

Monday, July 7							
Time Slot	Event Type	Details					
13:00 -16:00	Registration						
15:30-17:00	Welcome Reception	Gathering, drink and snack, going to Heinerfest together					
Tuesday, July 8							
Time Slot	Event Type	Details					
8:30-9:30	Registration	Gathering, coffee and registration					
9:30-10:00	Conference Opening	Welcome, short talk and introduction					
10:00-11:00	Plenary Talk 1	Daniel Ferris, University of Florida			Robotic exoskeletons, bionic prostheses, and immersive virtual reality as tools to better understand brain and body connections		
11:00-11:30	Coffee Break						
11:30-13:00	Oral Session 1 Chair: David Remy	Time	Title	Authors			
		11:30 -11:43	Decoding the Interplay Between Central and Peripheral Control for Versatile Locomotor Repertoire in Centipedes	Kotaro Yasui, Emily M. Standen, Takeshi Kano, Hitoshi Aonuma, Akio Ishiguro			
		11:43 - 11:56	How Leg Stiffness Affects Energy Economy in Hopping	Iskandar Khemakhem, Dominik Tschernemjak, Maximilian Raff, David Remy			
		11:56 -12:09	Cortical Activity as a Marker for User Preference in Exoskeleton Personalization	Morteza Khosrotabar, Asghar Mahmoudi, André Seyfarth, Maziar Sharbafi			
		12:09 - 12:22	Role of stretch feedback when swimming inside a vortex street	Alexandros Anastasiadis, Astha Gupta, Karen Mulleners, Auke Ijspeert			
		12:22 -12:35	The Role of Trunk Mechanics in Uphill and Downhill Walking: A Simulation and Experimental Study	Vahid Firouzi, Johanna Vilemeyer, Oskar Stryk, Roy Müller			
		12:35 - 12:48	The Influence of Wing and Tail Morphology on the Aerodynamics of Gliding Mammals	Liming Zheng, Baihui Chen, Alexander van Zuijlen, Salua Hamaza			
		12:48 -13:00	Integrating simulated muscle reflexes with volitional inputs to enhance lower-limb EMG-control	Matthias Voß, Philipp, Beckerle			
13:00-14:00	Lunch Break						
14:00-14:30	Keynote Speaker 1	Klaus Gramann, TU Berlin			Imaging the Human Brain in Real and Virtual Worlds		
14:30-15:00	Keynote Speaker 2	Madhusudhan Venkadesan, Yale University			The human foot		
15:00-15:40	Panel Discussions	Daniel Ferris, Klaus Gramann, Madhusudhan Venkadesan, Emily Standen, Gregory Sawicki					
15:40-16:00	Coffee Break						
16:00-18:00	Workshops 1 Workshop 3	MoBI - Mobile Brain and Body Imaging (room 164) Bioinspired Actuators (Auditorium)					
Wednesday, July 9							
Time Slot	Event Type	Details					
8:30-9:30	Plenary Talk 2	Helen Huang, UNC			Towards Human-Prosthesis Symbiosis		
9:30-10:10	Poster Pitch	Order from 1 to 27 (60 sec each)					
10:10-10:30	Coffee Break						
10:30-12:00	Oral Session 2 Chair: Martin Grimmer	Time	Title	Authors			
		10:30 -10:43	Rapid Human-in-the-Loop Optimization for Hip Exoskeleton Assistance During Walking: An EMG-based Approach	Guoping Zhao, Martin Grimmer, Xingsong Wang, André Seyfarth			
		10:43 - 10:56	Natural Human Biomechanical Adaptation Behavior during the Active Ankle Exoskeleton-Assisted Locomotion	Peter Seungjune Lee, Katja Mombaur			
		10:56 -11:09	Passive exoskeletons may simultaneously augment stability, agility and efficiency of cyclic movement	Laksh Kumar Punith, Gregory S. Sawicki			
		11:09 - 11:22	Concerted Control Framework for Gait Generation Across Models of Varying Complexity	Omid Mohseni, Vahid Firouzi, André Seyfarth, Maziar Sharbafi			
		11:22 -11:35	Validating Predictive Simulations for Wearable Assistive Device Optimization: A Case Study on a Passive Biarticular Exosuit	Asghar Mahmoudi, Vahid Firouzi, Stephan Rinderknecht, Maziar Sharbafi			
		11:35 - 11:48	Enhancing Preferred Walking and Transition Speeds With an Active Biarticular Soft Exosuit	Arjang Ahmadi, Vahid Firouzi, Dennis Haufe, André Seyfarth, Maziar Sharbafi			
		11:48 -12:00	Partial Gait and Balance Assistance via a 3D Path Controller	Zeynep Özge Orhan, Auke Ijspeert, Mohamed Bouri			
		12:00-13:30	Lunch Break				
		13:30-14:00	Keynote Speaker 3	Poramate Manoonpong	VISTEC, Thailand, SDU Denmark	Bio-inspired Neural Control with Online Adaptation for Personalized Locomotion Assistance of Interactive Exoskeletons	
		14:00-14:30	Keynote Speaker 4	Jan Veneman	Hocoma	Applying Robotics to Rehabilitate and Support Human Mobility	
		14:30-15:10	Panel Discussions	Helen Huang, Poramate Manoonpong, Jan Veneman, David Remy, Herta Flor			
		15:10-15:30	Coffee Break				
		15:30-17:30	Workshop 4, Workshop 5, Tutorial 1	Central vs. Distributed Movement Control (Auditorium) LokoAssist (room 15) MPC in Robotics (room 164)			
		16:30-18:30	Poster Section	Poster ID	Title	Authors	
				1	Is the Muscle Spindle a Length Sensor? A Model of Extrafusal Muscle Length Control Based on Intrafusal Muscle Force	Yoichi Masuda, Masahiro Ishikane, Masato Ishikawa	
				2	Active Gait Rehabilitation using Inverse Reinforcement Learning	Zongwei Zhang, Michael Drolet, Firas Al-Hafez, Sebastian Hirt, Jan Peters	
				3	Magnetic Field-Based Foot Sensor for Legged Robots	Worasuchad Haomachai, Poramate Manoonpong	
4	Magnetically Controlled 3D-Printed Structures for Soft Robotics and Biomedical Applications			Muhammad Bilal Khan, Kilian Schäfer, Denys Makarov, and Oliver Gutfleisch			
5	Real-Time Gait Phase Estimation Based on Textile Integrated Ferroelectrets and Adaptive Oscillators			Julian Seiler, Mark Suppelt, Ruth Wilhelm, Philipp Beckerle, Mario Kupnik			
6	Perturbation Recovery in Human Hopping			Aida Mohammadi Nejad Rashly			
7	Walking in Virtual Reality - How the Attendance of an Avatar and the Feeling of Embodiment Influence Human Gait			Gregor Schwinn, Maximilian Alexander Stasica, André Seyfarth			
8	Co-contraction Share Analyses to Understand Human Reaction to Lateral Angular Perturbation during Walking			Srnjila Stokanović, Omid Mohseni, Maziar Sharbafi, André Seyfarth, Heike Valley, Nadica Mijlković			
9	Joint Kinematics as Predictors of Metabolic Response to Passive Exosuits			Vahid Firouzi, Oskar Stryk, Maziar Ahmad Sharbafi			
10	An approach for reconstructing dinosaur locomotion using physical skeletal platforms			Kazuki Ito, Kaito Kimura, Kentaro Chiba, Tsukasa Okoshi, Yasuhiro Sugimoto, Damdinsuren Idersaikhan, Tetsuya Kinugasa, Koichi Osuka			
11	Combined Learning of Exoskeleton Mid-level Assistance Profiles and Low-level Control Parameters			Sebastian Hirt, Mustafa Kamal, Maziar Sharbafi, Michael Drolet, Rolf Findeisen			
12	Unraveling Robust Locomotion: How Monoarticular and Biarticular Muscle Enhance Perturbation Recovery in Robotic Hopping			Marc Murcia i Matute, Maziar Sharbafi, Omid Mohseni, André Seyfarth, Gregory S. Sawicki			
13	Parametric study for continuous quasi-passive walking of a musculoskeletal humanoid robot with anatomy trains			Hiroki Nishii, Hisashi Ishihara, Yusuke Tsunoda, Teruyo Wada, Koichi Osuka			
14	The Relationship of Psychological and Behavioural Factors and Prosthesis Satisfaction in Daily Life: A Pilot Case Study			Zahra Abbasi, Angela Serian, Maren Prignitz, Frauke Nees, Herta Flor			
15	The Unique Ankle Articulation of Avimimus: Examining Its Potential Existence Through Robotic Modeling			Tetsuya Kinugasa, Hikaru Nakamura, Kentaro Chiba, Tsukasa Okoshi, Ryota Hayashi, Koji Yoshida, Buuvei Mainbayar, Khishigjav Tsogtbaatar			
16	Learning Robot Locomotion from Diverse Datasets			Lu Liu, Michael Drolet, Oleg Arenz, Jan Peters			
17	Muscle Activity Characteristics Between Correct and Incorrect Bodyweight-Squats			Dennis Haufe, Arjang Ahmadi, Sebastian Dill, Daniel Fener, Martin Grimmer, Luise Herrmann, Yanhua Zhao, Andre Seyfarth, Christoph Hoog Antink, and Maziar Ahmad Sharbafi			
18	Body Schema Integration and Emotions: The Effect of Valence and Emotional Arousal on the Body Schema Integration Process			Otilia Pasnicu, Sushian Alpanahifard			
19	Assessment of Perceived-Embodiment of Prostheses using Virtual Limbs: A Study Protocol			Jennifer Raynaud, Herta Flor, Kornelius Kammler-Suecker, Julian Seiler, Mario Kupnik			
20	On the Importance of Muscle Activity for an Exoskeleton to Rehabilitate Temporomandibular Disorders			Paul-Otto Müller, Oskar Stryk			
21	Techniques and Compensatory Strategies of Prosthetic Users			Diana Cervera, André Seyfarth			
22	Simulating locomotion under anatomical and mechanical constrains			Omer Yuval, Avi Amir, Elad Ozeri, Lena Lilit, Amir Ayali			
23	Functional Electrical Stimulation in Adults with Neurological Impairments – short- vs. long-term effects			Niklas Bleichner			
24	A Hydraulic Powered Ankle-Foot Prosthesis with Adjustable Nonlinear Stiffness			Bowen Li, Yulong Xiong, Qitao Huang			
25	Strategies and Compensatory Movements of Athletes with Disabilities			Diana Cervera, Tobias Welchar			
26	Development of Deep Biomimetic Quadruped Robot with Bow-string Structure in Cursorial Mammals		Akira Fukuhara, Megu Gunji, Yoichi Masuda, Yasuji Harada, Akio Ishiguro, Koichi Suzumori				
Robot Zoo	Title		Short description	Presenter Names			
	3D-Printed Magnetic Butterflies		Magnetic butterfly wings with adaptive bending under magnetic fields	M. B. Khan et al.			
	EPA Walker Balance		Bipedal robot with PAMs and gyroscope to study standing balance under perturbations	Marc Murcia, Jitong Yang, M. A. Sharbafi			
	Redundant PAM Mono-leg		Mono-legged PAM robot replicating human leg with biarticular actuation	Yelin Jiang, M. A. Sharbafi, R. Findeisen			
	Biomimetic Quadruped		Flexible trunk quadruped robot with bow-string structure for mammal-like motion	Akira Fukuhara et al.			
	Bio-inspired Open Knee Joint		Robot knee joint mimicking ligaments and 3D motion with spherical surface contact and tendon-driven actuation	Shinsuke Nakashima, Yilun Sun, Julius Ambros, Christoph Rehekampff, Qi An, Atsushi Yamashita, Tim C. Lueth			
	Powered Ankle-Foot Prosthesis		A Hydraulic Powered Ankle-Foot Prosthesis with Adjustable Nonlinear Stiffness	Bowen Li, Yulong Xiong, Qitao Huang			
	BATEX: A Soft Biarticular Exosuit		BATEX: A Soft Biarticular Exosuit for Hip and Knee Joint Assistance	Arjang Ahmadi, Vahid Firouzi, Dennis Haufe, Andre Seyfarth, Maziar Ahmad Sharbafi			
18:30 - 19:00	Travel to the banquet location						
19:00 - 22:00	Banquet						
Thursday, July 10							
Time Slot	Event Type	Details					
8:30-9:30	Plenary Talk 3	Thorsten Zander, BTU			What Is Neuroadaptive AI and Why Will It Change Much More Than You Think?		
9:30-10:10	Poster Pitch	Order from 1 to 26 (60 sec each)					
10:10-10:30	Coffee Break						
10:30-12:00	Oral Session 3 Chair: Guoping Zhao	Time	Title	Authors			
		10:30 -10:43	Learning Robot Locomotion for Multiple Embodiments	Nico Bohlinger, Grzegorz Czechmanowski, Maciej Piotr Krupka, Piotr Kicki, Krzysztof Walas, Jan Peters, Davide Tateo			
		10:43 - 10:56	Ground Reaction Force-based Joint Stiffness Modulation for Generating 3D Bipedal Walking	Shunsuke Koseki, Omid Mohseni, Mitsuihiro Hayashibe, Maziar Sharbafi, André Seyfarth, Dai Owaki			
		10:56 -11:09	Neural mechanisms of intersegmental coordination: CPGs, sensory feedback, and mechanical coupling in the spinal-transected Anguilla rostrata	J. Hainer, K. Lutek, E. M. Standen			
		11:09 - 11:22	Optimizing Human Gait by Reducing Metabolic Cost with Imitation Learning	Nadine Drawing, Firas Al-Hafez, Maziar Sharbafi, André Seyfarth			
		11:22 -11:35	Learning from Bees: Transferring Navigation Behavior in Animals to Robot Control	Abhi Veda, Matthew Garratt, Mandyam Srinivasan, Sridhar Ravi			
		11:35 - 11:48	Silkmoth-inspired Adaptive Sensing Control for Odor Source Localization of Walking Robots	Jettanan Homchanthanakul, Shunsuke Shigaki, Poramate Manoonpong			
		11:48 -12:00	A Framework for Online Human-Exoskeleton Activity Classification and Gait-Lab Control: Towards Automated Gait Rehabilitation	Natchaya Sricom, Matas Manawakul, Run Janna, Kanut Tarapongnivat, Sanpoom Punapanont, Chaicham Akkawutvanich, Poramate Manoonpong			
12:00 - 13:30	Lunch Break						
13:30 - 14:00	Keynote Speaker 5	Sangbae Kim, MIT			Physical intelligence and Cognitive Biases Toward AI		
14:00-14:30	Keynote Speaker 6	Katja Mombaur, KIT & University of Waterloo, Canada			Endowing humanoid robots with embodied intelligence: the roles of bio-inspiration, optimization and learning		
14:30 - 15:10	Panel Discussions:	Thorsten Zander, Sangbae Kim, Katja Mombaur, Auke Ijspeert, Oskar vonStryk					
15:10-15:30	Coffee Break						
15:30-17:30	Workshop 2, Workshop 6, Tutorial 2	Whitebox (room 15), Movement Academy (room 164), LocoMujocoCo (room 204)					
16:30 - 18:30	Poster Section	Poster ID	Title	Authors			
		1	Exploring the Feldenkrais Method® as a Tool to Improve the Human Movement Quality	Eisa Alokia, Roger Russell, Andr’e Seyfarth, Maziar Ahmad Sharbafi			
		2	Neural Control for Soft Robot Terrestrial-Aquatic Locomotion	Naris Asawaletsak, Poramate Manoonpong			
		3	Kinematic alterations for users of lower-limb prosthetics during vertical ground perturbations	Christine Burgard, Maximilian Stasica, André Seyfarth			
		4	Agency in Continuous Control	Kai Streiling, Viktoria Penaz, Loes C.J. van Dam			
		5	Analysis of Body Parameters' Effects on Various Gaits in Locusts	Yasuhiro Sugimoto, Jun Fukui, Keisuke Naniwa, Daisuke Nakanishi, Koichi Osuka			
		6	Adaptive behavior to sensory organ defect in an insect analyzed by a constructive approach	Shunsuke Shigaki, Keisuke Yokota, Ryoko Sekiwa, Dai Owaki			
		7	Analysis of Inter-leg Coordination Mechanisms in Cricket gait: Insights from Thoracic Ganglion Network Transection	Yasuhiro Sugimoto, Hiromi Togawa, Keisuke Naniwa, Daisuke Nakanishi, Koichi Osuka			
		8	Aminergic control of decision to fight or flee in the trap-jaw ants	Hitoshi Aonuma, Takuto Kikuchi, Kanna Matsumoto			
		9	Experimental verification of scalable sheepdog-type swarm robot navigation using farthest-agent targeting control	Yusuke Tsunoda, Naoki Korekawa, Natsuki Kawaguchi, Takao Sato			
		10	Neural Hebbain plastic control network for adaptive locomotion	Worasuchad Haomachai, Rujikorn Charakorn, Poramate Manoonpong			
		11	Decentralized Intra-Limb Coordination Mechanisms Toward Whole-Body Coordinated Quadruped Locomotion	Seokhyun Kim, Goku Sawada, Satoshi Maeda, Shoel Hattori, Shura Suzuki, Kotaro Yasui, Akio Ishiguro			
		12	Decentralized Control Mechanism for Adaptive Locomotion in Centipedes: Transition Between Walking and Peristalsis	Daisuke Akai, Yusei Sugiyama, Kotaro Yasui, Akio Ishiguro			
		13	Improving Locomotion Learning Efficiency of CPG-RBF networks Under Morphological Damage With Multiple Value Functions	Chayapol Hansanelak, Rujikorn Charakorn, Worasuchad Haomachai, Poramate Manoonpong			
		14	Deep Biomimetic Printing/Using Fiber Embedding and Sponge Ossification	Ayano Michikawa, Siyuan Tao, Yoichi Masuda, Megu Gunji, Akira Fukuhara, Hiroyuki Nabae, Yasuji Harada, Koichi Suzumori			
		15	Walk-Trot-Gallop Transition with Spinal Flexion in a Quadruped Model	Shura Suzuki, Goku Sawada, Kotaro Yasui, Akira Fukuhara, Akio Ishiguro			
		16	Decentralized Control for Morphology-Adaptive Gait Generation in Sprawling Quadruped Locomotion	Shura Suzuki, Satoshi Maeda, Kotaro Yasui, Akio Ishiguro			
		17	Simple Cellular Automaton Model for Understanding Caterpillar Swarm Locomotion	Shura Suzuki, Keisuke Naniwa, Masato Ishikawa, Akio Ishiguro			
		18	Dynamics of exploratory movement: The case of Braille reading	Tetsushi Nonaka			
		19	Automated Evaluation of Anisotropic Friction Pads	Anastázíe Rišková, Jiří Kubík, Jan Faigl			
		20	Inchworm-like Robot Locomotion using Off-the-Shelf 3D-printable Anisotropic Friction Pads	Jiří Kubík, Anastázíe Rišková, Jan Faigl			
		21	Flapping Propulsion Dynamics: Influence of Motion Composition on Thrust and Efficiency	Bluest Lan			
		22	Aerodynamic Tails for Stability and Control of Dynamic Tetrapedal Locomotion	Ardian Jusufi, Robert Baines, Marco Hutter, Yuntao Ma, ziyou wu, Felix Wingham			
		23	Head control of a 3DoF robot arm using Visual-SLAM and IMU inspired by head-bobbing in birds	Kiyofumi FUJINO, Ryuma Niiyama			
		24	Hind-leg autotomy alters aggressive behavior in the cricket Gryllus bimaculatus	Akihisa MURATA, Hitoshi AONUMA			
		25	On the Role of Hierarchies, Abstractions, and Representations of Dynamics in Animal and Machine Learning	Steve Heim			
		26	Data-Driven Inverse Reinforcement Learning Reproduces Tactile-Responsive Gait Flexibility in Stick Insects	Yuchen Wang, Mitsuihiro Hayashibe, Dai Owaki			
	Robot Zoo	Title	Short description	Presenter Names			
		Human-like EcoWalker-3	Bipedal robot mimicking leg mechanics with passive unlocking mechanisms	Bernadett Kiss, A. Buchmann, D. Renjewski, A. Badri-Sprowitz			
		Inchworm Robot with Friction Pads	Tethered inchworm-like robot with 3D-printed anisotropic friction pads	Jiří Kubík, Anastázíe Rišková			
		Dinosaur Hindlimb Robot	Reconstruction of dinosaur hindlimb with pneumatic muscles to achieve stance	Kazuki Ito et al.			
		1-DOF Knee Exoskeleton	Knee exoskeleton with PAM and EEG for user evaluation study	Morteza Khosrotabar, M. A. Sharbafi			
		Modular Robot Snail	Modular soft robot with snail-like muscle-inspired motion using vacuum actuators	S. P. M. Babu et al.			
		Crawling with a Soft Skin	Untethered soft snake robot using kirigami scales and tendon actuation for rectilinear crawling	Aida Parvaresh, Burcu Seyidoğlu, Ali Sahafi, Ahmad Rafsanjani			
		BERT Quadrupeds	Elastic quadruped robots exploring locomotion via passive dynamics and RL	Davide Calzolari et al.			
Friday, July 11							
Time Slot	Event Type	Details					
8:30-9:30	Plenary Talk 4	Rebecca Kramer Bottiglio, Yale University			Soft robots that adapt to changing tasks and environments		
9:30-10:10	Closing ceremony	Including the introduction of the next AMAM					
10:10-10:30	Coffee Break						
10:30-12:00	Oral Session 4 Chair: Akio Ishiguro	Time	Title	Authors			
		10:30 - 10:43	Adaptive Learning Control for Soft Robotic Fish: Enhancing Body-Caudal Undulation under Dynamic Flow Conditions	Fabian Schwab, Federico Allione, Bingcheng Wang, Mohamed El Arayshi, Claudio Mucignat , Ivan Lunati , Cristiano M. Verrelli , Ardian Jusufi			
		10:43 - 10:56	Inside the snake's head: a bio-robotic study of the stability of slender swimmers on the water surface	Johann Herault, Max Rocuzzo			
		10:56 - 11:09	Robotic Study on the Control and Power Consumption of Bout and Glide Swimming	Xiangxiao Liu, François A. Longchamp, Luca Zunino, Selina I. Bothner, Lisa R. Schneider, André Guignard, Alessandro Crespi, Guillaume Bellegarda, Alexandre Bernardino, Eva A. Naumann, Auke Ijspeert			
		11:09 - 11:22	The Sensitivity of Muscle Activity to Magnitude, Duration and Timing of Small Plantarflexion Torque Pulses During Walking.	Zahra S. Mahdian, Mhairi K. MacLean			
		11:22 -11:35	Adaptive crawling with a soft skin	Aida Parvaresh, Burcu Seyidoglu, Ali Sahafi, Ahmad Rafsanjani			
		11:35 - 11:48	Emergent dynamics of a self-excited, insect-inspired, flapping robot in forward flight conditions	Ellen Liu, Ethan Wold, Rundong Yang, Simona Ivanov, Nicholas Gravish, Simon Sponberg			
		11:48 - 12:00	Simulating the locomotion of walking fish	Michael Ishida, Narges Khadem Hosseini, Valentina Di Santo, Neil Shubin, Fumiya Iida			
12:00-13:00	Lunch Break						
13:00-13:30	Keynote Speaker 7	Oliver Brock, TU Berlin			Is Dexterous Manipulation in Robots Converging Towards How Humans Do It?		
13:30-14:00	Keynote Speaker 8	Koh Hosoda, Kyoto University			Quadruped Robots driven by Pneumatic Artificial Muscles		
14:00-14:40	Panel Discussions	Rebecca Kramer Bottiglio, Oliver Brock, Koh Hosoda, Hitoshi Aunoma, Ardian Jusufi					
14:40-15:00	Coffee Break						
15:00-16:00	Oral Session 5 Chair: Dai Owaki	Time	Title	Author			
		15:00 - 15:12	Improvement of Phototactic Performance of Underwater Modular Robots through Stroke Synchronization	Kohei Nishikawa, Jumpei Yamaguchi, Hayato Dan, Daisuke Kurabayashi			
		15:12 - 15:24	A measurement concept to collect running data in the real world	Daniel Fener, Diana Cervera, André Seyfarth, Maximilian Stasica			
		15:24-15:36	Bio-inspired Open Ball Joint with Intra-Articular Force Sensors	Shinsuke Nakashima, Yilun Sun, Qi An, Atsushi Yamashita, Tim C. Lueth			
		15:36 - 15:48	How does the shape of the self-propelled particle affect its motion?	Yuki Koyano			
		15:48 - 16:00	A Snail Inspired Modular Soft Robot	Saravana Prashanth Murali Babu, Cao Danh Do, Alessio Mondini, Barbara Mazzolai			
16:00-17:00	Farewell and Award	Closing remarks, Best paper award, snack and drink					