b>Session 4: Topic 5 "Best Paper Session"</b> 4x 15min Talk with Title and Speakers	
<i>Auditorium U1.131</i>			
15:45	16:15	Coffee break and industry exhibition	
16:15	17:00	<b>KeyNote 7</b> Matthias Harders (Universität Innsbruck, Austria) «Recent Developments in Surgical Simulation»	
<i>Auditorium U1.131</i>			
17:00	18:00	<b>Members Assembly CURAC</b> Only CURAC members	
<i>Auditorium U1.131</i>			
18:15	18:45	<b>Lab Tour: 3D Printlab at the point of care</b> Florian Thieringer	
<i>3D-Printlab University Hospital Basel</i>			
19:00	23:00	<b>Conference Dinner</b> <a href="#">Rheingasse 12, 4058 Basel</a>	
<i>Hotel Krafft, Basel</i>			



## Saturday, 26. Aug. 2023 - CURAC Day 3

8:00	8:30	Registration and coffee
8:30	9:15	<b>KeyNote 8</b>
Auditorium U1.131		Daniel Murariu (Univ. of Pittsburgh Med. School., PA, USA)
9:15	9:45	<b>Scientific Presentations: Stipendiaten</b>
Auditorium U1.131		
9:45	10:45	<b>Session 5: Topic 6</b>
Auditorium U1.131		4x 15min Talk with Title and Speakers
10:45	11:15	Coffee break and industry exhibition
11:15	12:00	<b>KeyNote 9</b>
Auditorium U1.131		Not yet confirmed
12:00	13:00	<b>Session 6: Topic 7</b>
Auditorium U1.131		4x 15min Talk with Title and Speakers
13:00	13:30	Coffee break and industry exhibition
13:30	14:15	<b>KeyNote 10</b>
Auditorium U1.131		Med Amine Laribi (CNRS-Université de Poitiers-ISAE ENSMA, France) «Robot Design: Application To Medical Robotics
14:15	16:00	<b>Lab Visit: Department of Biomedical Engineering, University of Basel</b>
BIROMED-Lab, DBE		Georg Rauter <a href="https://hegenheimer-mattweg.167c.unibas.ch">Hegenheimer-mattweg 167C, 2nd Floor, 4123 Allschwil</a> Lab: <a href="https://biomed.dbe.unibas.ch">https://biomed.dbe.unibas.ch</a>
16:00	16:15	<b>Farewell</b>
BIROMED-Lab, DBE		Georg Rauter
16:15		<b>End</b>