

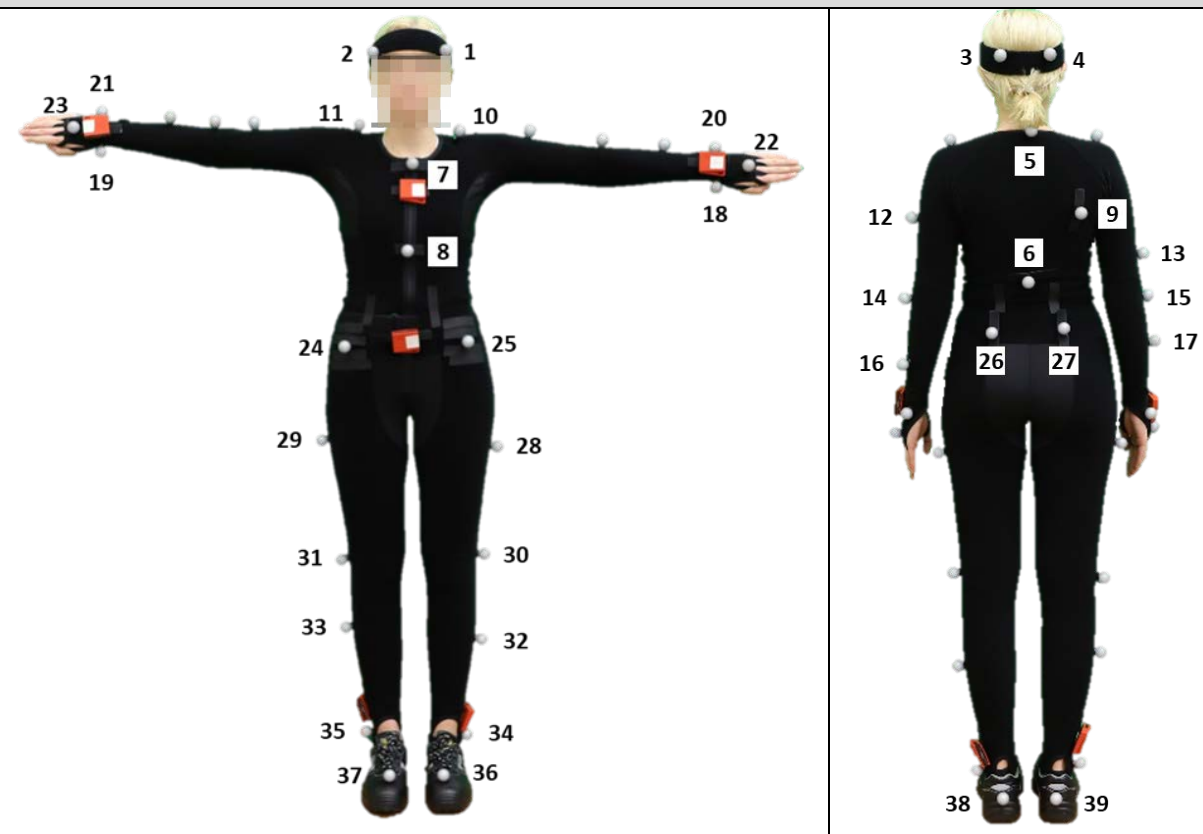
# Recording Protocol

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## General information about the recordings

Total view							
<b>Issue</b>	Recordings of human movements in the context of intralogistics with Optical marker-based Motion Capture (OMoCap) and Inertial Measurement Units (IMU)						
<b>Description</b>	<ul style="list-style-type: none"> <li>- Acknowledgments: The work on the recordings was supported by Deutsche Forschungsgemeinschaft (DFG) in the context of the project Fi799/10-2, HO2403/14-2 "Transfer Learning for Human Activity Recognition in Logistics"</li> <li>- Hall: area 220 m<sup>2</sup>, height 6 m</li> <li>- OMoCap system: Suit 39 marker, 40 infrared cameras (200 fps)</li> <li>- IMU set 1: from the company Texas Instruments Incorporated (10 Hz)</li> <li>- IMU set 2: from MbientLab (100 Hz)</li> <li>- IMU set 3: from the company MotionMiners GmbH from Dortmund (100 Hz)</li> </ul>						
<b>Place</b>	'Innovationlab Hybrid Services in Logistics' at TU Dortmund University						
Researcher							
<b>Last name</b>	<b>First name</b>	<b>Role</b>					
Moya	Fernando	IMU expert					
Niemann	Friedrich	OMoCap expert					
Reining	Christopher	OMoCap expert					
Subject							
Last name	First name	Role	Sex [F/M]	Age [a]	Weight [kg]	Height [cm]	Left-/ Right-handed [L/R]
-	-	Subject 01	M	28	78	175	L
-	-	Subject 02	F	24	62	163	L
-	-	Subject 03	M	59	71	171	R
-	-	Subject 04	F	53	64	165	L
-	-	Subject 05	M	28	79	185	R
-	-	Subject 06	F	22	52	163	R
-	-	Subject 07	M	23	65	177	R
-	-	Subject 08	F	51	68	168	R
-	-	Subject 09	M	35	100	172	R
-	-	Subject 10	M	49	97	181	R
-	-	Subject 11	F	47	66	175	R
-	-	Subject 12	F	23	48	163	R
-	-	Subject 13	F	25	54	163	R
-	-	Subject 14	M	54	90	177	R

**Marker position (OMoCap)**



No.	Marker	Abbreviation	Left [L] / Right [R]
<b>Head markers</b>			
1	Front head	LFHD	L
2		RFHD	R
3	Back head	LBHD	L
4		RBHD	R
<b>Torso markers</b>			
5	7th Cervical Vertebrae	C7	
6	10th Thoracic Vertebrae	T10	
7	Clavicle	CLAV	
8	Sternum	STRN	
9	Back (Scapula)	RBAK	R
<b>Arm markers</b>			
10	Shoulder	LSHO	L
11		RSHO	R
12	Upper arm	LUPA	L
13		RUPA	R
14	Elbow	LELB	L
15		RELB	R
16	Forearm	LFRA	L

17		RFRA	R
18	Wrist A	LWRA	L
19		RWRA	R
20	Wrist B	LWRB	L
21		RWRB	R
22	Finger	LFIN	L
23		RFIN	R
<b>Pelvis markers</b>			
24	Anterior superior iliac spine (ASIS)	LASI	L
25		RASI	R
26	Posterior superior iliac spine (PSIS)	LPSI	L
27		RPSI	R
<b>Leg markers</b>			
28	Thigh	LTHI	L
29		RTHI	R
30	Knee	LKNE	L
31		RKNE	R
32	Tibial wand	LTIB	L
33		RTIB	R
34	Ankel	LANK	L
35		RANK	R
<b>Foot markers</b>			
36	Toe	LTOE	L
37		RTOE	R
38	Heel	LHEE	L
39		RHEE	R

**Date 01.11.2018**

Time	10:00 – 16:30
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**Subject 1**




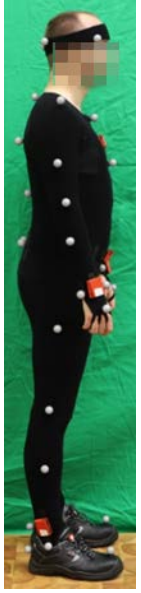

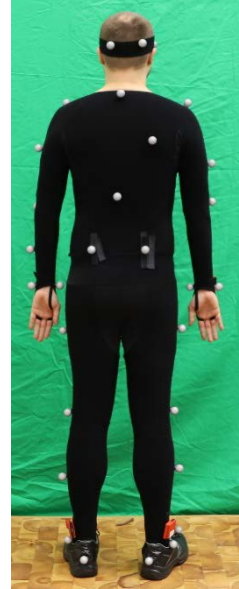


**Overview of the session**

Time	10:00 – 14:20
Room	At 10:00 – 21.5°C
temperature	At 14:20 – 22.9°C


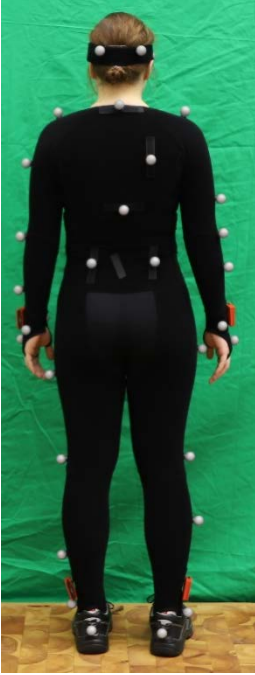

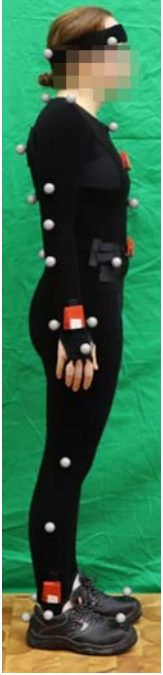

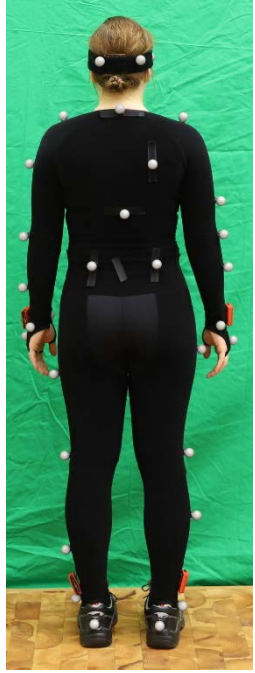


**Size of the Suit / Shoes**

Top	S
Trousers	S
Shoes	43 (EU/DE)

**Pictures of marker position and IMU position**

	Front	Back	Side left	Side right
<b>before the session</b>				
<b>after the session</b>				

Use of velcro																			
	Knee	Elbow	Waistband front	Waistband back															
<b>Velcro used?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input checked="" type="checkbox"/> yes (8 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no															
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no																		
Recordings																			
<b>Scenario</b>	1																		
<b>IMU set</b>	1																		
<b>Number</b>	30																		
<b>Length</b>	120 sec. per recording																		
<b>Video</b>	<input checked="" type="checkbox"/> yes <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>ID</th> <th>Recording Number</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td>Video_Subject1_Rec7-11</td> <td>7 - 11</td> <td>10 min 33 sec</td> </tr> <tr> <td>Video_Subject1_Rec12-16</td> <td>12 - 16</td> <td>12 min 31 sec</td> </tr> <tr> <td>Video_Subject1_Rec16</td> <td>16</td> <td>1 min 56 sec</td> </tr> <tr> <td>Video_Subject1_Rec22</td> <td>22</td> <td>2 min 14 sec</td> </tr> </tbody> </table> <input type="checkbox"/> no				ID	Recording Number	Length	Video_Subject1_Rec7-11	7 - 11	10 min 33 sec	Video_Subject1_Rec12-16	12 - 16	12 min 31 sec	Video_Subject1_Rec16	16	1 min 56 sec	Video_Subject1_Rec22	22	2 min 14 sec
ID	Recording Number	Length																	
Video_Subject1_Rec7-11	7 - 11	10 min 33 sec																	
Video_Subject1_Rec12-16	12 - 16	12 min 31 sec																	
Video_Subject1_Rec16	16	1 min 56 sec																	
Video_Subject1_Rec22	22	2 min 14 sec																	
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 5 pictures: before recording</li> <li>- 221 pictures: during recording</li> <li>- 5 pictures: after recording</li> </ul> <input type="checkbox"/> no																		
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- Marker lost: left heel (LHEE) → recording deleted and new recording</li> <li>- Marker lost: right finger (RFIN) → recording deleted and new recording</li> <li>- Error IMU</li> </ul> <input type="checkbox"/> no																		
<b>Remarks</b>	<ul style="list-style-type: none"> <li>- First Subject &amp; first recording               <ul style="list-style-type: none"> <li>o Detailed attempts before the actual recordings started</li> </ul> </li> <li>- Testing and designation of the gesture to begin with</li> <li>- Break after 16 recordings</li> </ul>																		

Subject 2				
Overview of the session				
Time	14:40 – 16:00			
Room temperature	At 14:40 – 22.9°C At 16:00 – 22.5°C			
Size of the Suit / Shoes				
Top	XS			
Trousers	XS			
Shoes	40 (EU/DE)			
Pictures of marker position and IMU position				
	Front	Back	Side left	Side right
<u>before</u> the session				
<u>after</u> the session				



Use of velcro													
	Knee	Elbow	Waistband front	Waistband back									
<b>Velcro used?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input checked="" type="checkbox"/> yes (11 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (1 pieces) <input type="checkbox"/> no									
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no												
Recordings													
<b>Scenario</b>	1												
<b>IMU set</b>	1												
<b>Number</b>	30												
<b>Length</b>	120 sec. per recording												
<b>Video</b>	<input checked="" type="checkbox"/> yes <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>ID</th> <th>Recording Number</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td>Video_Subject2_Rec17</td> <td>17</td> <td>2 min 15 sec</td> </tr> <tr> <td>Video_Subject2_Rec18-21</td> <td>18 - 21</td> <td>7 min 58 sec</td> </tr> </tbody> </table> <input type="checkbox"/> no				ID	Recording Number	Length	Video_Subject2_Rec17	17	2 min 15 sec	Video_Subject2_Rec18-21	18 - 21	7 min 58 sec
ID	Recording Number	Length											
Video_Subject2_Rec17	17	2 min 15 sec											
Video_Subject2_Rec18-21	18 - 21	7 min 58 sec											
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 10 pictures: before recording</li> <li>- 64 pictures: during recording</li> <li>- 10 pictures: after recording</li> </ul> <input type="checkbox"/> no												
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- Marker lost: right finger (RFIN) → during a break</li> </ul> <input type="checkbox"/> no												
<b>Remarks</b>	<ul style="list-style-type: none"> <li>- Break after 15 recordings</li> </ul>												



**Date 02.11.2018**

Time 09:30 – 15:00

**Subject 3**

**Overview of the session**

Time 10:00 – 12:15

Room At 10:00 – 22.5°C  
 temperature At 12:15 – 22.1°C







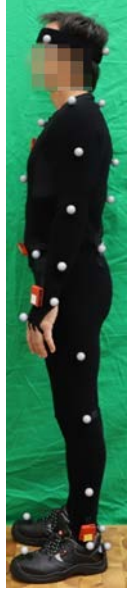

**Size of the Suit / Shoes**

Top M









Trousers S

Shoes 43 (EU/DE)

**Pictures of marker position and IMU position**

	Front	Back	Side left	Side right
<b>before the session</b>				
<b>after the session</b>				

Use of velcro																			
	Knee	Elbow	Waistband front	Waistband back															
<b>Velcro used?</b>	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (4 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (10 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (3 pieces) <input type="checkbox"/> no															
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no																		
Recordings																			
<b>Scenario</b>	1																		
<b>IMU set</b>	1																		
<b>Number</b>	30																		
<b>Length</b>	120 sec. per recording																		
<b>Video</b>	<input checked="" type="checkbox"/> yes <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>ID</th> <th>Recording Number</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td>Video_Subject3_Rec13</td> <td>13</td> <td>2 min 9 sec</td> </tr> <tr> <td>Video_Subject3_Rec16-21</td> <td>16 - 21</td> <td>12 min 31 sec</td> </tr> <tr> <td>Video_Subject3_Rec21-27</td> <td>21 - 27</td> <td>12 min 29 sec</td> </tr> <tr> <td>Video_Subject3_Rec27-30</td> <td>27 - 30</td> <td>7 min 12 sec</td> </tr> </tbody> </table> <input type="checkbox"/> no				ID	Recording Number	Length	Video_Subject3_Rec13	13	2 min 9 sec	Video_Subject3_Rec16-21	16 - 21	12 min 31 sec	Video_Subject3_Rec21-27	21 - 27	12 min 29 sec	Video_Subject3_Rec27-30	27 - 30	7 min 12 sec
ID	Recording Number	Length																	
Video_Subject3_Rec13	13	2 min 9 sec																	
Video_Subject3_Rec16-21	16 - 21	12 min 31 sec																	
Video_Subject3_Rec21-27	21 - 27	12 min 29 sec																	
Video_Subject3_Rec27-30	27 - 30	7 min 12 sec																	
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 10 pictures: before recording</li> <li>- 84 pictures: during recording</li> <li>- 10 pictures: after recording</li> </ul> <input type="checkbox"/> no																		
<b>Incident</b>	<input type="checkbox"/> yes  <input checked="" type="checkbox"/> no																		
<b>Remarks</b>	<ul style="list-style-type: none"> <li>- Break after 15 recordings</li> <li>- Injured at the right hand → Frequent use of the left hand</li> </ul>																		

Subject 4				
Overview of the session				
Time	12:45 – 14:45			
Room temperature	At 12:45 – 22.8°C At 15:00 – 22.8°C			
Size of the Suit / Shoes				
Top	S			
Trousers	XS			
Shoes	40 (EU/DE)			
Pictures of marker position and IMU position				
	Front	Back	Side left	Side right
before the session				
after the session				

Use of velcro																						
	<b>Knee</b>	<b>Elbow</b>	<b>Waistband front</b>	<b>Waistband back</b>																		
<b>Velcro used?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input checked="" type="checkbox"/> yes (12 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no																		
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no																					
Recordings																						
<b>Scenario</b>	1																					
<b>IMU set</b>	1																					
<b>Number</b>	30																					
<b>Length</b>	120 sec. per recording																					
<b>Video</b>	<input checked="" type="checkbox"/> yes <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>ID</th> <th>Recording Number</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td>Video_Subject4_Rec9</td> <td>9</td> <td>2 min 7 sec</td> </tr> <tr> <td>Video_Subject4_Rec10-15</td> <td>10 - 15</td> <td>12 min 31 sec</td> </tr> <tr> <td>Video_Subject4_Rec15-21</td> <td>15 - 21</td> <td>12 min 29 sec</td> </tr> <tr> <td>Video_Subject4_Rec21-27</td> <td>21 - 27</td> <td>12 min 28 sec</td> </tr> <tr> <td>Video_Subject4_Rec27-29</td> <td>27 - 29</td> <td>6 min 2 sec</td> </tr> </tbody> </table> <input type="checkbox"/> no				ID	Recording Number	Length	Video_Subject4_Rec9	9	2 min 7 sec	Video_Subject4_Rec10-15	10 - 15	12 min 31 sec	Video_Subject4_Rec15-21	15 - 21	12 min 29 sec	Video_Subject4_Rec21-27	21 - 27	12 min 28 sec	Video_Subject4_Rec27-29	27 - 29	6 min 2 sec
ID	Recording Number	Length																				
Video_Subject4_Rec9	9	2 min 7 sec																				
Video_Subject4_Rec10-15	10 - 15	12 min 31 sec																				
Video_Subject4_Rec15-21	15 - 21	12 min 29 sec																				
Video_Subject4_Rec21-27	21 - 27	12 min 28 sec																				
Video_Subject4_Rec27-29	27 - 29	6 min 2 sec																				
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 10 pictures: before recording</li> <li>- 37 pictures: during recording</li> <li>- 10 pictures: after recording</li> </ul> <input type="checkbox"/> no																					
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- Marker lost: right elbow (RELB) → recording deleted and new recording</li> <li>- Marker lost: right finger (RFIN) → recording deleted and new recording</li> </ul> <input type="checkbox"/> no																					
<b>Remarks</b>	<ul style="list-style-type: none"> <li>- No break</li> </ul>																					



**Date 03.11.2018**

Time 11:45 – 15:30

**Subject 5**









**Overview of the session**

Time 11:45 – 13:30  
Room At 11:45 – 22 °C  
temperature At 13:30 – 22.9 °C

**Size of the Suit / Shoes**

Top S  
Trousers S  
Shoes 44 (EU/DE)

**Pictures of marker position and IMU position**

	Front	Back	Side left	Side right
<b>before the session</b>				
<b>after the session</b>				

Use of velcro										
	Knee	Elbow	Waistband front	Waistband back						
<b>Velcro used?</b>	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input checked="" type="checkbox"/> yes (10 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no						
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no									
Recordings										
<b>Scenario</b>	1									
<b>IMU set</b>	1									
<b>Number</b>	30									
<b>Length</b>	120 sec per recording									
<b>Video</b>	<input checked="" type="checkbox"/> yes <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>ID</th> <th>Recording Number</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td>Video_Subject5_Rec11</td> <td>11</td> <td>2 min 7 sec</td> </tr> </tbody> </table> <input type="checkbox"/> no				ID	Recording Number	Length	Video_Subject5_Rec11	11	2 min 7 sec
ID	Recording Number	Length								
Video_Subject5_Rec11	11	2 min 7 sec								
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 20 pictures: before recording</li> <li>- 17 pictures: during recording</li> <li>- 11 pictures: after recording</li> </ul> <input type="checkbox"/> no									
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- Marker lost: right elbow (RELB) → recording deleted and new recording</li> <li>- Marker lost: right toe (RTOE) → newly stucked → recording deleted and new recording</li> <li>- Marker lost: left toe (LTOE) → newly stucked → recording deleted and new recording</li> </ul> <input type="checkbox"/> no									
<b>Remarks</b>	<ul style="list-style-type: none"> <li>- No break</li> <li>- During records: drinking and talking to the parties concerned (persons involved)</li> </ul>									

**Subject 6**

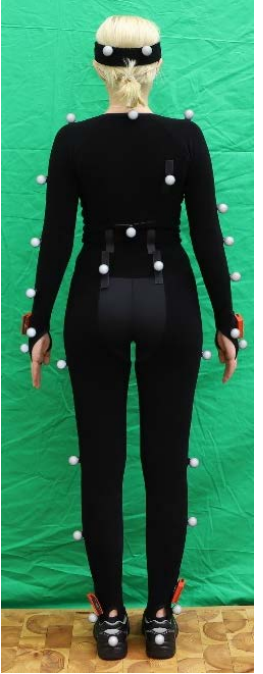


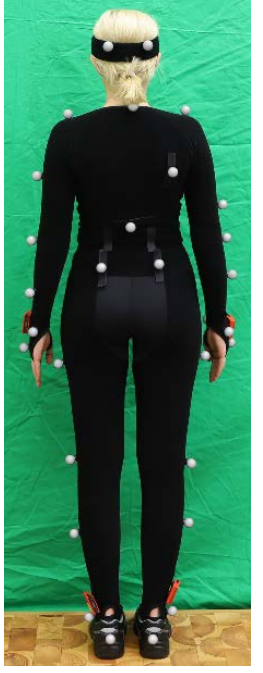


**Overview of the session**

<b>Time</b>	13:45 – 15:30
<b>Room temperature</b>	At 13:45 – 22.9 °C At 15:30 – 23.1 °C

**Size of the Suit / Shoes**

<b>Top</b>	XS
<b>Trousers</b>	XS
<b>Shoes</b>	36 (EU/DE)

**Pictures of marker position and IMU position**

	Front	Back	Side left	Side right
<b>before the session</b>				
<b>after the session</b>				



Use of velcro																
	Knee	Elbow	Waistband front	Waistband back												
<b>Velcro used?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<input checked="" type="checkbox"/> yes (10 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no												
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no															
Recordings																
<b>Scenario</b>	1															
<b>IMU set</b>	1															
<b>Number</b>	30															
<b>Length</b>	120 sec per recording															
<b>Video</b>	<input checked="" type="checkbox"/> yes <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>ID</th> <th>Recording Number</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td>Video_Subject6_Rec7</td> <td>7</td> <td>2 min 13 sec</td> </tr> <tr> <td>Video_Subject6_Rec8-14</td> <td>8 - 14</td> <td>12 min 31 sec</td> </tr> <tr> <td>Video_Subject6_Rec15</td> <td>15</td> <td>2 min 26 sec</td> </tr> </tbody> </table> <input type="checkbox"/> no				ID	Recording Number	Length	Video_Subject6_Rec7	7	2 min 13 sec	Video_Subject6_Rec8-14	8 - 14	12 min 31 sec	Video_Subject6_Rec15	15	2 min 26 sec
ID	Recording Number	Length														
Video_Subject6_Rec7	7	2 min 13 sec														
Video_Subject6_Rec8-14	8 - 14	12 min 31 sec														
Video_Subject6_Rec15	15	2 min 26 sec														
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 10 pictures: before recording</li> <li>- 38 pictures: during recording</li> <li>- 10 pictures: after recording</li> </ul> <input type="checkbox"/> no															
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- Marker lost: left heel (LHEE) → recording deleted and new recording</li> </ul> <input type="checkbox"/> no															
<b>Remarks</b>	<ul style="list-style-type: none"> <li>- Break after 15 recordings</li> </ul>															

**Date 02.08.2019**

Time	08:00 – 18:00
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**Subject 7**









**Overview of the session**

Time	10:15 – 12:25
Room	At 10:15 – 25.7 °C
temperature	At 12:25 – 27.1 °C

**Size of the Suit / Shoes**

Top	S
Trousers	S
Shoes	42 (EU/DE)

**Pictures of marker position and IMU position**

	Front	Back	Side left	Side right
<b>before the session</b>				
<b>after the session</b>				

Use of velcro				
	<b>Knee</b>	<b>Elbow</b>	<b>Waistband front</b>	<b>Waistband back</b>
<b>Velcro used?</b>	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no			
Recordings				
<b>Scenario</b>		<b>Scenario</b>	<b>Record</b>	
		1	1-2	
		2	3-16	
		3	17-30	
<b>IMU set</b>	2 and 3			
<b>Number</b>	30			
<b>Length</b>	120 sec. per recording			
<b>Video</b>	<input checked="" type="checkbox"/> yes – all 30 recordings <input type="checkbox"/> no			
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 12 pictures: before recording</li> <li>- 60 pictures: during recording</li> <li>- 5 pictures: after recording</li> </ul> <input type="checkbox"/> no			
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- Recording 17 take 1 deleted → Take 2</li> </ul> <input type="checkbox"/> no			
<b>Remarks</b>	<ul style="list-style-type: none"> <li>- First Subject for Scenario 1, 2 and 3 &amp; first recording <ul style="list-style-type: none"> <li>o Detailed attempts before the actual recordings started</li> </ul> </li> </ul>			

**Subject 8**


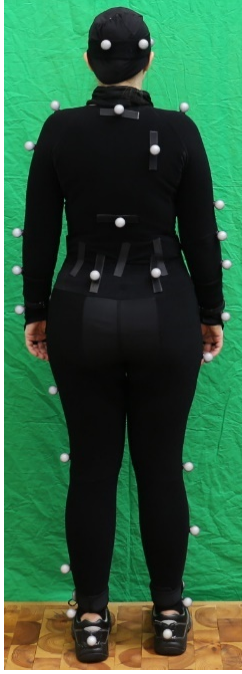



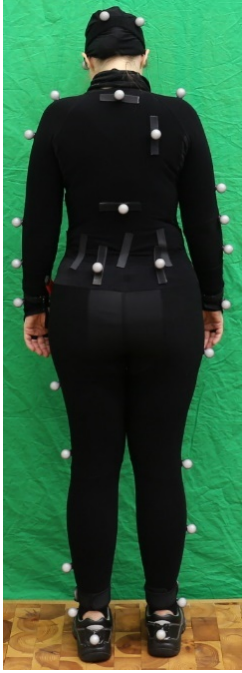
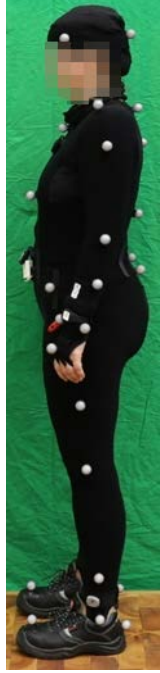
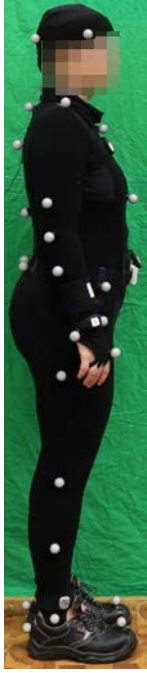
**Overview of the session**

<b>Time</b>	15:15 – 17:40
<b>Room temperature</b>	At 15:15 – 28.8 °C At 17:40 – 28.8 °C

**Size of the Suit / Shoes**

<b>Top</b>	S
<b>Trousers</b>	S
<b>Shoes</b>	40 (EU/DE)

**Pictures of marker position and IMU position**

	Front	Back	Side left	Side right
<b>before the session</b>				
<b>after the session</b>				

Use of velcro				
	Knee	Elbow	Waistband front	Waistband back
<b>Velcro used?</b>	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (3 pieces) <input type="checkbox"/> no
<b>More velcro?</b>	<input checked="" type="checkbox"/> yes (waist side 2 pieces) <input type="checkbox"/> no			
Recordings				
<b>Scenario</b>	Scenario		Record	
	1		1-2	
	2		3-16	
	3		17-30	
<b>IMU set</b>	2 and 3			
<b>Number</b>	30			
<b>Length</b>	120 sec. per recording			
<b>Video</b>	<input checked="" type="checkbox"/> yes – all 30 recordings <input type="checkbox"/> no			
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 5 pictures: before recording</li> <li>- 0 pictures: during recording</li> <li>- 5 pictures: after recording</li> </ul> <input type="checkbox"/> no			
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- Recording 9 marker lost: right finger (RFIN) → recording deleted and new recording</li> <li>- Between recording 10 and 13 marker lost: right finger (RFIN)</li> <li>- During recording 14 Nexus crashed → reboot (therefore recording 14 take 3)</li> <li>- Recording Take 1: video camera was off → therefore take 2</li> </ul> <input type="checkbox"/> no			
<b>Remarks</b>				



**Date 03.08.2019**

Time	07:30 – 17:00
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**Subject 9**







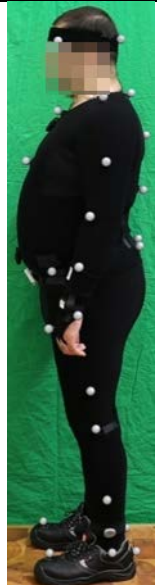

**Overview of the session**

Time	09:25 – 12:10
Room temperature	At 09:25 – 24.7 °C At 12:10 – 26.0 °C

**Size of the Suit / Shoes**



Top	M
Trousers	S
Shoes	43 (EU/DE)

**Pictures of marker position and IMU position**

	Front	Back	Side left	Side right
<b>before the session</b>				
<b>after the session</b>				

Use of velcro				
	Knee	Elbow	Waistband front	Waistband back
<b>Velcro used?</b>	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (10 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (3 pieces) <input type="checkbox"/> no
<b>More velcro?</b>	<input checked="" type="checkbox"/> yes (4 pieces um die Armband-IMUs zu fixieren) <input type="checkbox"/> no			
Recordings				
Scenario		Scenario	Record	
		1	1-2	
		2	3-16	
		3	17-30	
<b>IMU set</b>	2 and 3			
<b>Number</b>	30			
<b>Length</b>	120 sec. per recording			
<b>Video</b>	<input checked="" type="checkbox"/> yes – all 30 recordings <input type="checkbox"/> no			
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 12 pictures: before recording</li> <li>- 0 pictures: during recording</li> <li>- 6 pictures: after recording</li> </ul> <input type="checkbox"/> no			
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- Before recording 3 marker loose but not lost: left heel (LHEE)</li> <li>- Recording 9 marker lost: left wrist (LWRB) → recording deleted and new recording</li> <li>- Recording 21 - lost connection to the IMU</li> <li>- Recording 21 take 2 and take 3 are alright → 31 recording available</li> <li>- Recording 30 without video</li> </ul> <input type="checkbox"/> no			
<b>Remarks</b>	<ul style="list-style-type: none"> <li>- After recording 2, 4 more velcros at the front of the hips</li> <li>- Recording 4 and 5 are labeled as take 2 in the video, although there are no second recordings</li> </ul>			



Subject 10				
Overview of the session				
Time	13:50 – 16:50			
Room temperature	At 13:50 – 26.5 °C At 16:50 – 27.7 °C			
Size of the Suit / Shoes				
Top	M			
Trousers	S			
Shoes	43 (EU/DE)			
Pictures of marker position and IMU position				
	Front	Back	Side left	Side right
<u>before</u> the session				
<u>after</u> the session				

Use of velcro				
	Knee	Elbow	Waistband front	Waistband back
<b>Velcro used?</b>	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (10 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (3 pieces) <input type="checkbox"/> no
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no			
Recordings				
<b>Scenario</b>		Scenario	Record	
		1	1-2	
		2	3-16	
		3	17-30	
<b>IMU set</b>	2 and 3			
<b>Number</b>	30			
<b>Length</b>	120 sec. per recording			
<b>Video</b>	<input checked="" type="checkbox"/> yes – all 30 recordings <input type="checkbox"/> no			
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 5 pictures: before recording</li> <li>- 0 pictures: during recording</li> <li>- 5 pictures: after recording</li> </ul> <input type="checkbox"/> no			
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- Before recording 3 connection problems with IMUs</li> <li>- During recording 11 marker lost: left finger (LFIN) → recording continued</li> <li>- Recording 24 connection problems with IMUs → from recording 24 to 30 no IMU recordings from set 2</li> <li>- During recording 30 marker lost: left finger (LFIN) → recording continued</li> </ul> <input type="checkbox"/> no			
<b>Remarks</b>	- Break after recording 16			

**Date 04.08.2019**

Time	07:30 – 17:30
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**Subject 11**

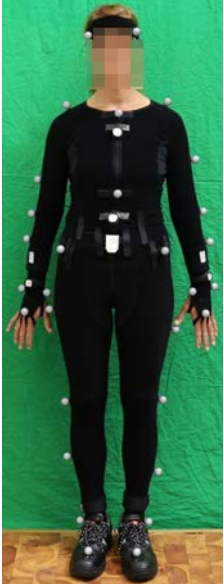
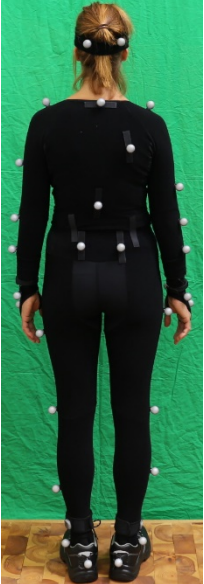



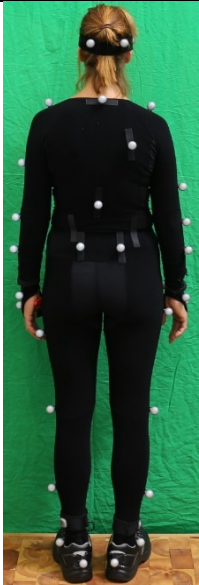


**Overview of the session**

Time	09:30 – 12:00
Room temperature	At 09:30 – 24.4 °C At 12:00 – 27.0 °C

**Size of the Suit / Shoes**

Top	S
Trousers	S
Shoes	41 (EU/DE)

**Pictures of marker position and IMU position**

	Front	Back	Side left	Side right
<b>before the session</b>				
<b>after the session</b>				

Use of velcro				
	Knee	Elbow	Waistband front	Waistband back
<b>Velcro used?</b>	<input checked="" type="checkbox"/> yes (0 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (0 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (12 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no			
Recordings				
<b>Scenario</b>		Scenario	Record	
		1	1-2	
		2	3-16	
		3	17-30	
<b>IMU set</b>	2 and 3			
<b>Number</b>	30			
<b>Length</b>	120 sec. per recording			
<b>Video</b>	<input checked="" type="checkbox"/> yes – all 30 recordings <input type="checkbox"/> no			
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 12 pictures: before recording</li> <li>- 0 pictures: during recording</li> <li>- 5 pictures: after recording</li> </ul> <input type="checkbox"/> no			
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- After recording 21 connection problems with IMUs</li> <li>- After the recording 27 it was noticed that the marker of the left finger (LFIN) slipped. When exactly it happened is unclear.</li> <li>- After the recording 30 it was noticed that the marker of the right ankle (RANK) was lost. When exactly it happened is unclear.</li> </ul> <input type="checkbox"/> no			
<b>Remarks</b>	<ul style="list-style-type: none"> <li>- Between recording 16 and recording 17 one break due to recording by a student (for the thesis)</li> </ul>			



**Subject 12**






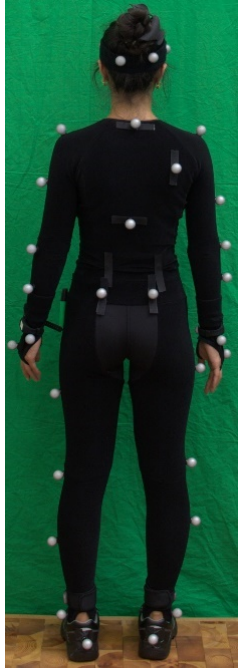


**Overview of the session**

Time	14:50 – 17:10
Room temperature	At 14:50 – 29.5 °C At 17:10 – 30.5 °C

**Size of the Suit / Shoes**

Top	XS
Trousers	XS
Shoes	37 (EU/DE)

**Pictures of marker position and IMU position**

	Front	Back	Side left	Side right
<b>before the session</b>				
<b>after the session</b>				

Use of velcro				
	Knee	Elbow	Waistband front	Waistband back
<b>Velcro used?</b>	<input checked="" type="checkbox"/> yes (0 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (10 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no			
Recordings				
<b>Scenario</b>	Scenario		Record	
	1		1-2	
	2		3-16	
	3		17-30	
<b>IMU set</b>	2 and 3			
<b>Number</b>	30			
<b>Length</b>	120 sec. per recording			
<b>Video</b>	<input checked="" type="checkbox"/> yes – all 30 recordings <input type="checkbox"/> no			
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 5 pictures: before recording</li> <li>- 116 pictures: during recording</li> <li>- 5 pictures: after recording</li> </ul> <input type="checkbox"/> no			
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- After recording 17 Nexus crashed → reboot</li> </ul> <input type="checkbox"/> no			
<b>Remarks</b>	<ul style="list-style-type: none"> <li>- System was recalibrated before recording (due to noise)</li> <li>- The headband was removed several times during the recording</li> </ul>			

**Date 05.08.2019**

Time	07:30 – 16:30
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**Subject 13**


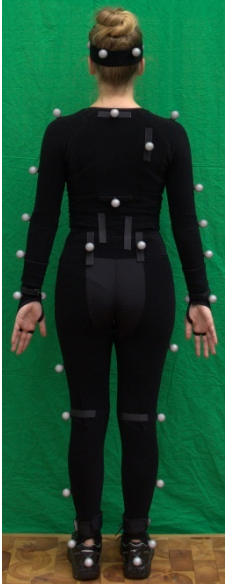



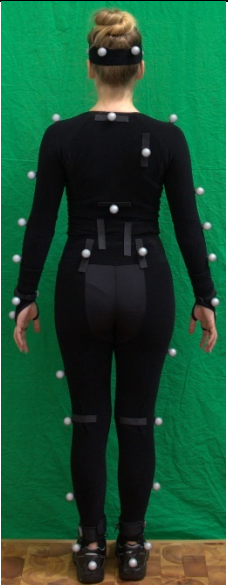


**Overview of the session**

Time	09:30 – 11:45
Room temperature	At 09:30 – 26.4 °C At 11:45 – 28.7 °C

**Size of the Suit / Shoes**

Top	XS
Trousers	XS
Shoes	38 (EU/DE)

**Pictures of marker position and IMU position**

	Front	Back	Side left	Side right
<b>before the session</b>				
<b>after the session</b>				



Use of velcro				
	Knee	Elbow	Waistband front	Waistband back
<b>Velcro used?</b>	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (10 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no			
Recordings				
<b>Scenario</b>		Scenario	Record	
		1	1-2	
		2	3-16	
		3	17-30	
<b>IMU set</b>	2 and 3			
<b>Number</b>	30			
<b>Length</b>	120 sec. per recording			
<b>Video</b>	<input checked="" type="checkbox"/> yes – all 30 recordings <input type="checkbox"/> no			
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 5 pictures: before recording</li> <li>- 120 pictures: during recording</li> <li>- 8 pictures: after recording</li> </ul> <input type="checkbox"/> no			
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- Recording 12 interrupted and repeated for video recording</li> <li>- After the last recording 30 it was noticed that: <ul style="list-style-type: none"> <li>o Marker slipped: right hand (RFIN)</li> <li>o Marker lost: left wrist inside (LWRA)</li> <li>o The lost marker (LWRA) was noticed on the left side of the rib cage</li> </ul> </li> </ul> <p>When exactly it happened is unclear.</p> <input type="checkbox"/> no			
<b>Remarks</b>				

**Subject 14**





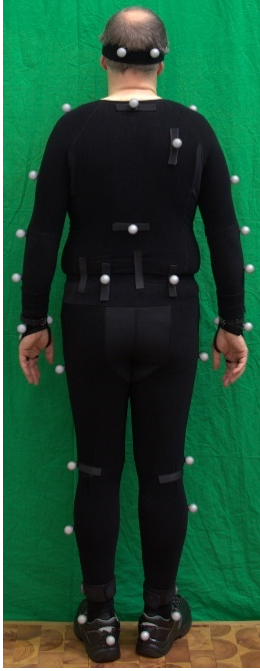


**Overview of the session**

<b>Time</b>	14:20 – 16:10
<b>Room temperature</b>	At 14:20 – 29.1 °C At 16:10 – 30.5 °C

**Size of the Suit / Shoes**

<b>Top</b>	S
<b>Trousers</b>	S
<b>Shoes</b>	43 (EU/DE)

**Pictures of marker position and IMU position**

	Front	Back	Side left	Side right
<b>before the session</b>				
<b>after the session</b>				

Use of velcro				
	Knee	Elbow	Waistband front	Waistband back
<b>Velcro used?</b>	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (10 pieces) <input type="checkbox"/> no	<input checked="" type="checkbox"/> yes (2 pieces) <input type="checkbox"/> no
<b>More velcro?</b>	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no			
Recordings				
<b>Scenario</b>	Scenario		Record	
	1		1-2	
	2		3-16	
	3		17-30	
<b>IMU set</b>	2 and 3			
<b>Number</b>	30			
<b>Length</b>	120 sec. per recording			
<b>Video</b>	<input checked="" type="checkbox"/> yes – all 30 recordings <input type="checkbox"/> no			
<b>Pictures available</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- 5 pictures: before recording</li> <li>- 96 pictures: during recording</li> <li>- 7 pictures: after recording</li> </ul> <input type="checkbox"/> no			
<b>Incident</b>	<input checked="" type="checkbox"/> yes <ul style="list-style-type: none"> <li>- After recording 15 it was noticed that the marker of the right forearm (RFRA) sticks to the leg. When exactly it happened is unclear.</li> <li>- After recording 17 Nexus crashed → reboot</li> </ul> <input type="checkbox"/> no			
<b>Remarks</b>				