

2012 IEEE International Conference on Robotics and Automation

(ICRA 2012)

**St. Paul, Minnesota, USA
14 – 18 May 2012**

Pages 1-798



**IEEE Catalog Number: CFP12RAA-PRT
ISBN: 978-1-4673-1403-9**

Content List of 2012 IEEE International Conference on Robotics and Automation

Technical Program for Tuesday May 15, 2012

TuA01	Meeting Room 1 (Mini-sota)
Estimation and Control for UAVs (Regular Session)	
Chair: Spletzer, John	Lehigh Univ.
Co-Chair: Robuffo Giordano, Paolo	Max Planck Inst. for Biological Cybernetics
08:30-08:45	TuA01.1
<i>State Estimation for Aggressive Flight in GPS-Denied Environments Using Onboard Sensing</i> , pp. 1-8.	
Bry, Adam	Massachusetts Inst. of Tech.
Bachrach, Abraham	Massachusetts Inst. of Tech.
Roy, Nicholas	Massachusetts Inst. of Tech.
08:45-09:00	TuA01.2
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Shen, Shaojie	Univ. of Pennsylvania
Michael, Nathan	Univ. of Pennsylvania
Kumar, Vijay	Univ. of Pennsylvania
09:00-09:15	TuA01.3
<i>Wind Field Estimation for Autonomous Dynamic Soaring</i> , pp. 16-22.	
Langelaan, Jack W.	Penn State Univ.
Spletzer, John	Lehigh Univ.
Montella, Corey	Lehigh Univ.
Grenestedt, Joachim	Lehigh Univ.
09:15-09:30	TuA01.4
<i>Decentralized Formation Control with Variable Shapes for Aerial Robots</i> , pp. 23-30. Attachment	
Turpin, Matthew	Univ. of Pennsylvania
Michael, Nathan	Univ. of Pennsylvania
Kumar, Vijay	Univ. of Pennsylvania
09:30-09:45	TuA01.5
<i>Versatile Distributed Pose Estimation and Sensor Self-Calibration for an Autonomous MAV</i> , pp. 31-38. Attachment	
Weiss, Stephan	ETH Zurich
Achtelik, Markus W.	ETH Zurich, Autonomous Systems Lab.
Chli, Margarita	ETH Zurich
Sieglwart, Roland	ETH Zurich
09:45-10:00	TuA01.6
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Mueller, Joerg	Univ. of Freiburg
Paul, Oliver	Univ. of Freiburg
Burgard, Wolfram	Univ. of Freiburg
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Bipedal Robot Control (Regular Session)	
Chair: Grizzle, J.W	Univ. of Michigan
Co-Chair: Roh, Kyungshik	Samsung Electronics Co., Ltd
08:30-08:45	TuA02.1
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Attachment	
Park, Hae Won	Univ. of Michigan
Sreenath, Koushil	Univ. of Michigan
Ramezani, Alireza	Univ. of Michigan
Grizzle, J.W	Univ. of Michigan
08:45-09:00	TuA02.2

Design and Experimental Implementation of a Compliant Hybrid Zero Dynamics Controller with Active Force Control for Running on MABEL, pp. 51-56. [Attachment](#)

Sreenath, Koushil Univ. of Michigan
Park, Hae Won Univ. of Michigan
Grizzle, J.W Univ. of Michigan

09:00-09:15 TuA02.3

Walking Control Strategy for Biped Robots Based on Central Pattern Generator, pp. 57-62. [Attachment](#)

Liu, Chengju Tongji Univ.
Chen, Qijun Tongji Univ.

09:15-09:30 TuA02.4

On the Lyapunov Stability of Quasistatic Planar Biped Robots, pp. 63-70.

Varkonyi, Peter L. Budapest Univ. of Tech. and Ec.
Gontier, David Ec. Normale Superieure
Burdick, Joel California Inst. of Tech.

09:30-09:45 TuA02.5

Humanoid Robot Safe Fall Using Aldebaran NAO, pp. 71-78. [Attachment](#)

Yun, Seung-kook Honda Res. Inst.
Goswami, Ambarish Honda Res. Inst.

09:45-10:00 TuA02.6

Control Design to Achieve Dynamic Walking on a Bipedal Robot with Compliance, pp. 79-84. [Attachment](#)

Lim, Bokman Samsung Advanced Inst. of Tech.
Lee, Minhyung Samsung Advanced Inst. of Tech.
Kim, Joohyung Samsung Advanced Inst. of Tech.
Lee, Jusuk Samsung Advanced Inst. of Tech.
Park, Jaeho Samsung Electronics Co., Ltd
Seo, Keehong Samsung Advanced Inst. of Tech.
Roh, Kyungshik Samsung Electronics Co., Ltd

TuA03 Meeting Room 3 (Mak'to)

Learning and Adaptive Control of Robotic Systems I (Regular Session)

Chair: Burke, Michael Council for Scientific and Industrial Res.
Co-Chair: Sandini, Giulio Italian Inst. of Tech.

08:30-08:45 TuA03.1

RTMBA: A Real-Time Model-Based Reinforcement Learning Architecture for Robot Control, pp. 85-90.

Hester, Todd Univ. of Texas at Austin
Quinlan, Michael Univ. of Texas at Austin
Stone, Peter Univ. of Texas at Austin

08:45-09:00 TuA03.2

Sensorimotor Learning of Sound Localization from an Auditory Evoked Behavior, pp. 91-96.

Bernard, Mathieu Brain Vision Systems
Pirim, Patrick BVS
de Cheveigné, Alain Lab. Psychologie de la Perception (CNRS UMR 8158)
Gas, Bruno Univ. Pierre et Marie Curie

09:00-09:15 TuA03.3

Path-Following Control of a Velocity Constrained Tracked Vehicle Incorporating Adaptive Slip Estimation, pp. 97-102.

Burke, Michael Council for Scientific and Industrial Res.

09:15-09:30 TuA03.4

Direct Yaw Moment Control for Four Wheel Independent Steering and Drive Vehicles Based on Centripetal Force Detection, pp. 103-108.

Lam, Tin Lun The Chinese Univ. of Hong Kong / Shenzhen Inst. of Advan
Xu, Yangsheng Chinese Univ. of Hong Kong/Shenzhen Institute of Advanced Tech.
Qian, Huihuan CUHK

09:30-09:45 TuA03.5

Predictive Control of Chained Systems: A Necessary Condition on the Control Horizon, pp. 109-114.

Courtial, Estelle
Fruchard, Matthieu
Allibert, Guillaume

Lab. PRISME
Univ. of Orleans
I3S

09:45-10:00

TuA03.6

Xbots: An Approach to Generating and Executing Optimal Multi-Robot Plans with Cross-Schedule Dependencies, pp. 115-122.

Korsah, G. Ayorkor
Kannan, Balajee
Browning, Brett
Stentz, Anthony
Dias, M. Bernardine

Ashesi Univ. Coll.
Carnegie Mellon Univ.
Carnegie Mellon Univ.
Carnegie Mellon Univ.
Carnegie Mellon Univ.

TuA04

Meeting Room 4 (Chief Wabasha)

Underactuated Robots (Regular Session)

Chair: Hollis, Ralph
Co-Chair: Yim, Mark

Carnegie Mellon Univ.
Univ. of Pennsylvania

08:30-08:45

TuA04.1

Trajectory Generation for Underactuated Control of a Suspended Mass, pp. 123-129. [Attachment](#)

Schultz, Jarvis
Murphey, Todd

Northwestern Univ.
Northwestern Univ.

08:45-09:00

TuA04.2

Planning in High-Dimensional Shape Space for a Single-Wheeled Balancing Mobile Robot with Arms, pp. 130-135. [Attachment](#)

Nagarajan, Umashankar
Kim, Byungjun
Hollis, Ralph

Carnegie Mellon Univ.
Carnegie Mellon Univ.
Carnegie Mellon Univ.

09:00-09:15

TuA04.3

Integrated Planning and Control for Graceful Navigation of Shape-Accelerated Underactuated Balancing Mobile Robots, pp. 136-141. [Attachment](#)

Nagarajan, Umashankar
Kantor, George
Hollis, Ralph

Carnegie Mellon Univ.
Carnegie Mellon Univ.
Carnegie Mellon Univ.

09:15-09:30

TuA04.4

Differentially Flat Design of a Closed-Chain Planar Under-Actuated 2 DOF System, pp. 142-147.

Zhang, Chengkun
Franch, Jaume
Agrawal, Sunil

Univ. of Delaware
Univ. Pol. de Catalunya
Univ. of Delaware

09:30-09:45

TuA04.5

Design of Energy Efficient Walking Gaits for a Three-Link Planar Biped Walker with Two Unactuated Degrees of Freedom, pp. 148-153.

Ortiz Morales, Daniel
La Hera, Pedro

Umeå Univ.
Umeå Univ.

09:45-10:00

TuA04.6

Biped Walking Stabilization Based on Gait Analysis, pp. 154-159. [Attachment](#)

Hashimoto, Kenji
Takezaki, Yuki
Motohashi, Hiromitsu
Otani, Takuya
Kishi, Tatsuhiro
Lim, Hun-ok
Takanishi, Atsuo

Waseda Univ.
Waseda Univ.
Waseda Univ.
Waseda Univ.
Waseda Univ.
Kanagawa Univ.
Waseda Univ.

TuA05

Meeting Room 5 (Ska)

Path Planning and Navigation (Regular Session)

Chair: Chung, Wan Kyun Co-Chair: O'Kane, Jason	POSTECH Univ. of South Carolina
08:30-08:45	TuA05.1
<i>Reliable Indoor Navigation with an Unreliable Robot: Allowing Temporary Uncertainty for Maximum Mobility</i> , pp. 160-165. Lewis, Jeremy O'Kane, Jason	Univ. of South Carolina Univ. of South Carolina
08:45-09:00	TuA05.2
<i>Path Planning in Time Dependent Flow Fields Using Level Set Methods</i> , pp. 166-173. Lolla, Tapovan Ueckermann, Mattheus Percy Yigit, Konuralp Haley, Patrick Lermusiaux, Pierre F.J.	Massachusetts Inst. of Tech. MIT Massachusetts Inst. of Tech. MIT MIT
09:00-09:15	TuA05.3
<i>Provably Safe Navigation for Mobile Robots with Limited Field-Of-Views in Unknown Dynamic Environments</i> , pp. 174-179. Bouraine, Sara Fraichard, Thierry Salhi, Hassen	cdta INRIA blida
09:15-09:30	TuA05.4
<i>An Efficient Mobile Robot Path Planning Using Hierarchical Roadmap Representation in Indoor Environment</i> , pp. 180-186. Park, Byungjae Choi, Jinwoo Chung, Wan Kyun	POSTECH POSTECH POSTECH
09:30-09:45	TuA05.5
<i>3D Time-Space Path Planning Algorithm in Dynamic Environment Utilizing Arrival Time Field and Heuristically Randomized Tree</i> , pp. 187-192. Ardiyanto, Igi Miura, Jun	Toyohashi Univ. of Tech. Toyohashi Univ. of Tech.
09:45-10:00	TuA05.6
<i>High-Speed Navigation of a Uniformly Braking Mobile Robot Using Position-Velocity Configuration Space</i> , pp. 193-199. Manor, Gil Rimon, Elon	Tech. - Israel Inst. of Tech. Tech. - Israel Inst. of Tech.
TuA06	Meeting Room 6 (Oya'te)
Applied Machine Learning (Regular Session)	
Chair: Theodorou, Evangelos Co-Chair: Kaelbling, Leslie	Univ. of Southern California MIT
08:30-08:45	TuA06.1
<i>Active Learning from Demonstration for Robust Autonomous Navigation</i> , pp. 200-207. Silver, David Bagnell, James Stentz, Anthony	Carnegie Mellon Univ. Carnegie Mellon Univ. Carnegie Mellon Univ.
08:45-09:00	TuA06.2
<i>Tendon-Driven Control of Biomechanical and Robotic Systems: A Path Integral Reinforcement Learning Approach</i> , pp. 208-214. <u>Attachment</u> Rombokas, Eric Theodorou, Evangelos Malhotra, Mark Todorov, Emanuel Matsuoka, Yoky	Univ. of Washington Univ. of Southern California Univ. of Washington Univ. of Washington Univ. of Washington
09:00-09:15	TuA06.3
<i>Slip Prediction Using Hidden Markov Models: Multidimensional Sensor Data to Symbolic Temporal Pattern Learning</i> , pp. 215-222. Jamali, Nawid	Univ. of New South Wales

Sammut, Claude	The Univ. of New South Wales
09:15-09:30	TuA06.4
<i>Collision-Free State Estimation</i> , pp. 223-228.	
Wong, Lawson L.S.	MIT
Kaelbling, Leslie	MIT
Lozano-Perez, Tomas	MIT
09:30-09:45	TuA06.5
<i>Fault Detection and Isolation from Uninterpreted Data in Robotic Sensorimotor Cascades</i> , pp. 229-236.	
Censi, Andrea	California Inst. of Tech.
Hakansson, Magnus	Lund Univ.
Murray, Richard	California Inst. of Tech.
09:45-10:00	TuA06.6
<i>Describing and Classifying Spatial and Temporal Contexts with OWL DL in Ubiquitous Robotics</i> , pp. 237-244.	
Sgorbissa, Antonio	Univ. of Genova
Scalmato, Antonello	Univ. of Genoa
Zaccaria, Renato	Univ. of Genova
TuA07	Meeting Room 7 (Remnicha)
Robust and Adaptive Control of Robotic Systems (Regular Session)	
Chair: Aswani, Anil	Univ. of California at Berkeley
Co-Chair: Chung, Soon-Jo	Univ. of Illinois at Urbana-Champaign
08:30-08:45	TuA07.1
<i>A Nonlinear PI and Backstepping Based Controller for Tractor-Steerable Trailer Influenced by Slip</i> , pp. 245-252.	
Huynh, Van	Queensland Univ. of Tech.
Smith, Ryan N.	Queensland Univ. of Tech.
Kwok, Ngai Ming	Univ. of New South Wales
Katupitiya, Jayantha	The Univ. of New South Wales
08:45-09:00	TuA07.2
<i>Dual-Space Adaptive Control of Redundantly Actuated Parallel Manipulators for Extremely Fast Operations with Load Changes</i> , pp. 253-258. Attachment	
Sartori Natal, Guilherme	LIRMM, Univ. of Montpellier 2
Chemori, Ahmed	LIRMM
Pierrot, François	CNRS - LIRMM
09:00-09:15	TuA07.3
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Bocsi, Botond	Babes Bolyai Univ.
Hennig, Philipp	MPI Intelligent Systems
Csató, Lehel	Babes Bolyai Univ.
Peters, Jan	Tech. Univ. Darmstadt
09:15-09:30	TuA07.4
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Li, Xiang	Nanyang Tech. Univ.
Cheah, C. C.	Nanyang Tech. Univ.
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<i>Predictive Gaze Stabilization During Periodic Locomotion Based on Adaptive Frequency Oscillators</i> , pp. 271-278. Attachment	
Gay, Sébastien	EPFL Ec. Pol. Fédérale de Lausanne
Santos-Victor, José	Inst. Superior Técnico - Inst. for Systems and Robotics
Ijspeert, Auke	EPFL
09:45-10:00	TuA07.6
<i>Learning-Based Model Predictive Control on a Quadrotor: Onboard Implementation and Experimental Results</i> , pp. 279-284.	
Bouffard, Patrick Michael	Univ. of California, Berkeley
Aswani, Anil	Univ. of California at Berkeley
Tomlin, Claire	UC Berkeley

TuA08		Meeting Room 8 (Wacipi)
Redundant Robots (Regular Session)		
Chair: Rocco, Paolo		Pol. di Milano
Co-Chair: Kim, Hyunchul		Univ. of California Santa Cruz
08:30-08:45		TuA08.1
<i>Motion Control of Redundant Robots under Joint Constraints: Saturation in the Null Space</i> , pp. 285-292. Attachment		
Flacco, Fabrizio		Univ. di Roma "La Sapienza"
De Luca, Alessandro		Univ. di Roma "La Sapienza"
Khatib, Oussama		Stanford Univ.
08:45-09:00		TuA08.2
<i>Priority Oriented Adaptive Control of Kinematically Redundant Manipulators</i> , pp. 293-298. Attachment		
Sadeghian, Hamid		Isfahan Univ. of Tech.
Keshmiri, Mehdi		Isfahan Univ. of Tech.
Villani, Luigi		Univ. di Napoli Federico II
Siciliano, Bruno		Univ. Napoli Federico II
09:00-09:15		TuA08.3
<i>End-Link Dynamics of Redundant Robotic Limbs: The Reaction Null Space Approach</i> , pp. 299-304. Attachment		
Hara, Naoyuki		Tokyo City Univ.
Handa, Yoichi		Tokyo City Univ.
Nenchev, Dragomir		Tokyo City Univ.
09:15-09:30		TuA08.4
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Kim, Hyunchul		Univ. of California Santa Cruz
Li, Zhi		Univ. of California, Santa Cruz
Milutinovic, Dejan		Baskin School of Engineering, UC Santa Cruz
Rosen, Jacob		Univ. of California at Santa Cruz
09:30-09:45		TuA08.5
<i>Dual-Arm Redundancy Resolution Based on Null-Space Dynamically-Scaled Posture Optimization</i> , pp. 311-316.		
Zanchettin, Andrea Maria		Pol. di Milano
Rocco, Paolo		Pol. di Milano
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Droge, Greg		Georgia Inst. of Tech. Dept of Electrical and Computer
Egerstedt, Magnus		Georgia Inst. of Tech.
TuA09		Meeting Room 9 (Sa)
Collision (Regular Session)		
Chair: Kim, Young J.		Ewha Womans Univ.
Co-Chair: Kroeger, Torsten		Stanford Univ.
08:30-08:45		TuA09.1
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Takei, Ryo		Univ. of California, Berkeley
Huang, Haomiao		Stanford Univ.
Ding, Jerry		Univ. of California - Berkeley
Tomlin, Claire		UC Berkeley
08:45-09:00		TuA09.2
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Johnson, Benjamin		Cornell Univ.
Havlak, Frank		Cornell Univ.
Campbell, Mark		Cornell Univ.

Kress-Gazit, Hadas	Cornell Univ.
09:00-09:15	TuA09.3
<i>A Depth Space Approach to Human-Robot Collision Avoidance</i> , pp. 338-345. Attachment	
Flacco, Fabrizio	Univ. di Roma "La Sapienza"
Kroeger, Torsten	Stanford Univ.
De Luca, Alessandro	Univ. di Roma "La Sapienza"
Khatib, Oussama	Stanford Univ.
09:15-09:30	TuA09.4
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van den Berg, Jur	Univ. of Utah
Wilkie, David	Univ. of North Carolina
Guy, Stephen J.	Univ. of North Carolina at Chapel Hill
Niethammer, Marc	UNC Chapel Hill
Manocha, Dinesh	UNC at Chapel Hill
09:30-09:45	TuA09.5
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Zhang, Xinyu	Ewha Womans Univ.
Kim, Young J.	Ewha Womans Univ.
09:45-10:00	TuA09.6
<i>Reciprocal Collision Avoidance for Multiple Car-Like Robots</i> , pp. 360-366. Attachment	
Alonso-Mora, Javier	ETH / Disney Res. Zurich
Breitenmoser, Andreas	ETH Zurich
Beardsley, Paul	Disney Res. Zurich
Siegwart, Roland	ETH Zurich
TuA110	Ballroom D
Interactive Session TuA-1 (Interactive Session)	
Chair: Bekey, George	Univ. of Southern California
Co-Chair: Lumia, Ron	Univ. of New Mexico
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<i>Curb Detection for a Pedestrian Robot in Urban Environments</i> , pp. 367-373. Attachment	
Maye, Jerome	ETH Zurich
Kaestner, Ralf	ETH Zurich
Siegwart, Roland	ETH Zurich
08:30-09:00	TuA110.2
<i>Towards a Watson That Sees: Language-Guided Action Recognition for Robots</i> , pp. 374-381. Attachment	
Teo, Ching Lik	Univ. of Maryland
Yang, Yezhou	Univ. of Maryland
Daume III, Hal	Univ. of Maryland, Coll. Park
Fermuller, Cornelia	Univ. of Maryland
Aloimonos, Yiannis	Univ. of Maryland
08:30-09:00	TuA110.3
<i>Tele-Impedance: Towards Transferring Human Impedance Regulation Skills to Robots</i> , pp. 382-388. Attachment	
Ajoudani, Arash	Istituto Italiano di Tecnologia
Tsagarakis, Nikolaos	Istituto Italiano di Tecnologia
Bicchi, Antonio	Univ. of Pisa
08:30-09:00	TuA110.4
<i>Visual Teach and Repeat Using Appearance-Based Lidar</i> , pp. 389-396.	
McManus, Colin	Univ. of Toronto
Furgale, Paul Timothy	Eidgenössische Tech. Hochschule Zürich
Stenning, Braden	Univ. of Toronto
Barfoot, Timothy	Univ. of Toronto

08:30-09:00	TuA110.5
<i>A Real-Time Micro-PIV System Using Frame-Straddling High-Speed Vision</i> , pp. 397-402.	
Kobatake, Motofumi	Hiroshima Univ.
Takaki, Takeshi	Hiroshima Univ.
Ishii, Idaku	Hiroshima Univ.

TuA210	Ballroom D
Interactive Session TuA-2 (Interactive Session)	
Chair: Bekey, George	Univ. of Southern California
Co-Chair: Lumia, Ron	Univ. of New Mexico

09:00-09:30	TuA210.1
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Oliveira, João Lobato	LIACC-FEUP, INESC-Porto
Ince, Gokhan	Honda Res. Inst. Japan Co., Ltd.
Nakamura, Keisuke	Honda Res. Inst. Japan Co., Ltd.
Nakadai, Kazuhiro	Honda Res. Inst. Japan Co., Ltd.

09:00-09:30	TuA210.2
<i>Teachless Teach-Repeat: Toward Vision-Based Programming of Industrial Robots</i> , pp. 409-414.	
Perrollaz, Mathias	INRIA Grenoble - Rhône-Alpes
Khorbotly, Sami	Ohio Northern Univ.
Cool, Amber	Ohio Northern Univ.
Yoder, John David	Ohio Northern Univ.
Baumgartner, Eric	Ohio Northern Univ.

09:00-09:30	TuA210.3
<i>Lithium Hydride Powered PEM Fuel Cells for Long-Duration Small Mobile Robotic Missions</i> , pp. 415-422.	
Thangavelautham, Jekanthan	Massachusetts Inst. of Tech.
Strawser, Daniel	Massachusetts Inst. of Tech.
Cheung, Mei Yi	Columbia Univ.
Dubowsky, Steven	MIT

09:00-09:30	TuA210.4
<i>Navigation in Three-Dimensional Cluttered Environments for Mobile Manipulation</i> , pp. 423-429. Attachment	
Hornung, Armin	Univ. of Freiburg
Phillips, Mike	Carnegie Mellon Univ.
Jones, Edward Gil	Willow Garage, Inc.
Bennewitz, Maren	Univ. of Freiburg
Likhachev, Maxim	Carnegie Mellon Univ.
Chitta, Sachin	Willow Garage Inc.

09:00-09:30	TuA210.5
<i>Identification of Mechanical Parameters at Low Velocities for a Micropositioning Stage Using a Velocity Hysteresis Model</i> , pp. 430-435.	
Bogdan, Ioana Corina	Paul Verlaine Univ. of Metz
Abba, Gabriel	Arts et Métiers ParisTech

TuA310	Ballroom D
Interactive Session TuA-3 (Interactive Session)	
Chair: Bekey, George	Univ. of Southern California
Co-Chair: Lumia, Ron	Univ. of New Mexico

09:30-10:00	TuA310.1
<i>Constellation - an Algorithm for Finding Robot Configurations That Satisfy Multiple Constraints</i> , pp. 436-443.	
Kaiser, Peter	Karlsruhe Inst. of Tech.
Berenson, Dmitry	Univ. of California, Berkeley
Vahrenkamp, Nikolaus	Karlsruhe Inst. of Tech. (KIT)
Asfour, Tamim	Karlsruhe Inst. of Tech. (KIT)

Dillmann, Rüdiger Srinivasa, Siddhartha	KIT Karlsruhe Inst. for Tech. Carnegie Mellon Univ.
09:30-10:00	TuA310.2
<i>Modeling the Influence of Action on Spatial Attention in Visual Interactive Environments</i> , pp. 444-450. Attachment	
Borji, Ali	Univ. of Southern California (USC)
Itti, Laurent	Univ. of Southern California
Sihite, Dicky	Univ. of Southern California
09:30-10:00	TuA310.3
<i>Online Identification of Quality of Teleoperator (QoT) for Performance Improvement of Telerobotic Operations</i> , pp. 451-456.	
Jia, Yunyi	Michigan State Univ.
Xi, Ning	Michigan State Univ.
Wang, Yunxia	MSU
Li, Xin	Michigan State Univ.
09:30-10:00	TuA310.4
<i>Target-Directed Navigation Using Wireless Sensor Networks and Implicit Surface Interpolation</i> , pp. 457-462.	
Deshpande, Nikhil	North Carolina State Univ.
Grant, Edward	North Carolina State Univ.
Henderson, Thomas C.	Univ. of Utah
09:30-10:00	TuA310.5
<i>Stress Analysis During Micro-Coil Deployment in Membranous Model of Saccular Aneurysm with Bleb</i> , pp. 463-468.	
Tercero Villagran, Carlos Rafael	Nagoya Univ.
Kojima, Masahiro	Nagoya Univ.
Ikeda, Seiichi	Nagoya Univ.
Ooe, Katsutoshi	Nagoya Univ.
Fukuda, Toshio	Nagoya Univ.
Arai, Fumihito	Nagoya Univ.
Negoro, Makoto	Fujita Health Univ.
Takahashi, Ikuo	Anjo Kosei Hospital
Kwon, Guiryong	Terumo Clinical Supply Ltd.
TuB01	Meeting Room 1 (Mini-sota)
Control and Planning for UAVs (Regular Session)	
Chair: Mellinger, Daniel	Univ. of Pennsylvania
Co-Chair: Tedrake, Russ	Massachusetts Inst. of Tech.
10:30-10:45	TuB01.1
<i>Deploying the Max-Sum Algorithm for Decentralised Coordination and Task Allocation of Unmanned Aerial Vehicles for Live Aerial Imagery Collection</i> , pp. 469-476. Attachment	
Delle Fave, Francesco Maria	Univ. of Southampton
Rogers, Alex	Univ. of Southampton
Xu, Zhe	The Univ. of Sydney
Sukkarieh, Salah	Univ. of Sydney
Jennings, Nick	Univ. of Southampton
10:45-11:00	TuB01.2
<i>Mixed-Integer Quadratic Program Trajectory Generation for Heterogeneous Quadrotor Teams</i> , pp. 477-483. Attachment	
Mellinger, Daniel	Univ. of Pennsylvania
Kushleyev, Aleksandr	Univ. of Pennsylvania
Kumar, Vijay	Univ. of Pennsylvania
11:00-11:15	TuB01.3
<i>Safety Verification of Reactive Controllers for UAV Flight in Cluttered Environments Using Barrier Certificates</i> , pp. 484-490.	
Barry, Andrew J.	Massachusetts Inst. of Tech.
Majumdar, Anirudha	Massachusetts Inst. of Tech.
Tedrake, Russ	Massachusetts Inst. of Tech.
11:15-11:30	TuB01.4
<i>On-Board Velocity Estimation and Closed-Loop Control of a Quadrotor UAV Based on Optical Flow</i> , pp. 491-497.	

Grabe, Volker	Max Planck Inst. for Biological Cybernetics
Buelthoff, Heinrich H.	Max Planck Inst. for Biol. Cybernetics
Robuffo Giordano, Paolo	Max Planck Inst. for Biological Cybernetics
11:30-11:45	TuB01.5
<i>Visual Terrain Classification by Flying Robots</i> , pp. 498-503.	
Khan, Yasir Niaz	Univ. of Tübingen
Masselli, Andreas	Univ. of Tübingen
Zell, Andreas	Univ. of Tübingen
11:45-12:00	TuB01.6
<i>Real-Time Decentralized Search with Inter-Agent Collision Avoidance</i> , pp. 504-510. Attachment	
Gan, Seng Keat	The Univ. of Sydney
Fitch, Robert	Univ. of Sydney
Sukkarieh, Salah	Univ. of Sydney
TuB02	Meeting Room 2 (Chief Red Wing)
Human Like Biped Locomotion (Regular Session)	
Chair: Laumond, Jean-Paul	LAAS-CNRS
Co-Chair: Morimoto, Jun	ATR Computational Neuroscience Lab.
10:30-10:45	TuB02.1
<i>Regulating Speed and Generating Large Speed Transitions in a Neuromuscular Human Walking Model</i> , pp. 511-516. Attachment	
Song, Seungmoon	Carnegie Mellon Univ.
Geyer, Hartmut	Carnegie Mellon Univ.
10:45-11:00	TuB02.2
<i>Using Basin Ruins and Co-Moving Low-Dimensional Latent Coordinates for Dynamic Programming of Biped Walkers on Roughing Ground</i> , pp. 517-523.	
Suetani, Hiromichi	Kagoshima Univ.
Ideta, Aiko	Kagoshima Univ.
Morimoto, Jun	ATR Computational Neuroscience Lab.
11:00-11:15	TuB02.3
<i>Spatio-Temporal Synchronization of Periodic Movements by Style-Phase Adaptation: Application to Biped Walking</i> , pp. 524-530. Attachment	
Matsubara, Takamitsu	NAIST/ATR
Uchikata, Akimasa	NAIST/ATR
Morimoto, Jun	ATR Computational Neuroscience Lab.
11:15-11:30	TuB02.4
<i>A Convex Approach to Inverse Optimal Control and Its Application to Modeling Human Locomotion</i> , pp. 531-536.	
Puydupin-Jamin, Anne-Sophie	Univ. of Illinois at Urbana Champaign
Johnson, Miles	Univ. of Illinois at Urbana Champaign
Bretl, Timothy	Univ. of Illinois at Urbana-Champaign
11:30-11:45	TuB02.5
<i>A Simple Bipedal Walking Model Reproduces Entrainment of Human Locomotion</i> , pp. 537-542.	
Ahn, Joeeun	MIT
Klenk, Daniel	MIT
Hogan, Neville	Massachusetts Inst. of Tech.
11:45-12:00	TuB02.6
<i>Motion Primitives for Human-Inspired Bipedal Robotic Locomotion: Walking and Stair Climbing</i> , pp. 543-549. Attachment	
Powell, Matthew	Texas A&M Univ.
Huihua, Zhao	Univ. of Texas A&M
Ames, Aaron	Texas A&M Univ.
TuB03	Meeting Room 3 (Mak'to)
Grasp Planning (Regular Session)	

Chair: Allen, Peter	Columbia Univ.
Co-Chair: Aleotti, Jacopo	Univ. of Parma
10:30-10:45	TuB03.1
<i>On the Synthesis of Feasible and Prehensile Robotic Grasps</i> , pp. 550-556.	
Rosales Gallegos, Carlos	Univ. Pol. de Catalunya (UPC)
Suarez, Raul	Univ. Pol. de Catalunya (UPC)
Gabiccini, Marco	Univ. di Pisa
Bicchi, Antonio	Univ. of Pisa
10:45-11:00	TuB03.2
<i>Pose Error Robust Grasping from Contact Wrench Space Metrics</i> , pp. 557-562.	
Weisz, Jonathan	Columbia Univ.
Allen, Peter	Columbia Univ.
11:00-11:15	TuB03.3
<i>Power Grasp Planning for Anthropomorphic Robot Hands</i> , pp. 563-569.	
Roa, Maximo A.	German Aerospace Center, DLR
Argus, Maximilian	Durham Univ.
Leidner, Daniel	German Aerospace Center (DLR)
Borst, Christoph	German Aerospace Center (DLR)
Hirzinger, Gerd	German Aerospace Center (DLR)
11:15-11:30	TuB03.4
<i>Navigation Functions Learning from Experiments: Application to Anthropomorphic Grasping</i> , pp. 570-575. Attachment	
Filippidis, Ioannis	National Tech. Univ. of Athens
Kyriakopoulos, Kostas	National Tech. Univ. of Athens
Artemiadis, Panagiotis	Arizona State Univ.
11:30-11:45	TuB03.5
<i>Toward Cloud-Based Grasping with Uncertainty in Shape: Estimating Lower Bounds on Achieving Force Closure with Zero-Slip Push Grasps</i> , pp. 576-583.	
Kehoe, Ben	Univ. of California, Berkeley
Berenson, Dmitry	Univ. of California, Berkeley
Goldberg, Ken	UC Berkeley
11:45-12:00	TuB03.6
<i>Combined Grasp and Manipulation Planning As a Trajectory Optimization Problem</i> , pp. 584-591.	
Horowitz, Matanya	California Inst. of Tech.
Burdick, Joel	California Inst. of Tech.
TuB04	Meeting Room 4 (Chief Wabasha)
Pose Estimation (Regular Session)	
Chair: Matthies, Larry	Jet Propulsion Lab.
Co-Chair: Singh, Sanjiv	Carnegie Mellon Univ.
10:30-10:45	TuB04.1
<i>Invariant Momentum-Tracking Kalman Filter for Attitude Estimation</i> , pp. 592-598.	
Persson, Sven Mikael	McGill Univ.
Sharf, Inna	McGill Univ.
10:45-11:00	TuB04.2
<i>Complementary Filtering Approach to Orientation Estimation Using Inertial Sensors Only</i> , pp. 599-605.	
Kubelka, Vladimir	Czech Tech. Univ. in Prague, Faculty of Electrical Engi
Reinstein, Michal	Czech Tech. Univ. in Prague, Faculty of Electrical Engi
11:00-11:15	TuB04.3
<i>Design of Complementary Filter for High-Fidelity Attitude Estimation Based on Sensor Dynamics Compensation with Decoupled Properties</i> , pp. 606-611.	
Masuya, Ken	Kyushu Univ.
Sugihara, Tomomichi	Graduate School of Engineering, Osaka Univ.
Yamamoto, Motoji	Kyushu Univ.

11:15-11:30	TuB04.4
<i>A Low-Cost and Fail-Safe Inertial Navigation System for Airplanes</i> , pp. 612-618. Attachment	
Leutenegger, Stefan	ETH Zurich
Sieewart, Roland	ETH Zurich
11:30-11:45	TuB04.5
<i>Robust Multi-Sensor, Day/Night 6-DOF Pose Estimation for a Dynamic Legged Vehicle in GPS-Denied Environments</i> , pp. 619-626. Attachment	
Ma, Jeremy	Jet Propulsion Lab.
Susca, Sara	Univ. of California Santa Barbara
Bajracharya, Max	JPL
Matthies, Larry	Jet Propulsion Lab.
Malchano, Matthew	Boston Dynamics
Wooden, David	Boston Dynamics
11:45-12:00	TuB04.6
<i>Global Pose Estimation with Limited GPS and Long Range Visual Odometry</i> , pp. 627-633.	
Rehder, Joern	Hamburg Univ. of Tech.
Gupta, Kamal	Indian Inst. of Tech. Delhi
Nuske, Stephen	CMU Robotics Inst.
Singh, Sanjiv	Carnegie Mellon Univ.
TuB05	Meeting Room 5 (Ska)
Sensor Networks (Regular Session)	
Chair: Hsieh, M. Ani	Drexel Univ.
Co-Chair: Tan, Jindong	Michigan Tech. Univ.
10:30-10:45	TuB05.1
<i>Distributed Coverage with Mobile Robots on a Graph: Locational Optimization</i> , pp. 634-641. Attachment	
Yun, Seung-kook	Honda Res. Inst.
Rus, Daniela	MIT
10:45-11:00	TuB05.2
<i>An Approach to Multi-Agent Area Protection Using Bayes Risk</i> , pp. 642-649.	
Bays, Matthew	Virginia Tech.
Shende, Apoorva	Virginia Tech.
Stilwell, Daniel	Virginia Tech.
11:00-11:15	TuB05.3
<i>On Coordination in Practical Multi-Robot Patrol</i> , pp. 650-656.	
Agmon, Noa	The Univ. of Texas at Austin
Fok, Chien-Liang	The Univ. of Texas at Austin
Elmaliyah, Yehuda	Bar-Ilan
Stone, Peter	Univ. of Texas at Austin
Julien, Christine	The Univ. of Texas at Austin
Vishwanath, Sriram	The Univ. of Texas at Austin
11:15-11:30	TuB05.4
<i>Adaptive Sampling Using Mobile Sensor Networks</i> , pp. 657-662.	
Huang, Shuo	Michigan Tech. Univ.
Tan, Jindong	Michigan Tech. Univ.
11:30-11:45	TuB05.5
<i>Coverage Control of Mobile Sensors for Adaptive Search of Unknown Number of Targets</i> , pp. 663-670.	
Surana, Amit	UTRC
Mathew, George	United Tech. Res. Center
Kannan, Suresh	United Tech. Res. Center
11:45-12:00	TuB05.6
<i>Robust Optimal Deployment of Mobile Sensor Networks</i> , pp. 671-676.	
Hutchinson, Seth	Univ. of Illinois

TuB06		Meeting Room 6 (Oya'te)
Minimally Invasive Interventions I (Regular Session)		
Chair: Desai, Jaydev P.		Univ. of Maryland
Co-Chair: Valdastri, Pietro		Vanderbilt Univ.
10:30-10:45		TuB06.1
<i>Design Requirements and Feasibility Study for a 3-DOF MRI-Compatible Robotic Device for MRI-Guided Prostate Intervention</i> , pp. 677-682.		
Bohren, Jonathan		The Johns Hopkins Univ.
lordachita, Iulian		Johns Hopkins Univ.
Whitcomb, Louis		The Johns Hopkins Univ.
10:45-11:00		TuB06.2
<i>Towards the Development of a SMA-Actuated MRI-Compatible Tendon-Driven Neurosurgical Robot</i> , pp. 683-688.		
Ho, Mingyen		Univ. of Maryland
Desai, Jaydev P.		Univ. of Maryland
11:00-11:15		TuB06.3
<i>Visual and Force-Feedback Guidance for Robot-Assisted Interventions in the Beating Heart with Real-Time MRI</i> , pp. 689-694.		
Navkar, Nikhil Vishwas		Univ. of Houston
Deng, Zhigang		Univ. of Houston
Shah, Dipan J.		Methodist DeBakey Heart & Vascular Center
Bekris, Kostas E.		Univ. of Nevada, Reno
Tsekos, Nikolaos		Univ. of Houston
11:15-11:30		TuB06.4
<i>Trans-Abdominal Active Magnetic Linkage for Robotic Surgery: Concept Definition and Model Assessment</i> , pp. 695-700.		
Di Natali, Christian		Vanderbilt Univ.
Ranzani, Tommaso		Scuola Superiore Sant'Anna
Simi, Massimiliano		Scuola Superiore Sant'Anna
Menciassi, Arianna		Scuola Superiore Sant'Anna - SSSA
Valdastri, Pietro		Vanderbilt Univ.
11:30-11:45		TuB06.5
<i>Cable Length Estimation for a Compliant Surgical Manipulator</i> , pp. 701-708.		
Segreti, Sean M.		Univ. of Maryland
Kutzer, Michael Dennis Mays		Johns Hopkins Univ. Applied Physics Lab.
Murphy, Ryan Joseph		Johns Hopkins Univ. Applied Physics Lab.
Armand, Mehran		Johns Hopkins Univ. Applied Physics Lab.
11:45-12:00		TuB06.6
<i>Towards a Compact Robotically Steerable Thermal Ablation Probe</i> , pp. 709-714.		
Graves, Carmen		Massachusetts Inst. of Tech.
Slocum, Alexander		Massachusetts Inst. of Tech.
Gupta, Rajiv		Massachusetts General Hospital
Walsh, Conor James		Harvard Univ.
TuB07		Meeting Room 7 (Remnicha)
Micro and Nano Robots I (Regular Session)		
Chair: Nelson, Bradley J.		ETH Zurich
Co-Chair: Kim, MinJun		Drexel Univ.
10:30-10:45		TuB07.1
<i>Polymer-Based Wireless Resonant Magnetic Microrobots</i> , pp. 715-720.		
Tung, Hsi-Wen		ETH Zurich
Frutiger, Dominic R.		ETH Zurich
Pane, Salvador		ETH Zurich
Nelson, Bradley J.		ETH Zurich

10:45-11:00	TuB07.2
<i>Three-Dimensional Control of Engineered Motile Cellular Microrobots</i> , pp. 721-726. Attachment	
Kim, Dal Hyung	Drexel Univ.
Kim, Paul	Drexel Univ.
Julius, Agung	Rensselaer Pol. Inst.
Kim, MinJun	Drexel Univ.
11:00-11:15	TuB07.3
<i>Towards MR-Navigable Nanorobotic Carriers for Drug Delivery into the Brain</i> , pp. 727-732.	
Tabatabaei, Seyed Nasrollah	Ec. Pol. de Montreal
Sonia, Duchemin	Cerebrovascular Pharmacology Lab. Department of Pharmacol
Giouard, H�el�ene	Cerebrovascular Pharmacology Lab. Department of Pharmacol
Martel, Sylvain	Ec. Pol. de Montreal (EPM)
11:15-11:30	TuB07.4
<i>Micro-Assembly Using Optically Controlled Bubble Microrobots in Saline Solution</i> , pp. 733-738.	
Hu, Wenqi	Univ. of Hawaii at Manoa
Ishii, Kelly Ann	Univ. of Hawaii
Ohta, Aaron	Univ. of Hawai'i at M�anoa
11:30-11:45	TuB07.5
<i>Diamagnetically Levitated Robots: An Approach to Massively Parallel Robotic Systems with Unusual Motion Properties</i> , pp. 739-744.	
Pelrine, Ron	SRI International
Wong-Foy, Annjoe	SRI International
McCoy, Brian	SRI International
Holeman, Dennis	SRI International
Mahoney, Rich	SRI International
Myers, Greg	SRI International
Herson, Jim	SRI International
Low, Thomas	SRI International
11:45-12:00	TuB07.6
<i>Magnetic Micro Actuator with Neutral Buoyancy and 3D Fabrication of Cell Size Magnetized Structure</i> , pp. 745-750.	
Yasui, Masato	Osaka Univ.
Ikeuchi, Masashi	The Univ. of Tokyo
Ikuta, Koji	The Univ. of Tokyo
TuB08	Meeting Room 8 (Wacipi)
3D Surface Models, Point Cloud Processing (Regular Session)	
Chair: Pochiraju, Kishore	Stevens Inst. of Tech.
Co-Chair: Burgard, Wolfram	Univ. of Freiburg
10:30-10:45	TuB08.1
<i>Highly Accurate 3D Surface Models by Sparse Surface Adjustment</i> , pp. 751-757.	
Ruhnke, Michael	Univ. of Freiburg
Kuemmerle, Rainer	Univ. of Freiburg
Grisetti, Giorgio	Sapienza Univ. of Rome
Burgard, Wolfram	Univ. of Freiburg
10:45-11:00	TuB08.2
<i>A Semi-Local Method for Iterative Depth-Map Refinement</i> , pp. 758-763.	
McKinnon, David	QUT
Smith, Ryan N.	Queensland Univ. of Tech.
Upcroft, Ben	Queensland Univ. of Tech.
11:00-11:15	TuB08.3
<i>High Quality Conservative Surface Mesh Generation for Swept Volumes</i> , pp. 764-769.	
von Dziegielewski, Andreas	Johannes Gutenberg-Univ. Mainz
Hemmer, Michael	Tel Aviv Univ.
Sch�omer, Elmar	Mainz Univ.

11:15-11:30	TuB08.4
<i>Convex Bricks: A New Primitive for Visual Hull Modeling and Reconstruction</i> , pp. 770-777.	
Chari, Visesh	INRIA Rhône-Alpes
Agrawal, Amit	Mitsubishi Electric Res. Lab.
Taguchi, Yuichi	Mitsubishi Electric Res. Lab.
Ramalingam, Srikumar	Mitsubishi Electric Res. Lab.
11:30-11:45	TuB08.5
<i>Real-Time Compression of Point Cloud Streams</i> , pp. 778-785.	
Kammerl, Julius	Tech. Univ. München
Blodow, Nico	Tech. Univ. München
Rusu, Radu Bogdan	Willow Garage, Inc
Gedikli, Suat	Willow Garage Inc.
Beetz, Michael	Tech. Univ. München
Steinbach, Eckehard	Munich Univ. of Tech.
11:45-12:00	TuB08.6
<i>Point Cloud Segmentation with LIDAR Reflection Intensity Behavior</i> , pp. 786-790.	
Tatoglu, Akin	Stevens Inst. of Tech.
Pochiraju, Kishore	Stevens Inst. of Tech.
TuB09	Meeting Room 9 (Sa)
Localization (Regular Session)	
Chair: Oriolo, Giuseppe	Univ. di Roma "La Sapienza"
Co-Chair: Mourikis, Anastasios	Univ. of California, Riverside
10:30-10:45	TuB09.1
<i>3-D Mutual Localization with Anonymous Bearing Measurements</i> , pp. 791-798. Attachment	
Cognetti, Marco	Univ. di Roma "La Sapienza"
Stegagno, Paolo	Univ. di Roma "La Sapienza"
Franchi, Antonio	Max Planck Inst. for Biological Cybernetics
Oriolo, Giuseppe	Univ. di Roma "La Sapienza"
Buelthoff, Heinrich H.	Max Planck Inst. for Biol. Cybernetics
10:45-11:00	TuB09.2
<i>A Sparsity-Aware QR Decomposition Algorithm for Efficient Cooperative Localization</i> , pp. 799-806.	
Zhou, Ke	Univ. of Minnesota
Roumeliotis, Stergios	Univ. of Minnesota
11:00-11:15	TuB09.3
<i>Online Model Estimation of Ultra-Wideband TDOA Measurements for Mobile Robot Localization</i> , pp. 807-814.	
Prorok, Amanda	EPFL
Gonon, Lukas	ETH Zurich
Martinoli, Alcherio	EPFL
11:15-11:30	TuB09.4
<i>Orientation Only Loop-Closing with Closed-Form Trajectory Bending</i> , pp. 815-821.	
Dubbelman, Gijs	CMU Robotics Inst.
Browning, Brett	Carnegie Mellon Univ.
Hansen, Peter	Carnegie Mellon Univ. in Qatar
Dias, M. Bernardine	Carnegie Mellon Univ.
11:30-11:45	TuB09.5
<i>Capping Computation Time and Storage Requirements for Appearance-Based Localization with CAT-SLAM</i> , pp. 822-827.	
Maddern, William	Queensland Univ. of Tech.
Milford, Michael J	Queensland Univ. of Tech.
Wyeth, Gordon	Queensland Univ. of Tech.
11:45-12:00	TuB09.6
<i>Improving the Accuracy of EKF-Based Visual-Inertial Odometry</i> , pp. 828-835.	
Li, Mingyang	Univ. of California, Riverside

TuB110		Ballroom D
Interactive Session TuB-1 (Interactive Session)		
Chair: Kosuge, Kazuhiro		Tohoku Univ.
Co-Chair: Aloimonos, Yiannis		Univ. of Maryland
10:30-11:00		TuB110.1
<i>Walking Trajectory Generation for Humanoid Robots with Compliant Joints: Experimentation with COMAN Humanoid</i> , pp. 836-841. <u>Attachment</u>		
Li, Zhibin		Italian Inst. of Tech.
Tsagarakis, Nikolaos		Istituto Italiano di Tecnologia
Caldwell, Darwin G.		Italian Inst. of Tech.
10:30-11:00		TuB110.2
<i>Unstructured Human Activity Detection from RGBD Images</i> , pp. 842-849.		
Sung, Jaeyong		Cornell Univ.
Ponce, Colin		Cornell Univ.
Selman, Bart		Cornell Univ.
Saxena, Ashutosh		Cornell Univ.
10:30-11:00		TuB110.3
<i>Online Stability Compensation of Mobile Manipulators Using Recursive Calculation of ZMP Gradients</i> , pp. 850-855.		
Lee, Sohee		Seoul National Univ.
Sobotka, Marion		Tech. Univ. München
Buss, Martin		Tech. Univ. München
Park, Frank		Seoul National Univ.
10:30-11:00		TuB110.4
<i>Information Propagation Applied to Robot-Assisted Evacuation</i> , pp. 856-861.		
Robinette, Paul		Georgia Inst. of Tech.
Vela, Patricio		Georgia Inst. of Tech.
Howard, Ayanna		Georgia Inst. of Tech.
10:30-11:00		TuB110.5
<i>Implementation of an Embodied General Reinforcement Learner on a Serial Link Manipulator</i> , pp. 862-869.		
Malone, Nicholas		Univ. of New Mexico
Rohrer, Brandon R.		Sandia National Lab.
Tapia, Lydia		Univ. of New Mexico
Lumia, Ron		Univ. of New Mexico
Wood, John		Univ. of New Mexico
TuB210		Ballroom D
Interactive Session TuB-2 (Interactive Session)		
Chair: Kosuge, Kazuhiro		Tohoku Univ.
Co-Chair: Aloimonos, Yiannis		Univ. of Maryland
11:00-11:30		TuB210.1
<i>Effects of Knee Locking and Passive Joint Stiffness on Energy Consumption of a Seven-Link Planar Biped</i> , pp. 870-876.		
Haq, Abdul		IRCCyN, CNRS
Aoustin, Yannick		CNRS
Chevallereau, Christine		CNRS
11:00-11:30		TuB210.2
<i>What Are We Doing Here? Egocentric Activity Recognition on the Move for Contextual Mapping</i> , pp. 877-882.		
Sundaram, Sudeep		Univ. of Bristol
Mayol, Walterio		Univ. of Bristol
11:00-11:30		TuB210.3
<i>ZMP Stabilization of Rapid Mobile Manipulator</i> , pp. 883-888.		
Choi, Dongil		KAIST

 11:00-11:30 TuB210.4

RSS Gradient-Assisted Frontier Exploration and Radio Source Localization, pp. 889-895. [Attachment](#)

Twigg, Jeffrey	Army Res. Lab.
Fink, Jonathan	ARL
Yu, Paul	ARL
Sadler, Brian	Army Res. Lab.

 11:00-11:30 TuB210.5

Improvisational Goal-Oriented Action Recommendation under Incomplete Knowledge Base, pp. 896-903.

Lim, Gi Hyun	Hanyang Univ.
Suh, Il Hong	Hanyang Univ.

TuB310 Ballroom D

Interactive Session TuB-3 (Interactive Session)

Chair: Kosuge, Kazuhiro	Tohoku Univ.
Co-Chair: Aloimonos, Yiannis	Univ. of Maryland

 11:30-12:00 TuB310.1

A Functional Adhesive Robot Skin with Integrated Micro Rubber Suction Cups, pp. 904-909.

Manabe, Ryoichi	Okayama Univ.
Suzumori, Koichi	Okayama Univ.
Wakimoto, Shuichi	Okayama Univ.

 11:30-12:00 TuB310.2

A Model and Formal Analysis of Braitenberg Vehicles 2 and 3, pp. 910-915.

Rano, Inaki	Ruhr-Univ.
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 11:30-12:00 TuB310.3

Visual Servoing Control of a 9-DoF WMRA to Perform ADL Tasks, pp. 916-922.

Pence, William	Univ. of South Florida
Farelo, Fabian	Univ. of South Florida
Alqasemi, Redwan	Univ. of South Florida
Sun, Yu	Univ. of South Florida
Dubey, Rajiv	Univ. of South Florida

 11:30-12:00 TuB310.4

An Online Stair-Climbing Control Method for a Transformable Tracked Robot, pp. 923-929.

Li, Nan	Shenyang Inst. of Automation, Chinese Acad.
Ma, Shugen	Ritsumeikan Univ.
Li, Bin	Shenyang Inst. of Automation
Wang, Minghui	Shenyang Inst. of Automation, Chinese Acad.
Wang, Yuechao	Shenyang Inst. of Automation

 11:30-12:00 TuB310.5

Monitoring of Manipulation Activities for a Service Robot Using Supervised Learning, pp. 930-935.

Ruehl, Steffen Wilhelm	Res. Center for Information Tech. (FZI)
Xue, Zhixing	FZI
Dillmann, Rüdiger	KIT Karlsruhe Inst. for Tech.

TuC01 Meeting Room 1 (Mini-sota)

Autonomy and Vision for UAVs (Regular Session)

Chair: Scherer, Sebastian	Carnegie Mellon Univ.
Co-Chair: Hesch, Joel	Univ. of Minnesota

 14:30-14:45 TuC01.1

Cooperative Vision-Aided Inertial Navigation Using Overlapping Views, pp. 936-943.

Melnyk, Igor	Univ. of Minnesota
Hesch, Joel	Univ. of Minnesota
Roumeliotis, Stergios	Univ. of Minnesota

14:45-15:00	TuC01.2
<i>UAV Vision: Feature Based Accurate Ground Target Localization through Propagated Initializations and Interframe Homographies</i> , pp. 944-950.	
Han, Kyuseo	Purdue Univ.
Aeschliman, Chad	Purdue Univ.
Park, Johnny	Purdue Univ.
Kak, Avinash	Purdue Univ.
Kwon, Hyukseong	US Air Force Acad.
Pack, Daniel	US Air Force Acad.
15:00-15:15	TuC01.3
<i>First Results in Autonomous Landing and Obstacle Avoidance by a Full-Scale Helicopter</i> , pp. 951-956.	
Scherer, Sebastian	Carnegie Mellon Univ.
Chamberlain, Lyle	Carnegie Mellon Univ.
Singh, Sanjiv	Carnegie Mellon Univ.
15:15-15:30	TuC01.4
<i>Real-Time Onboard Visual-Inertial State Estimation and Self-Calibration of MAVs in Unknown Environments</i> , pp. 957-964.	
Weiss, Stephan	ETH Zurich
Achtelik, Markus W.	ETH Zurich, Autonomous Systems Lab.
Lynen, Simon	ETH Zurich
Chli, Margarita	ETH Zurich
Siegwart, Roland	ETH Zurich
15:30-15:45	TuC01.5
<i>"ShadowCut" - an Unsupervised Object Segmentation Algorithm for Aerial Robotic Surveillance Applications</i> , pp. 965-970.	
Hung, Calvin	Univ. of Sydney
Bryson, Mitch	Univ. of Sydney
Sukkarieh, Salah	Univ. of Sydney
15:45-16:00	TuC01.6
<i>Autonomous Landing of a VTOL UAV on a Moving Platform Using Image-Based Visual Servoing</i> , pp. 971-976. Attachment	
Lee, Daewon	Seoul National Univ.
Ryan, Tyler	Seoul National Univ.
Kim, H. Jin	Seoul National Univ.
TuC02 Meeting Room 2 (Chief Red Wing)	
Planning and Navigation of Biped Walking (Regular Session)	
Chair: Ames, Aaron	Texas A&M Univ.
Co-Chair: Yokoi, Kazuhito	National Inst. of AIST
14:30-14:45	TuC02.1
<i>Real-Time Footstep Planning for Humanoid Robots among 3D Obstacles Using a Hybrid Bounding Box</i> , pp. 977-982. Attachment	
Perrin, Nicolas Yves	Istituto Italiano di Tecnologia
Stasse, Olivier	CNRS
Lamiroux, Florent	CNRS
Kim, Young J.	Ewha Womans Univ.
Manocha, Dinesh	UNC at Chapel Hill
14:45-15:00	TuC02.2
<i>Foot Placement for Planar Bipedes with Point Feet</i> , pp. 983-988.	
van Zutven, Pieter	Eindhoven Univ. of Tech.
Kostic, Dragan	Eindhoven Univ. of Tech.
Nijmeijer, Hendrik	Eindhoven Univ. of Tech.
15:00-15:15	TuC02.3
<i>A Framework for Extreme Locomotion Planning</i> , pp. 989-996. Attachment	
Dellin, Christopher	Carnegie Mellon Univ.
Srinivasa, Siddhartha	Carnegie Mellon Univ.

15:15-15:30		TuC02.4
<i>Adaptive Level-Of-Detail Planning for Efficient Humanoid Navigation</i> , pp. 997-1002.		
Hornung, Armin		Univ. of Freiburg
Bennewitz, Maren		Univ. of Freiburg
15:30-15:45		TuC02.5
<i>Dominant Sources of Variability in Passive Walking</i> , pp. 1003-1010. Attachment		
Nanayakkara, Thrishantha		King's Coll. Univ. of London
Byl, Katie		UCSB
Liu, Hongbin		King's Coll. London
Song, Xiaojing		King's Coll. London
Villabona, Tim		Massachusetts Inst. of Tech.
15:45-16:00		TuC02.6
<i>First Steps Toward Underactuated Human-Inspired Bipedal Robotic Walking</i> , pp. 1011-1017. Attachment		
Ames, Aaron		Texas A&M Univ.
TuC03		Meeting Room 3 (Mak'to)
Haptics (Regular Session)		
Chair: Lee, Dongheui		Tech. Univ. of Munich
Co-Chair: Xiao, Jing		UNC-Charlotte
14:30-14:45		TuC03.1
<i>A Compact Tactile Display Suitable for Integration in VR and Teleoperation</i> , pp. 1018-1024.		
Sarakoglou, Ioannis		Istituto Italiano di Tecnologia
Tsagarakis, Nikolaos		Istituto Italiano di Tecnologia
Caldwell, Darwin G.		Italian Inst. of Tech.
14:45-15:00		TuC03.2
<i>Risk-Sensitive Optimal Feedback Control for Haptic Assistance</i> , pp. 1025-1031.		
Medina Hernandez, Jose Ramon		Tech. Univ. München
Lee, Dongheui		Tech. Univ. of Munich
Hirche, Sandra		Tech. Univ. München
15:00-15:15		TuC03.3
<i>Integration Framework for NASA NextGen Volumetric Cockpit Situation Display with Haptic Feedback</i> , pp. 1032-1037.		
Robles, Jose		California State Univ. Long Beach
Sguerri, Matthew		California State Univ. Long Beach
Rorie, Conrad		California State Univ. Long Beach
Vu, Kim-Phuong		California State Univ. Long Beach
Strybel, Thomas		California State Univ. Long Beach
Marayong, Panadda		California State Univ. Long Beach
15:15-15:30		TuC03.4
<i>Wearable Haptic Device for Cutaneous Force and Slip Speed Display</i> , pp. 1038-1043.		
Damian, Dana		Univ. of Zurich
Ludersdorfer, Marvin		Univ. of Applied Sciences Deggendorf
Kim, Yeongmi		ETH Zurich
Hernandez Arieta, Alejandro		Noser Engineering
Pfeifer, Rolf		Univ. of Zurich
Okamura, Allison M.		Stanford Univ.
15:30-15:45		TuC03.5
<i>Development of a Haptic Interface Using MR Fluid for Displaying Cutting Forces of Soft Tissues</i> , pp. 1044-1049. Attachment		
Tsujita, Teppei		Tohoku Univ.
Ohara, Manabu		Tohoku Univ.
Sase, Kazuya		Tohoku Univ.
Konno, Atsushi		Tohoku Univ.
Nakayama, Masano		Tohoku Univ.
Abe, Koyu		Tohoku Univ.

Uchiyama, Masaru	Tohoku Univ.
15:45-16:00	TuC03.6
<i>Six-Degree-Of-Freedom Haptic Simulation of Organ Deformation in Dental Operations</i> , pp. 1050-1056. Attachment	
Wang, Dangxiao	Beihang Univ.
Liu, Shuai	Beihang Univ.
Zhang, Xin	Beihang Univ.
Zhang, Yuru	Beihang Univ.
Xiao, Jing	UNC-Charlotte
TuC04	Meeting Room 4 (Chief Wabasha)
Micro - Nanoscale Automation (Regular Session)	
Chair: Popa, Dan	The Univ. of Texas at Arlington
Co-Chair: Sun, Yu	Univ. of Toronto
14:30-14:45	TuC04.1
<i>Dynamic Region Control for Robot-Assisted Cell Manipulation Using Optical Tweezers</i> , pp. 1057-1062.	
Li, Xiang	Nanyang Tech. Univ.
Cheah, C. C.	Nanyang Tech. Univ.
14:45-15:00	TuC04.2
<i>Automated Nanomanipulation for Nano Device Construction</i> , pp. 1063-1068. Attachment	
Zhang, Yanliang	MathWorks
Li, Jason	Univ. of Toronto
To, Steve	Univ. of Toronto, Advanced Micro and Nanosystems Lab.
Zhang, Yong	Univ. of Toronto
Ye, Xutao	Univ. of Toronto
Sun, Yu	Univ. of Toronto
15:00-15:15	TuC04.3
<i>Parallel Teleoperation of Holographic Optical Tweezers Using Multi-Touch User Interface</i> , pp. 1069-1074.	
Onda, Kazuhisa	Nagoya Univ.
Arai, Fumihito	Nagoya Univ.
15:15-15:30	TuC04.4
<i>Vision-Based Retinal Membrane Peeling with a Handheld Robot</i> , pp. 1075-1080. Attachment	
Becker, Brian C.	Carnegie Mellon University
MacLachlan, Robert A.	Carnegie Mellon Univ.
Lobes, Louis A.	Dept. of Ophthalmology, Univ. of Pittsburgh Medical Center,
Riviere, Cameron	Carnegie Mellon Univ.
15:30-15:45	TuC04.5
<i>Holonomic 5-DOF Magnetic Control of 1D Nanostructures</i> , pp. 1081-1086.	
Schuerle, Simone	ETH Zurich
Peyer, Kathrin Eva	ETH Zurich
Kratochvil, Bradley	ETH Zurich
Nelson, Bradley J.	ETH Zurich
15:45-16:00	TuC04.6
<i>Interval Analysis for Robot Precision Evaluation</i> , pp. 1087-1092.	
Pac, Muhammed Rasid	Univ. of Texas at Arlington
Popa, Dan	The Univ. of Texas at Arlington
TuC05	Meeting Room 5 (Ska)
Multi-Robot Systems 1 (Regular Session)	
Chair: Sukhatme, Gaurav	Univ. of Southern California
Co-Chair: Martinoli, Alcherio	EPFL
14:30-14:45	TuC05.1
<i>Fully Distributed Scalable Smoothing and Mapping with Robust Multi-Robot Data Association</i> , pp. 1093-1100.	
Cunningham, Alexander	Georgia Inst. of Tech.

Wurm, Kai M.	Univ. of Freiburg
Burgard, Wolfram	Univ. of Freiburg
Dellaert, Frank	Georgia Inst. of Tech.
14:45-15:00	TuC05.2
<i>Collaborative 3D Localization of Robots from Relative Pose Measurements Using Gradient Descent on Manifolds</i> , pp. 1101-1106.	
Knuth, Joseph	Univ. of Florida
Barooah, Prabir	Univ. of Florida
15:00-15:15	TuC05.3
<i>Distributed Source Seeking by Cooperative Robots: All-To-All and Limited Communications</i> , pp. 1107-1112.	
Li, Shuai	Stevens Inst. of Tech.
Guo, Yi	Stevens Inst. of Tech.
15:15-15:30	TuC05.4
<i>A Coordination Strategy for Multi-Robot Sampling of Dynamic fi Elds</i> , pp. 1113-1118.	
Antonelli, Gianluca	Univ. degli Studi di Cassino
Marino, Alessandro	Univ. degli Studi di Salerno
Chiaverini, Stefano	Univ. di Cassino
15:30-15:45	TuC05.5
<i>On Localization Uncertainty in an Autonomous Inspection</i> , pp. 1119-1124.	
Faigl, Jan	Czech Tech. Univ. in Prague, Faculty of Electrical Engineer
Krajník, Tomas	Faculty of Electrical Engineering, Czech Tech. Univ.
Vonasek, Vojtech	Czech Tech. Univ. in Prague
Preucil, Libor	Czech Tech. Univ. in Prague
15:45-16:00	TuC05.6
<i>Probabilistic Spatial Mapping and Curve Tracking in Distributed Multi-Agent Systems</i> , pp. 1125-1130.	
Williams, Ryan	Univ. of Southern California
Sukhatme, Gaurav	Univ. of Southern California
TuC06	Meeting Room 6 (Oya'te)
Biologically Inspired Robotics (Invited Session)	
Chair: von der Emde, Gerhard	Univ. of Bonn
Co-Chair: Boyer, Frédéric	Ec. des Mines de Nantes
14:30-14:45	TuC06.1
<i>Estimation of Relative Position and Coordination of Mobile Underwater Robotic Platforms through Electric Sensing</i> , pp. 1131-1136.	
Morel, Yannick	Swiss Federal Inst. of Tech.
Porez, Mathieu	IRCCyN
Ijspeert, Auke	EPFL
14:45-15:00	TuC06.2
<i>Localization of Small Objects with Electric Sense Based on Kalman Filter</i> , pp. 1137-1142.	
Lebastard, Vincent	Ec. des Mines de Nantes
Chevallereau, Christine	CNRS
Girin, Alexis	IRCCyN
Boyer, Frédéric	Ec. des mines de Nantes
Gossiaux, Pol Bernard	Ec. des Mines de Nantes
15:00-15:15	TuC06.3
<i>Non-Visual Orientation and Communication by Fishes Using Electrical Fields: A Model System for Underwater Robotics</i> , pp. 1143-1148.	
von der Emde, Gerhard	Univ. of Bonn
Gebhardt, Kristina	Univ. of Bonn
Behr, Katharina	Univ. of Bonn
15:15-15:30	TuC06.4
<i>An Underwater Reconfigurable Robot with Bioinspired Electric Sense</i> , pp. 1149-1154.	
Mintchev, Stefano	Scuola Superiore Sant'Anna

Stefanini, Cesare	Scuola Superiore Sant'Anna
Girin, Alexis	IRCCyN
Marrazza, Stefano	Scuola Superiore Sant'Anna
Orofino, Stefano	Scuola Superiore Sant'Anna
Lebastard, Vincent	Ec. des Mines de Nantes
Manfredi, Luigi	Scuola Superiore Sant'Anna
Dario, Paolo	Scuola Superiore Sant'Anna
Boyer, Frédéric	Ec. des Mines de Nantes
15:30-15:45	TuC06.5
<i>Underwater Electro-Navigation in the Dark</i> , pp. 1155-1160. Attachment	
Lebastard, Vincent	Ec. des Mines de Nantes
Boyer, Frédéric	Ec. des mines de Nantes
Chevallereau, Christine	CNRS
Servagent, Noël	SUBATECH-Ec. des Mines de Nantes
15:45-16:00	TuC06.6
<i>Electric Sensor Based Control for Underwater Multi-Agents Navigation in Formation</i> , pp. 1161-1167.	
Chevallereau, Christine	CNRS
Boyer, Frédéric	Ec. des Mines de Nantes
Lebastard, Vincent	Ec. des Mines de Nantes
Benachenhou, Mohamed	Ec. des mines de Nantes
TuC07	Meeting Room 7 (Remnicha)
Climbing Robots (Regular Session)	
Chair: Shapiro, Amir	Ben Gurion Univ. of the Negev
Co-Chair: Spenko, Matthew	Illinois Inst. of Tech.
14:30-14:45	TuC07.1
<i>Step Negotiation with Wheel Traction: A Strategy for a Wheel-Legged Robot</i> , pp. 1168-1174.	
Turker, Korhan	McGill Univ.
Sharf, Inna	McGill Univ.
Trentini, Michael	Defence Res. and Development Canada
14:45-15:00	TuC07.2
<i>Fast Accessible Rescue Device by Using a Flexible Sliding Actuator</i> , pp. 1175-1180. Attachment	
Tsukagoshi, Hideyuki	Tokyo Inst. of Tech.
15:00-15:15	TuC07.3
<i>Design Considerations for Attachment and Detachment in Robot Climbing with Hot Melt Adhesives</i> , pp. 1181-1186. Attachment	
Wang, Liyu	Bio-Inspired Robotics Lab. ETH Zurich
Neuschaefer, Fabian	Department of Mechanical and Process Engineering, ETH Zurich
Bernet, Remo	Department of Mechanical and Process Engineering, ETH Zurich
Iida, Fumiya	ETH Zurich
15:15-15:30	TuC07.4
<i>Parameter Optimization of Directional Dry Adhesives for Robotic Climbing and Gripping Applications</i> , pp. 1187-1192.	
Ruffatto III, Donald	Illinois Inst. of Tech.
Spenko, Matthew	Illinois Inst. of Tech.
15:30-15:45	TuC07.5
<i>Stable Open-Loop Brachiation on a Vertical Wall</i> , pp. 1193-1199. Attachment	
Rosa, Nelson	Northwestern Univ.
Barber, Adam	Northwestern Univ.
Gregg, Robert D.	Northwestern Univ.
Lynch, Kevin	Northwestern Univ.
15:45-16:00	TuC07.6
<i>System and Design of Clothbot: A Robot for Flexible Clothes Climbing</i> , pp. 1200-1205. Attachment	
Liu, Yuanyuan	Shenzhen Inst. of Advanced Tech.
Wu, Xinyu	Shenzhen Inst. of Advanced Tech.

Qian, Huihuan
Zheng, Duan
Sun, Jianquan
Xu, Yangsheng

CUHK
Guangxi Univ. Tech.
Shenzhen Inst. of Advanced Tech.
Chinese Univ. of Hong Kong/Shenzhen Institute of Advanced Tech.

TuC08		Meeting Room 8 (Wacipi)
Human Detection and Tracking (Regular Session)		
Chair: Trahanias, Panos	Foundation for Res. and Tech. – Hellas (FORTH)	
Co-Chair: Alempijevic, Alen	Univ. of Tech. Sydney (FEIT)	
14:30-14:45		TuC08.1
<i>Iterative Pedestrian Segmentation and Pose Tracking under a Probabilistic Framework</i> , pp. 1206-1211.		
Li, Yanli		Beihang Univ.
Zhou, Zhong		Beihang Univ.
Wu, Wei		Beihang Univ.
14:45-15:00		TuC08.2
<i>A Connectionist-Based Approach for Human Action Identification</i> , pp. 1212-1217.		
Al Azrai, Rami		Purdue Univ.
Lee, C. S. George		Purdue Univ.
15:00-15:15		TuC08.3
<i>Using Dempster's Rule of Combination to Robustly Estimate Pointed Targets</i> , pp. 1218-1225.		
Pateraki, Maria	Foundation for Res. and Tech. - Hellas	
Baltzakis, Haris	Foundation for Res. and Tech. - Hellas	
Trahanias, Panos	Foundation for Res. and Tech. – Hellas (FORTH)	
15:15-15:30		TuC08.4
<i>Head-To-Shoulder Signature for Person Recognition</i> , pp. 1226-1231. Attachment		
Kirchner, Nathan		Univ. of Tech.
Alempijevic, Alen		Univ. of Tech. Sydney (FEIT)
Virgona, Alexander Joseph		Univ. of Tech. Sydney
15:30-15:45		TuC08.5
<i>Bigram-Based Natural Language Model and Statistical Motion Symbol Model for Scalable Language of Humanoid Robots</i> , pp. 1232-1237.		
Takano, Wataru		Univ. of Tokyo
Nakamura, Yoshihiko		Univ. of Tokyo
15:45-16:00		TuC08.6
<i>Cognitive Active Vision for Human Identification</i> , pp. 1238-1245.		
Utsumi, Yuzuko		Osaka Prefecture Univ.
Sommerlade, Eric		Univ. of Oxford
Bellotto, Nicola		Univ. of Lincoln
Reid, Ian		Univ. of Oxford
TuC09		Meeting Room 9 (Sa)
Mapping (Regular Session)		
Chair: Kim, Jonghyuk	The Australian National Univ.	
Co-Chair: Paz, Lina María	Univ. of Zaragoza	
14:30-14:45		TuC09.1
<i>Decomposable Bundle Adjustment Using a Junction Tree</i> , pp. 1246-1253.		
Pinies, Pedro		Univ. de Zaragoza
Paz, Lina María		Univ. of Zaragoza
Haner, Sebastian		Lund Inst. of Tech.
Heyden, Anders		Lund Inst. of Tech.
14:45-15:00		TuC09.2
<i>Towards a Robust Back-End for Pose Graph SLAM</i> , pp. 1254-1261.		
Sünderhauf, Niko		Chemnitz Univ. of Tech.

Protzel, Peter	Chemnitz Univ. of Tech.
15:00-15:15	TuC09.3
<i>An Incremental Trust-Region Method for Robust Online Sparse Least-Squares Estimation</i> , pp. 1262-1269.	
Rosen, David	Massachusetts Inst. of Tech.
Kaess, Michael	MIT
Leonard, John	MIT
15:15-15:30	TuC09.4
<i>Weak Constraints Network Optimiser</i> , pp. 1270-1277. Attachment	
Berger, Cyrille	Linköping Univ.
15:30-15:45	TuC09.5
<i>Multi-Agent Deterministic Graph Mapping Via Robot Rendezvous</i> , pp. 1278-1283.	
Gong, Chaohui	Carnegie Mellon Univ.
Tully, Stephen	Carnegie Mellon Univ.
Kantor, George	Carnegie Mellon Univ.
Choset, Howie	Carnegie Mellon Univ.
15:45-16:00	TuC09.6
<i>The RoboEarth Language: Representing and Exchanging Knowledge about Actions, Objects, and Environments</i> , pp. 1284-1289.	
Tenorth, Moritz	TU München
Perzylo, Alexander Clifford	Tech. Univ. Muenchen
Lafrenz, Reinhard	Tech. Univ. München
Beetz, Michael	Tech. Univ. München
TuC110	Ballroom D
Interactive Session TuC-1 (Interactive Session)	
Chair: Siciliano, Bruno	Univ. Napoli Federico II
Co-Chair: Blum, Manuel	Albert-Ludwigs-Univ. Freiburg
14:30-15:00	TuC110.1
<i>On Combining Visual SLAM and Dense Scene Flow to Increase the Robustness of Localization and Mapping in Dynamic Environments</i> , pp. 1290-1297. Attachment	
Fernández Alcantarilla, Pablo	Univ. of Alcalá
Yebes, Torres, José Javier	Pol. school. Univ. of Alcalá
Almazán, Javier	Univ. of Alcalá
Bergasa, Luis Miguel	Univ. of Alcalá
14:30-15:00	TuC110.2
<i>A Learned Feature Descriptor for Object Recognition in RGB-D Data</i> , pp. 1298-1303.	
Blum, Manuel	Albert-Ludwigs-Univ. Freiburg
Springenberg, Jost Tobias	Albert-Ludwigs-Univ. of Freiburg
Wülfing, Jan	Albert-Ludwigs-Univ. Freiburg
Riedmiller, Martin	Albert-Ludwigs-Univ. Freiburg
14:30-15:00	TuC110.3
<i>A Flexible Visual Inspection System Combining Pose Estimation and Visual Servo Approaches</i> , pp. 1304-1309.	
Zang, Chuantao	Tohoku Univ.
Hashimoto, Koichi	Tohoku Univ.
14:30-15:00	TuC110.4
<i>SIGVerse - a Cloud Computing Architecture Simulation Platform for Social Human-Robot Interaction</i> , pp. 1310-1315.	
Tan, Jeffrey Too Chuan	National Inst. of Informatics
Inamura, Tetsunari	National Inst. of Informatics
14:30-15:00	TuC110.5
<i>Generating Optimal Trajectory of Humanoid Arm That Minimizes Torque Variation Using Differential Dynamic Programming</i> , pp. 1316-1321.	
Park, In-Won	KAIST
Hong, Young-Dae	KAIST
Lee, Bum-Joo	Myongji Univ.

TuC210		Ballroom D
Interactive Session TuC-2 (Interactive Session)		
Chair: Siciliano, Bruno		Univ. Napoli Federico II
Co-Chair: Blum, Manuel		Albert-Ludwigs-Univ. Freiburg
15:00-15:30		TuC210.1
<i>Integrated Online Localization and Navigation for People with Visual Impairments Using Smart Phones</i> , pp. 1322-1329.		
<u>Attachment</u>		
Apostolopoulos, Ilias		Univ. of Nevada, Reno
Fallah, Navid		Computer Science and Engineering, Univ. of Nevada, Reno
Folmer, Eelke		Computer Science and Engineering Department, Univ. of Nevada
Bekris, Kostas E.		Univ. of Nevada, Reno
15:00-15:30		TuC210.2
<i>Detection-Based Object Labeling in 3D Scenes</i> , pp. 1330-1337.		
Lai, Kevin		Univ. of Washington
Bo, Liefeng		Univ. of Washington
Ren, Xiaofeng		Intel Lab.
Fox, Dieter		Univ. of Washington
15:00-15:30		TuC210.3
<i>Generation of Independent Contact Regions on Objects Reconstructed from Noisy Real-World Range Data</i> , pp. 1338-1344.		
Charusta, Krzysztof Andrzej		Center for Applied Autonomous Sensor Systems ÖrebroUniversity,,
Krug, Robert		Oerebro Univ.
Stoyanov, Todor		Learning Systems Lab. Center for Applied Autonomous Sensor Syste
Dimitrov, Dimitar Nikolaev		Oerebro Univ.
Iliev, Boyko		Orebro Univ.
15:00-15:30		TuC210.4
<i>A Multi-Sensor Visual Tracking System for Behavior Monitoring of At-Risk Children</i> , pp. 1345-1350.		
Sivalingam, Ravishankar		Univ. of Minnesota
Cherian, Anoop		U. of Minnesota
Fasching, Joshua		Univ. of Minnesota
Walczak, Nicholas		Univ. of Minnesota
Morellas, Vassilios		U. of Minnesota
Papanikolopoulos, Nikos		Univ. of Minnesota
Lim, Kelvin		Psychiatry
Sapiro, Guillermo		Univ. of Minnesota
Murphy, Barbara		Univ. of Minnesota
Bird, Nathaniel		Ohio Northern Univ.
Cullen, Kathryn		UMN
15:00-15:30		TuC210.5
<i>Numerical Computation of Manipulator Singularities</i> , pp. 1351-1358.		
Bohigas, Oriol		Consejo Superior de Investigaciones Científicas
Zlatanov, Dimitar		Univ. of Genoa
Ros, Lluís		Consejo Superior de Investigaciones Científicas (CSIC)
Manubens, Montserrat		Consejo Superior de Investigaciones Científicas
Porta, Josep M		CSIC-UPC
TuC310		Ballroom D
Interactive Session TuC-3 (Interactive Session)		
Chair: Siciliano, Bruno		Univ. Napoli Federico II
Co-Chair: Blum, Manuel		Albert-Ludwigs-Univ. Freiburg
15:30-16:00		TuC310.1
<i>Indoor Robot/human Localization Using Dynamic Triangulation and Wireless Pyroelectric Infrared Sensory Fusion Approaches</i> , pp. 1359-1364.		

Luo, Ren	National Taiwan Univ.
Chen, Ogst	National Chung Cheng Univ.
Lin, Pei-Hsien	National Taiwan Univ.
15:30-16:00	TuC310.2
<i>Occlusion-Aware Reconstruction and Manipulation of 3D Articulated Objects</i> , pp. 1365-1371. Attachment	
Huang, Xiaoxia	Clemson Univ.
Walker, Ian	Clemson Univ.
Birchfield, Stan	Clemson Univ.
15:30-16:00	TuC310.3
<i>Two Ball Juggling with High-Speed Hand-Arm and High-Speed Vision System</i> , pp. 1372-1377.	
Kizaki, Takahiro	Chiba Univ.
Namiki, Akio	Chiba Univ.
15:30-16:00	TuC310.4
<i>Online 3D Tracking of Human Arms with a Single Camera</i> , pp. 1378-1383.	
Tu, Ming-Han	National Taiwan Univ.
Huang, Cheng-Ming	National Taipei Univ. of Tech.
Fu, Li-Chen	National Taiwan Univ.
15:30-16:00	TuC310.5
<i>Casimir Based Impedance Control</i> , pp. 1384-1391.	
Sakai, Satoru	Shinshu Univ.
Stramigioli, Stefano	Univ. of Twente
TuD01	Meeting Room 1 (Mini-sota)
Force & Tactile Sensors (Regular Session)	
Chair: Ohka, Masahiro	Nagoya Univ.
Co-Chair: Althoefer, Kaspar	Kings Coll. London
16:30-16:45	TuD01.1
<i>Finger Flexion Force Sensor Based on Volar Displacement of Flexor Tendon</i> , pp. 1392-1397.	
Heo, Pilwon	KAIST
Kim, Jung	KAIST
16:45-17:00	TuD01.2
<i>A Compact Two DOF Magneto-Elastomeric Force Sensor for a Running Quadruped</i> , pp. 1398-1403.	
Ananthanarayanan, Arvind	MA Inst. OF Tech.
Foong, Shaohui	Singapore Univ. of Tech. and Design
Kim, Sangbae	Massachusetts Inst. of Tech.
17:00-17:15	TuD01.3
<i>Basic Experiments of Three-Axis Tactile Sensor Using Optical Flow</i> , pp. 1404-1409.	
Ohka, Masahiro	Nagoya Univ.
Matsunaga, Takuya	Hitachi Omuron
Nojima, Yu	Hitachi
Noda, Daiji	Univ. of Hyogo
Hattori, Tadashi	Univ. of Hyogo
17:15-17:30	TuD01.4
<i>A Computationally Fast Algorithm for Local Contact Shape and Pose Classification Using a Tactile Array Sensor</i> , pp. 1410-1415.	
Liu, Hongbin	King's Coll. London
Song, Xiaojing	King's Coll. London
Nanayakkara, Thrishantha	King's Coll. Univ. of London
Seneviratne, Lakmal	Kings Coll. London
Althoefer, Kaspar	Kings Coll. London
17:30-17:45	TuD01.5
<i>Analysis of the Trade-Off between Resolution and Bandwidth for a Nanoforce Sensor Based on Diamagnetic Levitation</i> , pp. 1416-1421.	

Piat, Emmanuel	UFC ENSMM
Abadie, Joel	UFC ENSMM
Oster, Stéphane	Femto-st

17:45-18:00 TuD01.6

An Investigation of the Use of Linear Polarizers to Measure Force and Torque in Optical 6-DOF Force/Torque Sensors for Dexterous Manipulators, pp. 1422-1427.

Sargeant, Ramon	Kings Coll. London
Seneviratne, Lakmal	Kings Coll. London
Althoefer, Kaspar	Kings Coll. London

TuD02 Meeting Room 2 (Chief Red Wing)

Humanoid Motion Planning and Control (Regular Session)

Chair: Park, Frank	Seoul National Univ.
Co-Chair: Khatib, Oussama	Stanford Univ.

16:30-16:45 TuD02.1

Controlling the Planar Motion of a Heavy Object by Pushing with a Humanoid Robot Using Dual-Arm Force Control, pp. 1428-1435. Attachment

Nozawa, Shunichi	The Univ. of Tokyo
Kakiuchi, Yohei	The Univ. of Tokyo
Okada, Kei	The Univ. of Tokyo
Inaba, Masayuki	The Univ. of Tokyo

16:45-17:00 TuD02.2

Hopping at the Resonance Frequency: A Pattern Generation Technique for Bipedal Robots with Elastic Joints, pp. 1436-1443.

Ugurlu, Barkan	Toyota Tech. Inst.
Saglia, Jody Alessandro	Fondazione Istituto Italiano di Tecnologia
Tsagarakis, Nikolaos	Istituto Italiano di Tecnologia
Caldwell, Darwin G.	Italian Inst. of Tech.

17:00-17:15 TuD02.3

Humanoid Motion Optimization Via Nonlinear Dimension Reduction, pp. 1444-1449.

Kang, Hyuk	Seoul Nat'l Univ.
Park, Frank	Seoul National Univ.

17:15-17:30 TuD02.4

A Neurorobotic Model of Bipedal Locomotion Based on Principles of Human Neuromuscular Architecture, pp. 1450-1455.

Attachment

Klein, Theresa	Univ. of Arizona
Lewis, M. Anthony	Univ. of Arizona

17:30-17:45 TuD02.5

Walking Control of Fully Actuated Robots Based on the Bipedal SLIP Model, pp. 1456-1463.

Garofalo, Gianluca	DLR
Ott, Christian	German Aerospace Center (DLR)
Albu-Schäffer, Alin	DLR - German Aerospace Center

17:45-18:00 TuD02.6

Muscle Force Transmission to Operational Space Accelerations During Elite Golf Swings, pp. 1464-1469.

Demircan, Emel	Stanford Univ.
Besier, Thor F.	Auckland Bioengineering Inst.
Khatib, Oussama	Stanford Univ.

TuD03 Meeting Room 3 (Mak'to)

Cable-Driven Mechanisms (Regular Session)

Chair: Gosselin, Clement	Univ. Laval
Co-Chair: Ozawa, Ryuta	Ritsumeikan Univ.

16:30-16:45 TuD03.1

Novel Equilibrium-Point Control of Agonist-Antagonist System with Pneumatic Artificial Muscles, pp. 1470-1475.

Ariga, Yohei	Osaka Univ.
Pham, Hang	Graduate School of Engineering Science, Osaka Univ.
Uemura, Mitsunori	Ritsumeikan Univ.
Hirai, Hiroaki	Graduate School of Engineering Science, Osaka Univ.
Miyazaki, Fumio	Graduate School of Engineering Science, Osaka Univ.
16:45-17:00	TuD03.2
<i>Dynamic Trajectory Planning of a Two-DOF Cable-Suspended Parallel Robot</i> , pp. 1476-1481.	
Gosselin, Clement	Univ. Laval
Ren, Ping	Univ. Laval
Foucault, Simon	Univ. Laval
17:00-17:15	TuD03.3
<i>Force-Closure of Spring-Loaded Cable-Driven Open Chains: Minimum Number of Cables Required & Influence of Spring Placements</i> , pp. 1482-1487.	
Mustafa, Shabbir Kurbanhusen	Singapore Inst. of Manufacturing Tech.
Agrawal, Sunil	Univ. of Delaware
17:15-17:30	TuD03.4
<i>Development of a MR-Compatible Cable-Driven Manipulator: Design and Technological Issues</i> , pp. 1488-1494.	
Abdelaziz, Salih	LSIIT, Univ. of Strasbourg
Esteveny, Laure	LSIIT, Univ. of Strasbourg
Barbé, Laurent	Univ. of Strasbourg, LSIIT UMR CNRS
Renaud, Pierre	LSIIT, Strasbourg Univ.
Bayle, Bernard	Univ. of Strasbourg
de Mathelin, Michel	Univ. of Strasbourg
17:30-17:45	TuD03.5
<i>Application of Unscented Kalman Filter to a Cable Driven Surgical Robot: A Simulation Study</i> , pp. 1495-1500.	
Ramadurai, Srikrishnan	Univ. of Washington
Nia Kosari, Sina	Univ. of Washington
King, H. Hawkeye	Univ. of Washington
Chizeck, Howard	Univ. of Washington
Hannaford, Blake	Univ. of Washington
17:45-18:00	TuD03.6
<i>Joint Control of Tendon-Driven Mechanisms with Branching Tendons</i> , pp. 1501-1507.	
Sawada, Daisuke	Ritsumeikan Univ.
Ozawa, Ryuta	Ritsumeikan Univ.
TuD04	Meeting Room 4 (Chief Wabasha)
Force, Torque and Contacts in Grasping and Assembly (Regular Session)	
Chair: Prattichizzo, Domenico	Univ. di Siena
Co-Chair: Johansson, Rolf	Lund Univ.
16:30-16:45	TuD04.1
<i>Object Motion-Decoupled Internal Force Control for a Compliant Multifingered Hand</i> , pp. 1508-1513.	
Prattichizzo, Domenico	Univ. di Siena
Malvezzi, Monica	Univ. of Siena
Wimboeck, Thomas	German Aerospace Center (DLR)
Aggravi, Marco	Univ. of Siena
16:45-17:00	TuD04.2
<i>Robust, Inexpensive Resonant Frequency Based Contact Detection for Robotic Manipulators</i> , pp. 1514-1519.	
Backus, Spencer	Yale Univ.
Dollar, Aaron	Yale Univ.
17:00-17:15	TuD04.3
<i>Testing Pressurized Spacesuit Glove Torque with an Anthropomorphic Robotic Hand</i> , pp. 1520-1525.	
Roberts, Dustyn	Pol. Inst. of New York Univ. (NYU-Pol.
Poon, Jack	Pol. Inst. of New York Univ.
Patrick, Daniella	Pol. Inst. of New York Univ.

Kim, Joo H.	Pol. Inst. of New York Univ. (NYU-Pol.)
17:15-17:30	TuD04.4
<i>Learning Grasping Force from Demonstration</i> , pp. 1526-1531.	
Lin, Yun	Univ. of South florida
Ren, Shaogang	Univ. of South Florida
Clevenger, Matthew	Univ. of South Florida
Sun, Yu	Univ. of South Florida
17:30-17:45	TuD04.5
<i>Revised Force Control Using a Compliant Sensor with a Position Controlled Robot</i> , pp. 1532-1537. Attachment	
Lange, Friedrich	German Aerospace Center (DLR)
Jehle, Claudius	German Aerospace Center (DLR)
Suppa, Michael	German Aerospace Center (DLR)
Hirzinger, Gerd	German Aerospace Center (DLR)
17:45-18:00	TuD04.6
<i>Force Controlled Robotic Assembly without a Force Sensor</i> , pp. 1538-1543. Attachment	
Stolt, Andreas	Lund Univ.
Linderoth, Magnus	Lund Univ.
Robertsson, Anders	LTH, Lund Univ.
Johansson, Rolf	Lund Univ.
TuD05	Meeting Room 5 (Ska)
Multi-Robot Systems II (Regular Session)	
Chair: Bekris, Kostas E.	Univ. of Nevada, Reno
Co-Chair: Guo, Yi	Stevens Inst. of Tech.
16:30-16:45	TuD05.1
<i>Distributed Value Functions for Multi-Robot Exploration</i> , pp. 1544-1550.	
Matignon, Laetitia	Univ. de Caen Basse-Normandie - GREYC/CNRS
Jeanpierre, Laurent	Univ. of Caen
Mouaddib, Abdel-Iliah	GREYC-UMR 6072
16:45-17:00	TuD05.2
<i>Steiner Traveler: Relay Deployment for Remote Sensing in Heterogeneous Multi-Robot Exploration</i> , pp. 1551-1556.	
Pei, Yuanteng	Michigan State Univ.
Mutka, Matt	Michigan State University
17:00-17:15	TuD05.3
<i>Minimal Persistence Control on Dynamic Directed Graphs for Multi-Robot Formation</i> , pp. 1557-1563. Attachment	
Wang, Hua	Stevens Inst. of Tech.
Guo, Yi	Stevens Inst. of Tech.
17:15-17:30	TuD05.4
<i>Distributed Formation Control of Unicycle Robots</i> , pp. 1564-1569.	
Sadowska, Anna	Queen Mary Univ. of London
Kostic, Dragan	Eindhoven Univ. of Tech.
van de Wouw, Nathan	Eindhoven Univ. of Tech.
Huijberts, Henri	Queen Mary, Univ. of London
Nijmeijer, Hendrik	Eindhoven Univ. of Tech.
17:30-17:45	TuD05.5
<i>Multi-Level Formation Roadmaps for Collision-Free Dynamic Shape Changes with Non-Holonomic Teams</i> , pp. 1570-1575.	
Krontiris, Athanasios	Univ. of Nevada, Reno
Louis, Sushil	Univ. of Nevada, Reno
Bekris, Kostas E.	Univ. of Nevada, Reno
17:45-18:00	TuD05.6
<i>An Unscented Model Predictive Control Approach to the Formation Control of Nonholonomic Mobile Robots</i> , pp. 1576-1582.	
Farrokhsiar, Morteza	UBC
Najjaran, Homayoun	Univ. of British Columbia

TuD06		Meeting Room 6 (Oya'te)
Needle Steering (Regular Session)		
Chair: Alterovitz, Ron		Univ. of North Carolina at Chapel Hill
Co-Chair: Webster III, Robert James		Vanderbilt Univ.
16:30-16:45		TuD06.1
<i>A New Hand-Held Force-Amplifying Device for Micromanipulation</i> , pp. 1583-1588.		
Payne, Christopher		Imperial Coll. London
Tun Latt, Win		Imperial Coll. London
Yang, Guang-Zhong		Imperial Coll. London
16:45-17:00		TuD06.2
<i>An Optical Actuation System and Curvature Sensor for a MR-Compatible Active Needle</i> , pp. 1589-1594.		
Ryu, Seok Chang		Stanford Univ.
Quek, Zhan Fan		Stanford Univ.
Renaud, Pierre		LSIIT, Strasbourg Univ.
Black, Richard J.		Intelligent Fiber Optic Systems Corp.
Daniel, Bruce		Stanford Univ. Department of Radiology
Cutkosky, Mark		Stanford Univ.
17:00-17:15		TuD06.3
<i>Semi-Automatic Needle Steering System with Robotic Manipulator</i> , pp. 1595-1600.		
Bernardes, Mariana Costa		Univ. of Montpellier 2 / CNRS - LIRMM
Adorno, Bruno Vilhena		Federal Univ. of Minas Gerais (UFMG)
Poignet, Philippe		LIRMM UMR 5506 CNRS UM2
Borges, Geovany Araujo		Univ. de Brasilia
17:15-17:30		TuD06.4
<i>Torsional Dynamics Compensation Enhances Robotic Control of Tip-Steerable Needles</i> , pp. 1601-1606.		
Swensen, John		Johns Hopkins Univ.
Cowan, Noah J.		Johns Hopkins Univ.
17:30-17:45		TuD06.5
<i>The Impact of Interaction Model on Stability and Transparency in Bilateral Teleoperation for Medical Applications</i> , pp. 1607-1613.		
Sanchez Secades, Luis Alonso		Lab. d'Informatique, de Robotique et de Microélectronique
Le, Minh-Quyen		INSA de Lyon
Liu, Chao		LIRMM (UMR5506), CNRS, France
Zemiti, Nabil		Univ. Montpellier II - CNRS UMR 5506
Poignet, Philippe		LIRMM UMR 5506 CNRS UM2
17:45-18:00		TuD06.6
<i>Towards a Discretely Actuated Steerable Cannula</i> , pp. 1614-1619.		
Ayvali, Elif		Univ. of Maryland, Coll. Park
Desai, Jaydev P.		Univ. of Maryland
TuD07		Meeting Room 7 (Remnicha)
Perception for Autonomous Vehicles (Regular Session)		
Chair: Daniilidis, Kostas		Univ. of Pennsylvania
Co-Chair: Wuensche, Hans J		UniBw Munich
16:30-16:45		TuD07.1
<i>Active Perception for Autonomous Vehicles</i> , pp. 1620-1627. Attachment		
Unterholzner, Alois		Univ. of the Bundeswehr Munich
Himmelsbach, Michael		Univ. of the Bundeswehr Munich
Wuensche, Hans J		UniBw Munich
16:45-17:00		TuD07.2
<i>A Probabilistic Framework for Car Detection in Images Using Context and Scale</i> , pp. 1628-1634.		
Held, David		Stanford Univ.

Levinson, Jesse	Stanford Univ.
Thrun, Sebastian	Stanford Univ.
17:00-17:15	TuD07.3
<i>Real-Time Topometric Localization</i> , pp. 1635-1642.	
Badino, Hernan	Carnegie Mellon Univ.
Huber, Daniel	CMU
Kanade, Takeo	Carnegie Mellon Univ.
17:15-17:30	TuD07.4
<i>SeqSLAM: Visual Route-Based Navigation for Sunny Summer Days and Stormy Winter Nights</i> , pp. 1643-1649. Attachment	
Milford, Michael J	Queensland Univ. of Tech.
Wyeth, Gordon	Queensland Univ. of Tech.
17:30-17:45	TuD07.5
<i>Image Sequence Partitioning for Outdoor Mapping</i> , pp. 1650-1655.	
Korrapati, Hemanth	Inst. Pascal
Mezouar, Youcef	Blaise Pascal Univ.
Martinet, Philippe	Ec. Centrale de Nantes
Courbon, Jonathan	Blaise Pascal Univ.
17:45-18:00	TuD07.6
<i>Anytime Merging of Appearance Based Maps</i> , pp. 1656-1662.	
Erinc, Gorkem	Univ. of California Merced
Carpin, Stefano	Univ. of California, Merced
TuD08	Meeting Room 8 (Wacipi)
RGB-D Localization and Mapping (Regular Session)	
Chair: Lui, Wen Lik Dennis	Monash Univ.
Co-Chair: Xiao, Jizhong	The City Coll. of New York
16:30-16:45	TuD08.1
<i>Efficient Scene Simulation for Robust Monte Carlo Localization Using an RGB-D Camera</i> , pp. 1663-1670. Attachment	
Fallon, Maurice	MIT
Johannsson, Hordur	MIT
Leonard, John	MIT
16:45-17:00	TuD08.2
<i>Robust Egomotion Estimation Using ICP in Inverse Depth Coordinates</i> , pp. 1671-1678. Attachment	
Lui, Wen Lik Dennis	Monash Univ.
Tang, Titus Jia Jie	Monash Univ.
Drummond, Tom	Univ. of Cambridge
Li, Wai Ho	Monash Univ.
17:00-17:15	TuD08.3
<i>Online Egomotion Estimation of RGB-D Sensors Using Spherical Harmonics</i> , pp. 1679-1684.	
Osteen, Philip	Motile Robotics Inc
Owens, Jason	US Army Res. Lab.
Kessens, Chad C.	United States Army Res. Lab.
17:15-17:30	TuD08.4
<i>Incremental Registration of RGB-D Images</i> , pp. 1685-1690.	
Dryanovski, Ivan	The Graduate Center, The City Univ. of New York (CUNY)
Jaramillo, Carlos	The City Coll. of New York
Xiao, Jizhong	The City Coll. of New York
17:30-17:45	TuD08.5
<i>An Evaluation of the RGB-D SLAM System</i> , pp. 1691-1696.	
Endres, Felix	Univ. of Freiburg
Hess, Juergen Michael	Univ. of Freiburg
Engelhard, Nikolas	Univ. of Freiburg
Sturm, Jürgen	Tech. Univ. of Munich

Cremers, Daniel Burgard, Wolfram	Tech. Univ. of Munich Univ. of Freiburg
17:45-18:00	TuD08.6
<i>Depth Camera Based Indoor Mobile Robot Localization and Navigation</i> , pp. 1697-1702. Attachment	
Biswas, Joydeep Veloso, Manuela	Carnegie Mellon Univ. Carnegie Mellon Univ.
TuD09	Meeting Room 9 (Sa)
Sensing for Manipulation (Regular Session)	
Chair: Vincze, Markus Co-Chair: Ude, Ales	Vienna Univ. of Tech. Jozef Stefan Inst.
16:30-16:45	TuD09.1
<i>Using Depth and Appearance Features for Informed Robot Grasping of Highly Wrinkled Clothes</i> , pp. 1703-1708.	
Ramisa, Arnau Alenyà, Guillem Moreno-Noguer, Francesc Torras, Carme	CSIC-UPC CSIC-UPC CSIC CSIC - UPC
16:45-17:00	TuD09.2
<i>Integrating Surface-Based Hypotheses and Manipulation for Autonomous Segmentation and Learning of Object Representations</i> , pp. 1709-1715. Attachment	
Ude, Ales Schiebener, David Sugimoto, Norikazu Morimoto, Jun	Jozef Stefan Inst. Univ. of Karlsruhe ATR Computational Neuroscience Lab. ATR Computational Neuroscience Lab.
17:00-17:15	TuD09.3
<i>From Object Categories to Grasp Transfer Using Probabilistic Reasoning</i> , pp. 1716-1723.	
Madry, Marianna Song, Dan Kragic, Danica	Royal Inst. of Tech. (KTH), Sweden Royal Inst. of Tech. (KTH), Stockholm KTH
17:15-17:30	TuD09.4
<i>Voting-Based Pose Estimation for Robotic Assembly Using a 3D Sensor</i> , pp. 1724-1731. Attachment	
Choi, Changhyun Taguchi, Yuichi Tuzel, Oncel Liu, Ming-Yu Ramalingam, Srikumar	Georgia Inst. of Tech. Mitsubishi Electric Res. Lab. MERL Univ. of Maryland Coll. Park Mitsubishi Electric Res. Lab.
17:30-17:45	TuD09.5
<i>Supervised Learning of Hidden and Non-Hidden 0-Order Affordances and Detection in Real Scenes</i> , pp. 1732-1739.	
Aldoma, Aitor Tombari, Federico Vincze, Markus	Vienna Univ. of Tech. Univ. of Bologna Vienna Univ. of Tech.
17:45-18:00	TuD09.6
<i>Estimating Object Grasp Sliding Via Pressure Array Sensing</i> , pp. 1740-1746.	
Alcazar, Javier Adolfo Barajas, Leandro	General Motors Res. Lab. General Motors, R&D Center
TuD110	Ballroom D
Interactive Session TuD-1 (Interactive Session)	
Chair: Meng, Max Q.-H. Co-Chair: Tokekar, Pratap	The Chinese Univ. of Hong Kong Univ. of Minnesota
16:30-17:00	TuD110.1
<i>Robot Path Planning Using Field Programmable Analog Arrays</i> , pp. 1747-1752.	
Koziol, Scott	Georgia Inst. of Tech.

Hasler, Paul Stilman, Mike	Georgia Inst. of Tech. Georgia Tech.
16:30-17:00	TuD110.2
<i>Learning Utility Models for Decentralised Coordinated Target Tracking</i> , pp. 1753-1759.	
Xu, Zhe Fitch, Robert Sukkarieh, Salah	The Univ. of Sydney Univ. of Sydney Univ. of Sydney
16:30-17:00	TuD110.3
<i>Short Range 3D Depth Sensing Via Multiple Intensity Differentiation</i> , pp. 1760-1765. Attachment	
Um, Dugan Ryu, Dongseok Kal, Myung Joon Kang, Sungchul	Texas A&M Univ. - CC Texas A&M Univ. Christi DINAST Korea Inst. of Science & Tech.
16:30-17:00	TuD110.4
<i>A Conditional Random Field Model for Place and Object Classification</i> , pp. 1766-1772. Attachment	
Rogers III, John G. Christensen, Henrik Iskov	Georgia Inst. of Tech. Georgia Inst. of Tech.
16:30-17:00	TuD110.5
<i>XRobots: A Flexible Language for Programming Mobile Robots Based on Hierarchical State Machines</i> , pp. 1773-1778.	
Tousignant, Steve Van Wyk, Eric Gini, Maria	Univ. of Minnesota Univ. of Minnesota Univ. of Minnesota
TuD210	Ballroom D
Interactive Session TuD-2 (Interactive Session)	
Chair: Meng, Max Q.-H. Co-Chair: Tokekar, Pratap	The Chinese Univ. of Hong Kong Univ. of Minnesota
17:00-17:30	TuD210.1
<i>The Toggle Local Planner for Sampling-Based Motion Planning</i> , pp. 1779-1786.	
Denny, Jory Amato, Nancy	Texas A&M Univ. Texas A&M Univ.
17:00-17:30	TuD210.2
<i>Cautious Greedy Strategy for Bearing-Based Active Localization: Experiments and Theoretical Analysis</i> , pp. 1787-1792.	
Vander Hook, Joshua Tokekar, Pratap Isler, Volkan	Univ. of Minnesota Univ. of Minnesota Univ. of Minnesota
17:00-17:30	TuD210.3
<i>Compact Covariance Descriptors in 3D Point Clouds for Object Recognition</i> , pp. 1793-1798.	
Fehr, Duc Cherian, Anoop Sivalingam, Ravishankar Nickolay, Sam Morellas, Vassilios Papanikolopoulos, Nikos	Univ. of Minnesota U. of Minnesota Univ. of Minnesota UMN U. of Minnesota Univ. of Minnesota
17:00-17:30	TuD210.4
<i>On-Line Next Best Grasp Selection for In-Hand Object 3D Modeling with Dual-Arm Coordination</i> , pp. 1799-1804.	
Tsuda, Atsushi Kakiuchi, Yohei Nozawa, Shunichi Ueda, Ryohei Okada, Kei Inaba, Masayuki	The Univ. of Tokyo The Univ. of Tokyo The Univ. of Tokyo The Univ. of Tokyo The Univ. of Tokyo The Univ. of Tokyo
17:00-17:30	TuD210.5

Efficient Task Execution and Refinement through Multi-Resolution Corrective Demonstration, pp. 1805-1810.

Merikli, Cetin Carnegie Mellon Univ.
Velooso, Manuela Carnegie Mellon Univ.
Akin, H. Levent Bogazici Univ.

TuD310	Ballroom D
Interactive Session TuD-3 (Interactive Session)	
Chair: Meng, Max Q.-H.	The Chinese Univ. of Hong Kong
Co-Chair: Tokekar, Pratap	Univ. of Minnesota
17:30-18:00	TuD310.1
<i>Maintaining Visibility for Leader-Follower Formations in Obstacle Environments</i> , pp. 1811-1816.	
Panagou, Dimitra	National Tech. Univ. of Athens
Kumar, Vijay	Univ. of Pennsylvania
17:30-18:00	TuD310.2
<i>WISS, a Speaker Identification System for Mobile Robots</i> , pp. 1817-1822.	
Grondin, Francois	Univ. de Sherbrooke
Michaud, Francois	Univ. de Sherbrooke
17:30-18:00	TuD310.3
<i>A Novel Correspondence Searching Strategy in Multiocular Vision</i> , pp. 1823-1828.	
Wei, Ning	Shenzhen Inst. of Advanced Tech. Chinese Acad. of S
Li, Baopu	Chinese Univ. of Hong Kong
He, Qing	Shenzhen Inst. of Advanced Tech. CAS
Hu, Chao	SIAT
Meng, Max Q.-H.	The Chinese Univ. of Hong Kong
17:30-18:00	TuD310.4
<i>Results with Autonomous Vehicles Operating in Specialty Crops</i> , pp. 1829-1835.	
Bergerman, Marcel	Carnegie Mellon Univ.
Singh, Sanjiv	Carnegie Mellon Univ.
Hamner, Brad	Carnegie Mellon Univ.
17:30-18:00	TuD310.5
<i>RDIS: Generalizing Domain Concepts to Specify Device to Framework Mappings</i> , pp. 1836-1841.	
Anderson, Monica	The Univ. of Alabama
Kilgo, Paul	The Univ. of Alabama
Bowman, Jason	The Univ. of Alabama

Technical Program for Wednesday May 16, 2012

WeA01	Meeting Room 1 (Mini-sota)
Learning and Adaptation Control of Robotic Systems II (Regular Session)	
Chair: Billard, Aude	EPFL
Co-Chair: Zucker, Matthew	Swarthmore Coll.
08:30-08:45	WeA01.1
<i>Online Learning of Varying Stiffness through Physical Human-Robot Interaction</i> , pp. 1842-1849. Attachment	
Kronander, Klas	Learning Algorithms and Systems Lab. EPFL
Billard, Aude	EPFL
08:45-09:00	WeA01.2
<i>Reinforcement Planning: RL for Optimal Planners</i> , pp. 1850-1855. Attachment	
Zucker, Matthew	Swarthmore Coll.
Bagnell, James	Carnegie Mellon Univ.
09:00-09:15	WeA01.3
<i>Adaptive Collaborative Estimation of Multi-Agent Mobile Robotic Systems</i> , pp. 1856-1861.	
Nesting, Stephen	Worcester Pol. Inst.
Demetriou, Michael	Worcester Pol. Inst.
09:15-09:30	WeA01.4
<i>Lingodroids: Learning Terms for Time</i> , pp. 1862-1867.	
Heath, Scott Christopher	Univ. of Queensland
Schulz, Ruth	The Univ. of Queensland
Ball, David	The Univ. of Queensland
Wiles, Janet	Univ. of Queensland
09:30-09:45	WeA01.5
<i>Teaching Nullspace Constraints in Physical Human-Robot Interaction Using Reservoir Computing</i> , pp. 1868-1875.	
Nordmann, Arne	CoR-Lab. Bielefeld Univ.
Emmerich, Christian	Bielefeld Univ.
Rüther, Stefan	Bielefeld Univ. Res. Inst. for Cognition and Robot
Lemme, Alemme	CoR-Lab.
Wrede, Sebastian	Bielefeld Univ.
Steil, Jochen J.	Bielefeld Univ.
09:45-10:00	WeA01.6
<i>A Bayesian Nonparametric Approach to Modeling Battery Health</i> , pp. 1876-1882.	
Joseph, Joshua	Massachusetts Inst. of Tech.
Doshi, Finale	MIT
Roy, Nicholas	Massachusetts Inst. of Tech.
WeA02	Meeting Room 2 (Chief Red Wing)
Multi-Legged Robots (Regular Session)	
Chair: Sharf, Inna	McGill Univ.
Co-Chair: Kim, Sangbae	Massachusetts Inst. of Tech.
08:30-08:45	WeA02.1
<i>Stable Dynamic Walking of a Quadruped "Kotetsu" Using Phase Modulations Based on Leg Loading/Unloading against a Lateral Perturbation</i> , pp. 1883-1888.	
Maufroy, Christophe	FSU Jena
Kimura, Hiroshi	Kyoto Inst. of Tech.
Nishikawa, Tomohiro	Takemoto Denki Co.
08:45-09:00	WeA02.2
<i>Dynamic Torque Control of a Hydraulic Quadruped Robot</i> , pp. 1889-1894. Attachment	
Boaventura, Thiago	Italian Inst. of Tech.
Semini, Claudio	Italian Inst. of Tech.
Buchli, Jonas	Italian Inst. of Tech.

Frigerio, Marco	Univ. of Genoa and Italian Inst. of Tech.
Focchi, Michele	Italian Inst. of Tech.
Caldwell, Darwin G.	Italian Inst. of Tech.
09:00-09:15	WeA02.3
<i>Kinematic Control and Posture Optimization of a Redundantly Actuated Quadruped Robot</i> , pp. 1895-1900.	
Thomson, Travis	McGill Univ.
Sharf, Inna	McGill Univ.
Beckman, Blake	Defence Res. and Development Canada
09:15-09:30	WeA02.4
<i>Optimally Scaled Hip-Force Planning: A Control Approach for Quadrupedal Running</i> , pp. 1901-1907. Attachment	
Valenzuela, Andrés	Massachusetts Inst. of Tech.
Kim, Sangbae	Massachusetts Inst. of Tech.
09:30-09:45	WeA02.5
<i>Enforced Symmetry of the Stance Phase for the Spring-Loaded Inverted Pendulum</i> , pp. 1908-1914.	
Piovan, Giulia	UCSB
Byl, Katie	UCSB
09:45-10:00	WeA02.6
<i>A Behavior Based Locomotion Controller with Learning for Disturbance Compensation in Bipedal Robots</i> , pp. 1915-1920.	
Beranek, Richard	Carleton Univ.
Ahmadi, Mojtaba	Carleton Univ.
WeA03	Meeting Room 3 (Mak'to)
Medical Robotics I (Regular Session)	
Chair: Simaan, Nabil	Vanderbilt Univ.
Co-Chair: Riviere, Cameron	Carnegie Mellon Univ.
08:30-08:45	WeA03.1
<i>Metal MEMS Tools for Beating-Heart Tissue Removal</i> , pp. 1921-1926.	
Gosline, Andrew	Children's Hospital Boston, Harvard Medical School
Vasilyev, Nikolay	Children's Hospital Boston and Harvard Medical School
Veeramani, Arun	MicroFabrica Inc, Van Nuys, CA
Wu, MingTing	MicroFabrica Inc, Vany Nuys, CA
Schmitz, Greg	MicroFabrica Inc, Van Nuys, CA
Chen, Rich	Microfabrica, Inc.
Arabagi, Veaceslav	Childrens Hospital Boston
del Nido, Pedro	Children's Hospital Boston and Harvard Medical School
Dupont, Pierre	Children's Hospital Boston, Harvard Medical School
08:45-09:00	WeA03.2
<i>Motion Planning for Multiple Millimeter-Scale Magnetic Capsules in a Fluid Environment</i> , pp. 1927-1932.	
Vartholomeos, Panagiotis	Children's Hospital Boston , Harvard Medical School
Akhavan-Sharif, Reza	Department of Radiology, Beth Israel Deaconess MedicalCenter, Bo
Dupont, Pierre	Children's Hospital Boston, Harvard Medical School
09:00-09:15	WeA03.3
<i>Geometry Effect of Preloading Probe on Accurate Needle Insertion for Breast Tumor Treatment</i> , pp. 1933-1938.	
Hatano, Maya	Waseda Univ.
Kobayashi, Yo	Waseda Univ.
Suzuki, Makiko	Waseda Univ.
Fujie, Masakatsu G.	Waseda Univ.
Shiraishi, Yasuyuki	Tohoku Univ.
Yambe, Tomoyuki	Tohoku Univ.
Hashizume, Makoto	Kyushu Univ.
09:15-09:30	WeA03.4
<i>A MRI-Guided Concentric Tube Continuum Robot with Piezoelectric Actuation: A Feasibility Study</i> , pp. 1939-1945.	
Su, Hao	Worcester Pol. Inst.

Cardona, Diana	Vanderbilt Univ.
Shang, Weijian	Worcester Pol. Inst.
Cole, Gregory	Worcester Pol. Inst.
Rucker, Caleb	Vanderbilt Univ.
Webster III, Robert James	Vanderbilt Univ.
Fischer, Gregory Scott	Worcester Pol. Inst.
09:30-09:45	WeA03.5
<i>Design and Analysis of 6 DOF Handheld Micromanipulator</i> , pp. 1946-1951.	
Yang, Sungwook	Carnegie Mellon Univ.
MacLachlan, Robert A.	Carnegie Mellon Univ.
Riviere, Cameron	Carnegie Mellon Univ.
09:45-10:00	WeA03.6
<i>An Impedance Control Strategy for a Hand-Held Instrument to Compensate for Physiological Motion</i> , pp. 1952-1957.	
Florez, Juan Manuel	Inst. de Systèmes Intelligents et de Robotique - Univ. P
Szewczyk, Jérôme	Univ. Pierre et Marie Curie-Paris 6
Morel, Guillaume	Univ. Pierre et Marie Curie - Paris 6
WeA04	Meeting Room 4 (Chief Wabasha)
Novel Robot Designs (Regular Session)	
Chair: Guglielmelli, Eugenio	Univ. Campus Bio-Medico
Co-Chair: Okada, Masafumi	Tokyo Inst. of Tech.
08:30-08:45	WeA04.1
<i>Optimal Design of Nonlinear Profile of Gear Ratio Using Non-Circular Gear for Jumping Robot</i> , pp. 1958-1963. Attachment	
Okada, Masafumi	Tokyo Inst. of Tech.
Takeda, Yushi	Tokyo Inst. of Tech.
08:45-09:00	WeA04.2
<i>Stackable Manipulator for Mobile Manipulation Robot</i> , pp. 1964-1969.	
Lee, Hoyul	Hanyang Univ.
Oh, Yonghwan	KIST
Shon, Wh	KITECH
Choi, Youngjin	Hanyang Univ.
09:00-09:15	WeA04.3
<i>Development of Hair-Washing Robot Equipped with Scrubbing Fingers</i> , pp. 1970-1975. Attachment	
Hirose, Toshinori	Panasonic Corp.
Fujioka, Soichiro	Panasonic Corp.
Mizuno, Osamu	Panasonic Corp.
Nakamura, Tohru	Panasonic Corp.
09:15-09:30	WeA04.4
<i>I-Hand: An Intelligent Robotic Hand for Fast and Accurate Assembly in Electronic Manufacturing</i> , pp. 1976-1981.	
Chen, Fei	Nagoya Univ.
Sekiyama, Kosuke	Nagoya Univ.
Di, Pei	Nagoya Univ.
Huang, Jian	Huazhong Univ. of Science and Tech.
Fukuda, Toshio	Nagoya Univ.
09:30-09:45	WeA04.5
<i>A Radial Crank-Type Continuously Variable Transmission Driven by Two Ball Screws</i> , pp. 1982-1987. Attachment	
Yamada, Hiroya	Tokyo Inst. of Tech.
09:45-10:00	WeA04.6
<i>Rolling Tensegrity Driven by Pneumatic Soft Actuators</i> , pp. 1988-1993. Attachment	
Koizumi, Yuusuke	Ritsumeikan Univ.
Shibata, Mizuho	Kinki Univ.
Hirai, Shinichi	Ritsumeikan Univ.

WeA05		Meeting Room 5 (Ska)
Embodied Intelligence - Icube (Invited Session)		
Chair: Metta, Giorgio		Istituto Italiano di Tecnologia (IIT)
Co-Chair: Natale, Lorenzo		Istituto Italiano di Tecnologia
08:30-08:45		WeA05.1
<i>Learning Reusable Task Components Using Hierarchical Activity Grammars with Uncertainties (I)</i> , pp. 1994-1999. Attachment		
Lee, Kyuhwa		Imperial Coll. of Science, Tech. and Medicine
Kim, Tae-Kyun		Imperial Coll. London
Demiris, Yiannis		Imperial Coll. London
08:45-09:00		WeA05.2
<i>Stabilization for the Compliant Humanoid Robot COMAN Exploiting Intrinsic and Controlled Compliance (I)</i> , pp. 2000-2006. Attachment		
Li, Zhibin		Italian Inst. of Tech.
Vanderborght, Bram		Vrije Univ. Brussel
Tsagarakis, Nikolaos		Istituto Italiano di Tecnologia
Colasanto, Luca		Istituto Italiano di Tecnologia
Caldwell, Darwin G.		Italian Inst. of Tech.
09:00-09:15		WeA05.3
<i>Efficient Human-Like Walking for the COMpliant Humanoid COMAN Based on Kinematic Motion Primitives (kMPs) (I)</i> , pp. 2007-2014. Attachment		
Moro, Federico Lorenzo		Istituto Italiano di Tecnologia
Tsagarakis, Nikolaos		Istituto Italiano di Tecnologia
Caldwell, Darwin G.		Italian Inst. of Tech.
09:15-09:30		WeA05.4
<i>Closed-Loop Primitives: A Method to Generate and Recognize Reaching Actions from Demonstration (I)</i> , pp. 2015-2020.		
Parlaktuna, Mustafa		Middle East Tech. Univ.
Tunaoglu, Doruk		Middle East Tech. Univ.
Ugur, Emre		National Inst. of Information and Communications Tech. (
Sahin, Erol		Middle East Tech. Univ.
09:30-09:45		WeA05.5
<i>Active Object Recognition on a Humanoid Robot (I)</i> , pp. 2021-2028.		
Browatzki, Bjoern		Max Planck Inst. for Biol. Cybernetics
Tikhanoff, Vadim		Italian Inst. of Tech.
Metta, Giorgio		Istituto Italiano di Tecnologia (IIT)
Buelthoff, Heinrich H.		Max Planck Inst. for Biol. Cybernetics
Wallraven, Christian		Korea Univ.
09:45-10:00		WeA05.6
<i>Imitation Learning of Non-Linear Point-To-Point Robot Motions Using Dirichlet Processes (I)</i> , pp. 2029-2034.		
Krueger, Volker		Aalborg Univ.
Tikhanoff, Vadim		Italian Inst. of Tech.
Natale, Lorenzo		Istituto Italiano di Tecnologia
Sandini, Giulio		ITALIAN Inst. OF Tech.
WeA06		Meeting Room 6 (Oya'te)
Trajectory Planning and Generation (Regular Session)		
Chair: Kroeger, Torsten		Stanford Univ.
Co-Chair: Hauser, Kris		Indiana Univ.
08:30-08:45		WeA06.1
<i>Optimal Acceleration-Bounded Trajectory Planning in Dynamic Environments Along a Specified Path</i> , pp. 2035-2041. Attachment		
Johnson, Jeffrey		Indiana Univ.
Hauser, Kris		Indiana Univ.
08:45-09:00		WeA06.2
<i>Robot Excitation Trajectories for Dynamic Parameter Estimation Using Optimized B-Splines</i> , pp. 2042-2047.		

Rackl, Wolfgang Lampariello, Roberto Hirzinger, Gerd	DLR - German Aerospace Center German Aerospace Center (DLR) German Aerospace Center (DLR)
09:00-09:15	WeA06.3
<i>On-Line Trajectory Generation: Nonconstant Motion Constraints</i> , pp. 2048-2054. Kroeger, Torsten	Stanford Univ.
09:15-09:30	WeA06.4
<i>Setpoint Scheduling for Autonomous Vehicle Controllers</i> , pp. 2055-2060. Au, Tsz-Chiu Quinlan, Michael Stone, Peter	The Univ. of Texas at Austin Univ. of Texas at Austin Univ. of Texas at Austin
09:30-09:45	WeA06.5
<i>A Real-Time Motion Planner with Trajectory Optimization for Autonomous Vehicles</i> , pp. 2061-2067. Xu, Wenda Wei, Junqing Dolan, John M. Zhao, Huijing Zha, Hongbin	Peking Univ. Carnegie Mellon Univ. Carnegie Mellon Univ. Peking Univ. Peking Univ.
09:45-10:00	WeA06.6
<i>Improved Non-Linear Spline Fitting for Teaching Trajectories to Mobile Robots</i> , pp. 2068-2073. Sprunk, Christoph Lau, Boris Burgard, Wolfram	Univ. of Freiburg Univ. of Freiburg Univ. of Freiburg
WeA07	Meeting Room 7 (Remnicha)
Slam I (Regular Session)	
Chair: Barfoot, Timothy Co-Chair: Castellanos, Jose A.	Univ. of Toronto Univ. of Zaragoza
08:30-08:45	WeA07.1
<i>On the Number of Local Minima to the Point Feature Based SLAM Problem</i> , pp. 2074-2079. Huang, Shoudong Wang, Heng Frese, Udo Dissanayake, Gamini	Univ. of Tech. Sydney Beijing Univ. of Tech. Univ. Bremen Univ. of Tech. Sydney
08:45-09:00	WeA07.2
<i>On the Comparison of Uncertainty Criteria for Active SLAM</i> , pp. 2080-2087. Attachment Carrillo, Henry Reid, Ian Castellanos, Jose A.	Univ. of Zaragoza Univ. of Oxford Univ. of Zaragoza
09:00-09:15	WeA07.3
<i>Continuous-Time Batch Estimation Using Temporal Basis Functions</i> , pp. 2088-2095. Furgale, Paul Timothy Barfoot, Timothy Sibley, Gabe	Eidgenössische Tech. Hochschule Zürich Univ. of Toronto George Washington Univ.
09:15-09:30	WeA07.4
<i>SLAM with Single Cluster PHD Filters</i> , pp. 2096-2101. Lee, Chee Sing Clark, Daniel Salvi, Joaquim	Univ. of Girona Heriot-Watt Univ. Univ. of Girona
09:30-09:45	WeA07.5
<i>Simultaneous Localization and Scene Reconstruction with Monocular Camera</i> , pp. 2102-2107. Huang, Kuo- Chen Tseng, Shih-Huan	National Taiwan Univ. National Taiwan Univ.

Mou, Wei-Hao	National Taiwan Univ.
Fu, Li-Chen	National Taiwan Univ.
09:45-10:00	WeA07.6
<i>Rhythm-Based Adaptive Localization in Incomplete RFID Landmark Environments</i> , pp. 2108-2114.	
Kodaka, Kenri	Waseda Univ.
Ogata, Tetsuya	Kyoto Univ.
Sugano, Shigeki	Waseda Univ.
WeA08	Meeting Room 8 (Wacipi)
Motion Path Planning I (Regular Session)	
Chair: Dasgupta, Raj	Univ. of Nebraska, Omaha
Co-Chair: Simmons, Reid	Carnegie Mellon Univ.
08:30-08:45	WeA08.1
<i>Navigation Functions for Everywhere Partially Sufficiently Curved Worlds</i> , pp. 2115-2120.	
Filippidis, Ioannis	National Tech. Univ. of Athens
Kyriakopoulos, Kostas	National Tech. Univ. of Athens
08:45-09:00	WeA08.2
<i>Trajectory Tracking among Landmarks and Binary Sensor-Beams</i> , pp. 2121-2127. Attachment	
Tovar, Benjamin	Northwestern Univ.
Murphey, Todd	Northwestern Univ.
09:00-09:15	WeA08.3
<i>A Singularity-Free Path Planner for Closed-Chain Manipulators</i> , pp. 2128-2134.	
Bohigas, Oriol	Consejo Superior de Investigaciones Cientificas
Henderson, Michael E.	IBM's Thomas J. Watson Res. Center
Ros, Lluís	Consejo Superior de Investigaciones Cientificas (CSIC)
Porta, Josep M	CSIC-UPC
09:15-09:30	WeA08.4
<i>Comparison of Constrained Geometric Approximation Strategies for Planar Information States</i> , pp. 2135-2140.	
Song, Yang	Univ. of South Carolina
O'Kane, Jason	Univ. of South Carolina
09:30-09:45	WeA08.5
<i>Voxel-Based Motion Bounding and Workspace Estimation for Robotic Manipulators</i> , pp. 2141-2146. Attachment	
Anderson-Sprecher, Peter	Carnegie Mellon Univ.
Simmons, Reid	Carnegie Mellon Univ.
09:45-10:00	WeA08.6
<i>Branch and Bound for Informative Path Planning</i> , pp. 2147-2154.	
Binney, Jonathan	Univ. of Southern California
Sukhatme, Gaurav	Univ. of Southern California
WeA09	Meeting Room 9 (Sa)
Surveillance (Regular Session)	
Chair: Basilico, Nicola	Univ. of California Merced
Co-Chair: Kang, Sungchul	Korea Inst. of Science & Tech.
08:30-08:45	WeA09.1
<i>A Game Theoretical Approach to Finding Optimal Strategies for Pursuit Evasion in Grid Environments</i> , pp. 2155-2162.	
Amigoni, Francesco	Pol. di Milano
Basilico, Nicola	Univ. of California Merced
08:45-09:00	WeA09.2
<i>Online Patrolling Using Hierarchical Spatial Representations</i> , pp. 2163-2169.	
Basilico, Nicola	Univ. of California Merced
Carpin, Stefano	Univ. of California, Merced
09:00-09:15	WeA09.3

<i>Laser-Based Intelligent Surveillance and Abnormality Detection in Extremely Crowded Scenarios</i> , pp. 2170-2176. Attachment	
Song, Xuan	Univ. of Tokyo
Shao, Xiaowei	Univ. of Tokyo
Zhang, Quanshi	Univ. of Tokyo
Shibasaki, Ryosuke	Univ. of Tokyo
Zhao, Huijing	Peking Univ.
Zha, Hongbin	Peking Univ.
09:15-09:30	WeA09.4
<i>Strong Shadow Removal Via Patch-Based Shadow Edge Detection</i> , pp. 2177-2182.	
Wu, Qi	Carnegie Mellon Univ.
Zhang, Wende	General Motors
Vijaya Kumar, B.V.K	Carnegie Mellon Univ.
09:30-09:45	WeA09.5
<i>Integrated Probabilistic Generative Model for Detecting Smoke on Visual Images</i> , pp. 2183-2188. Attachment	
Vidal-Calleja, Teresa A.	Univ. of Sydney
Agamennoni, Gabriel	The Univ. of Sydney
09:45-10:00	WeA09.6
<i>Localization in Indoor Environments by Querying Omnidirectional Visual Maps Using Perspective Images</i> , pp. 2189-2195.	
Lourenço, Miguel	Univ. of Coimbra
Pedro, Vítor Manuel	Univ. of Coimbra
Barreto, João P.	Univ. of Coimbra
WeA110	Ballroom D
Interactive Session WeA-1 (Interactive Session)	
Chair: Christensen, Henrik Iskov	Georgia Inst. of Tech.
Co-Chair: Luo, Ren	National Taiwan Univ.
08:30-09:00	WeA110.1
<i>Control of Biological Clock Activity Capsulated by Lipid-Mono-Layer</i> , pp. 2196-2201.	
Kojima, Masaru	Nagoya Univ.
Nakajima, Masahiro	Nagoya Univ.
Takiguchi, Kingo	Nagoya Univ.
Kondo, Takao	Nagoya Univ.
Homma, Michio	Nagoya Univ.
Fukuda, Toshio	Nagoya Univ.
08:30-09:00	WeA110.2
<i>System Identification, Estimation and Control for a Cost Effective Open-Source Quadcopter</i> , pp. 2202-2209. Attachment	
Sa, Inkyu	Queensland Univ. of Tech.
Corke, Peter	QUT
08:30-09:00	WeA110.3
<i>Position Tracking and Recognition of Everyday Objects by Using Sensors Embedded in an Environment and Mounted on Mobile Robots</i> , pp. 2210-2216.	
Murakami, Kouji	Kyushu Sangyo Univ.
Matsuo, Kazuya	RIKEN
Hasegawa, Tsutomu	Kyushu Univ.
Kurazume, Ryo	Kyushu Univ.
08:30-09:00	WeA110.4
<i>A New Strategy for Making a Knot with a General-Purpose Arm</i> , pp. 2217-2222.	
Trinh, Van Vinh	The Univ. of Electro-Communications
Tomizawa, Tetsuo	Univ. of Electronics and Communications
Kudoh, Shunsuke	The Univ. of Electro-Communications
Suehiro, Takashi	the Univ. of Electro-Communications
08:30-09:00	WeA110.5
<i>Impact Dynamics of a Finger Mechanism with Application to Onset of a Cart Motion</i> , pp. 2223-2228. Attachment	

Ryu, Hwan Taek
 Choi, Jae Yeon
 Yi, Byung-Ju

Hanyang Univ.
 Hanayang Univ.
 Hanyang Univ.

WeA210		Ballroom D
Interactive Session WeA-2 (Interactive Session)		
Chair: Christensen, Henrik Iskov		Georgia Inst. of Tech.
Co-Chair: Luo, Ren		National Taiwan Univ.
09:00-09:30		WeA210.1
<i>Mission Energy Prediction for Unmanned Ground Vehicles</i> , pp. 2229-2234.		
Sadrpour, Amir		Univ. of Michigan
Jin, Jionghua		Univ. of Michigan
Ulsoy, A. Galip		Univ. of Michigan
09:00-09:30		WeA210.2
<i>Region of Attraction Estimation for a Perching Aircraft: A Lyapunov Method Exploiting Barrier Certificates</i> , pp. 2235-2242.		
Glassman, Elena Leah		Massachusetts Inst. of Tech.
Lussier Desbiens, Alexis		Stanford Univ.
Tobenkin, Mark		Massachusetts Inst. of Tech.
Cutkosky, Mark		Stanford Univ.
Tedrake, Russ		Massachusetts Inst. of Tech.
09:00-09:30		WeA210.3
<i>Concurrent Indoor Map Construction and Patterns of Interests Recognition Using Sensory Fusion Approach for Service Robotics</i> , pp. 2243-2248.		
Luo, Ren		National Taiwan Univ.
Lai, Chun C.		National Chung Cheng Univ.
09:00-09:30		WeA210.4
<i>Simple Model and Deformation Control of a Flexible Rope Using Constant, High-Speed Motion of a Robot Arm</i> , pp. 2249-2254.		
Yamakawa, Yuji		Univ. of Tokyo
Namiki, Akio		Chiba Univ.
Ishikawa, Masatoshi		Univ. of Tokyo
09:00-09:30		WeA210.5
<i>Planning and Control During Reach to Grasp Using the Three Predominant UB Hand IV Postural Synergies</i> , pp. 2255-2260.		
<u>Attachment</u>		
Ficuciello, Fanny		Univ. di Napoli Federico II
Palli, Gianluca		Univ. of Bologna
Melchiorri, Claudio		Univ. of Bologna
Siciliano, Bruno		Univ. Napoli Federico II
WeA310		Ballroom D
Interactive Session WeA-3 (Interactive Session)		
Chair: Christensen, Henrik Iskov		Georgia Inst. of Tech.
Co-Chair: Luo, Ren		National Taiwan Univ.
09:30-10:00		WeA310.1
<i>A Stochastic Algorithm for Explorative Goal Seeking Extracted from Cockroach Walking Data</i> , pp. 2261-2268. <u>Attachment</u>		
Daltorio, Kathryn A		Case Western Res. Univ.
Tietz, Brian R.		Case Western Res. Univ.
Bender, John A.		Case Western Res. Univ.
Webster, Victoria A.		Case Western Res. Univ.
Szczecinski, Nicholas S.		Case Western Res. Univ.
Branicky, Michael		Case Western Res. Univ.
Ritzmann, Roy Earl		Case Western Res. Univ.
Quinn, Roger, D.		Case Western Res. Univ.
09:30-10:00		WeA310.2

A Hybrid Pose / Wrench Control Framework for Quadrotor Helicopters, pp. 2269-2274.

Bellens, Steven	Katholieke Univ. Leuven
De Schutter, Joris	Katholieke Univ. Leuven
Bruyninckx, Herman	Katholieke Univ. Leuven

09:30-10:00 WeA310.3

Any-Angle Path Planning with Limit-Cycle Circle Set for Marine Surface Vehicle, pp. 2275-2280.

Kim, Hanguen	KAIST
Lee, Taehwan	KAIST
Chung, Hyun	KAIST
Sun, Namsun	Korea Ocean Res. and Development Inst.
Myung, Hyun	KAIST

09:30-10:00 WeA310.4

Pick and Place Planning for Dual-Arm Manipulators, pp. 2281-2286. [Attachment](#)

Harada, Kensuke	National Inst. of AIST
Foissotte, Torea	Vision and Manipulation Res. Group, Intelligent Systems Resea
Tsuji, Tokuo	National Inst. of AIST
Nagata, Kazuyuki	National Inst. of AIST
Yamanobe, Natsuki	Advanced Industrial Science and Tech.
Nakamura, Akira	National Inst. of Advanced Industrial Science and Technology
Kawai, Yoshihiro	National Inst. of Advanced Industrial Science and Tech.

09:30-10:00 WeA310.5

Learning Human Reach-To-Grasp Strategies: Towards EMG-Based Control of Robotic Arm-Hand Systems, pp. 2287-2292.

Liarokapis, Minas	National Tech. Univ. of Athens
Artemiadis, Panagiotis	Arizona State Univ.
Katsiaris, Pantelis	National Tech. Univ. of Athens
Kyriakopoulos, Kostas	National Tech. Univ. of Athens
Manolakos, Elias	Department of Informatics and Telecommunications, Univ. of

WeB01 Meeting Room 1 (Mini-sota)

Parallel Robots (Regular Session)

Chair: Merlet, Jean-Pierre	INRIA
Co-Chair: Gouttefarde, Marc	LIRMM

10:30-10:45 WeB01.1

The Octahedral Manipulator Revisited, pp. 2293-2298.

Rojas, Nicolas	IRI (CSIC-UPC)
Borràs Sol, Júlia	Yale Univ.
Thomas, Federico	CSIC-UPC

10:45-11:00 WeB01.2

Simplified Static Analysis of Large-Dimension Parallel Cable-Driven Robots, pp. 2299-2305.

Gouttefarde, Marc	LIRMM
Collard, Jean-François	Lab. d'Informatique, de Robotique et de Microélectronique
Riehl, Nicolas	LIRMM
Baradat, Cédric	Fondation Tecnalia

11:00-11:15 WeB01.3

Design Optimization for Parallel Mechanism Using on Human Hip Joint Power Assisting Based on Manipulability Inclusive Principle, pp. 2306-2312.

Yu, Yong	Kagoshima Univ.
Liang, WenYuan	Univ. of Science and Tech. of China

11:15-11:30 WeB01.4

The Kinematics of the Redundant $n-1$ Wire Driven Parallel Robot, pp. 2313-2318.

Merlet, Jean-Pierre	INRIA
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11:30-11:45 WeB01.5

Error Modeling and Accuracy Analysis of a Multi-Level Hybrid Support Robot, pp. 2319-2324.

Chai, Xiaoming	Tsinghua Univ.
Tang, Xiaoqiang	Tsinghua Univ.
Tang, Lewei	Tsinghua Univ.
Lu, Qiujuan	Tsinghua Univ.

11:45-12:00 WeB01.6

Point-To-Point Motion Planning of a Parallel 3-DOF Underactuated Cable-Suspended Robot, pp. 2325-2330. [Attachment](#)

Zoso, Nathaniel	Univ. Laval
Gosselin, Clement	Univ. Laval

WeB02 Meeting Room 2 (Chief Red Wing)

Hybrid Legged Robots (Regular Session)

Chair: Fujimoto, Yasutaka	Yokohama national Univ.
Co-Chair: Clark, Jonathan	Florida State Univ.

10:30-10:45 WeB02.1

Passive Dynamic Walking of Viscoelastic-Legged Rimless Wheel, pp. 2331-2336. [Attachment](#)

Asano, Fumihiko	Japan Advanced Inst. of Science and Tech.
Kawamoto, Junji	Japan Advanced Inst. of Science and Tech.

10:45-11:00 WeB02.2

Control of Dynamic Locomotion for the Hybrid Wheel-Legged Mobile Robot by Using Unstable-Zeros Cancellation, pp. 2337-2342.

Suzumura, Akihiro	Yokohama National Univ.
Fujimoto, Yasutaka	Yokohama national Univ.

11:00-11:15 WeB02.3

Comparison of Cost Functions for Electrically Driven Running Robots, pp. 2343-2350.

Remy, C. David	ETH Zurich
Buffinton, Keith	Bucknell Univ.
Siegwart, Roland	ETH Zurich

11:15-11:30 WeB02.4

A Reduced-Order Dynamical Model for Running with Curved Legs, pp. 2351-2357.

Jun, Jae Yun	Florida State Univ.
Clark, Jonathan	Florida State Univ.

11:30-11:45 WeB02.5

FastRunner: A Fast, Efficient and Robust Bipedal Robot. Concept and Planar Simulation, pp. 2358-2364. [Attachment](#)

Cotton, Sebastien	Florida Inst. for Human and Machine Cognition
Olaru, Ionut Mihai Constantin	IHMC Florida Inst. For Human & Machine Cognition
Bellman, Matthew	ihmc
Van Der Ven, Tim	ihmc
Godowski, Johnny C	Inst. for Human and Machine Cognition
Pratt, Jerry	Inst. for Human and Machine Cognition

11:45-12:00 WeB02.6

Zero-Moment Point Based Balance Control of Leg-Wheel Hybrid Structures with Inequality Constraints of Dynamic Behavior, pp. 2365-2370.

An, Sang-ik	Korea Advanced Inst. of Science and Tech. (KAIST)
Oh, Yonghwan	KIST
Kwon, Dong-Soo	KAIST

WeB03 Meeting Room 3 (Mak'to)

Grasping: Learning and Estimation (Regular Session)

Chair: Stoytchev, Alexander	Iowa State Univ.
Co-Chair: Saxena, Ashutosh	Cornell Univ.

10:30-10:45 WeB03.1

End-To-End Dexterous Manipulation with Deliberate Interactive Estimation, pp. 2371-2378. [Attachment](#)

Hudson, Nicolas	Jet Propulsion Lab.
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Howard, Tom	Jet Propulsion Lab.
Ma, Jeremy	Jet Propulsion Lab.
Jain, Abhinandan	Jet Propulsion Lab.
Bajracharya, Max	JPL
Myint, Steven	Jet Propulsion Lab.
Matthies, Larry	Jet Propulsion Lab.
Backes, Paul	Jet Propulsion Lab.
Hebert, Paul	California Inst. of Tech.
Fuchs, Thomas	California Inst. of Tech.
Burdick, Joel	California Inst. of Tech.

10:45-11:00

WeB03.2

Template-Based Learning of Grasp Selection, pp. 2379-2384. [Attachment](#)

Herzog, Alexander	Max-Planck-Inst. for Intelligent Systems, Tuebingen
Pastor, Peter	Univ. of Southern California
Kalakrishnan, Mrinal	Univ. of Southern California
Righetti, Ludovic	Univ. of Southern California
Asfour, Tamim	Karlsruhe Inst. of Tech. (KIT)
Schaal, Stefan	Univ. of Southern California

11:00-11:15

WeB03.3

Learning Hardware Agnostic Grasps for a Universal Jamming Gripper, pp. 2385-2391. [Attachment](#)

Jiang, Yun	Cornell Univ.
Amend, John	Cornell Univ.
Lipson, Hod	Cornell Univ.
Saxena, Ashutosh	Cornell Univ.

11:15-11:30

WeB03.4

Learning Grasp Stability, pp. 2392-2397.

Dang, Hao	Columbia Univ.
Allen, Peter	Columbia Univ.

11:30-11:45

WeB03.5

Learning to Slide a Magnetic Card through a Card Reader, pp. 2398-2404. [Attachment](#)

Sukhoy, Vladimir	Iowa State Univ.
Georgiev, Veselin	Southeast Missouri State Univ.
Wegter, Todd	Iowa State Univ.
Sweidan, Ramy	Rice Univ.
Stoytchev, Alexander	Iowa State Univ.

11:45-12:00

WeB03.6

Combined Shape, Appearance and Silhouette for Simultaneous Manipulator and Object Tracking, pp. 2405-2412.

Hebert, Paul	California Inst. of Tech.
Hudson, Nicolas	Jet Propulsion Lab.
Ma, Jeremy	Jet Propulsion Lab.
Howard, Tom	Jet Propulsion Lab.
Fuchs, Thomas	California Inst. of Tech.
Bajracharya, Max	JPL
Burdick, Joel	California Inst. of Tech.

WeB04

Meeting Room 4 (Chief Wabasha)

Networked Robots (Regular Session)

Chair: Chopra, Nikhil	Univ. of Maryland, Coll. Park
Co-Chair: Kim, H. Jin	Seoul National Univ.

10:30-10:45

WeB04.1

Compensation of Packet Loss for a Network-Based Rehabilitation System, pp. 2413-2418.

Bae, Joonbum	UNIST
Zhang, Wenlong	Univ. of California at Berkeley
Tomizuka, Masayoshi	Univ. of California

10:45-11:00	WeB04.2
<i>Motion Planning for Robust Wireless Networking</i> , pp. 2419-2426. Attachment	
Fink, Jonathan	ARL
Ribeiro, Alejandro	Univ. of Pennsylvania
Kumar, Vijay	Univ. of Pennsylvania
11:00-11:15	WeB04.3
<i>Decentralised Information Gathering with Communication Costs</i> , pp. 2427-2432.	
Kassir, Abdallah	ACFR, The Univ. of Sydney
Fitch, Robert	Univ. of Sydney
Sukkarieh, Salah	Univ. of Sydney
11:15-11:30	WeB04.4
<i>Decentralized Connectivity Maintenance for Networked Lagrangian Dynamical Systems</i> , pp. 2433-2438. Attachment	
Sabattini, Lorenzo	Univ. of Modena and Reggio Emilia
Secchi, Cristian	Univ. of Modena & Reggio Emilia
Chopra, Nikhil	Univ. of Maryland, Coll. Park
11:30-11:45	WeB04.5
<i>Multi-Target Tracking Using Distributed SVM Training Over Wireless Sensor Networks</i> , pp. 2439-2444. Attachment	
Kim, Woojin	Seoul National Univ.
Yoo, Jae Hyun	Seoul National Univ.
Kim, H. Jin	Seoul National Univ.
11:45-12:00	WeB04.6
<i>A Dual-Use Visible Light Approach to Integrated Communication and Localization of Underwater Robots with Application to Non-Destructive Nuclear Reactor Inspection</i> , pp. 2445-2450.	
Rust, Ian	MIT
Asada, Harry	MIT
WeB05	Meeting Room 5 (Ska)
Rehabilitation Robotics (Regular Session)	
Chair: Dubey, Rajiv	Univ. of South Florida
Co-Chair: Masia, Lorenzo	Italian Inst. of Tech.
10:30-10:45	WeB05.1
<i>WeeBot: A Novel Method for Infant Control of a Robotic Mobility Device</i> , pp. 2451-2456.	
Stansfield, Sharon	Ithaca Coll.
Dennis, Carole	Ithaca Coll.
Larin, Helene	Ithaca Coll.
10:45-11:00	WeB05.2
<i>Transition from Mechanical Arm to Human Arm with CAREX: A Cable Driven Arm Exoskeleton (CAREX) for Neural Rehabilitation</i> , pp. 2457-2462.	
Mao, Ying	Univ. of Delaware
Agrawal, Sunil	Univ. of Delaware
11:00-11:15	WeB05.3
<i>A Comparison of Parallel and Series Elastic Elements in an Actuator for Mimicking Human Ankle Joint in Walking and Running</i> , pp. 2463-2470.	
Grimmer, Martin	TU Darmstadt
Seyfarth, Andre	TU Darmstadt
Eslamy, Mahdy	LaufLabor Jena
11:15-11:30	WeB05.4
<i>Measuring End-Point Stiffness by Means of a Modular Mechatronic System</i> , pp. 2471-2478. Attachment	
Masia, Lorenzo	Italian Inst. of Tech.
Squeri, Valentina	Univ. di Genova
Sandini, Giulio	Italian Inst. of Tech.
Morasso, Pietro Giovanni	Univ. of Genoa
11:30-11:45	WeB05.5

AssistOn-SE: A Self-Aligning Shoulder-Elbow Exoskeleton, pp. 2479-2485.

Ergin, Mehmet Alper
Patoglu, Volkan

Sabanci Univ.
Sabanci Univ.

11:45-12:00

WeB05.6

Adaptive Control of a Human-Driven Knee Joint Orthosis, pp. 2486-2491.

Rifai, Hala
Mohammed, Samer
Daachi, Boubaker
Amirat, Yacine

Univ. of Paris Est Créteil
Univ. of Paris Est Créteil - (UPEC)
Univ. of Paris Est Créteil (UPEC)
Univ. of Paris Est Créteil (UPEC)

WeB06

Meeting Room 6 (Oya'te)

Micro and Nano Robots II (Regular Session)

Chair: Akella, Srinivas
Co-Chair: Arai, Fumihito

Univ. of North Carolina at Charlotte
Nagoya Univ.

10:30-10:45

WeB06.1

Motion Control of Tetrahymena Pyriformis Cells with Artificial Magnetotaxis: Model Predictive Control (MPC) Approach, pp. 2492-2497.

Ou, Yan
Kim, Dal Hyung
Kim, Paul
Kim, MinJun
Julius, Agung

Rensselaer Pol. Inst.
Drexel Univ.
Drexel Univ.
Drexel Univ.
Rensselaer Pol. Inst.

10:45-11:00

WeB06.2

Robust H-Infinity Control for Electromagnetic Steering of Microrobots, pp. 2498-2503.

Marino, Hamal
Bergeles, Christos
Nelson, Bradley J.

Scuola Superiore Sant'Anna
ETH Zurich
ETH Zurich

11:00-11:15

WeB06.3

Magnetic Dragging of Vascular Obstructions by Means of Electrostatic and Antibody Binding, pp. 2504-2509.

Khorami Llewellyn, Maral
Dario, Paolo
Menciassi, Arianna
Sinibaldi, Edoardo

Scuola Superiore Sant'Anna, Piazza Martiri della Libertà, Pisa (I
Scuola Superiore Sant'Anna
Scuola Superiore Sant'Anna - SSSA
Istituto Italiano di Tecnologia

11:15-11:30

WeB06.4

Coordination of Droplets on Light-Actuated Digital Microfluidic Systems, pp. 2510-2516.

Ma, Zhiqiang
Akella, Srinivas

UNC Charlotte
Univ. of North Carolina at Charlotte

11:30-11:45

WeB06.5

High Speed Microrobot Actuation in a Microfluidic Chip by Levitated Structure with Riblet Surface, pp. 2517-2522. [Attachment](#)

Hagiwara, Masaya
Kawahara, Tomohiro
Iijima, Toru
Arai, Fumihito

Nagoya Univ.
Kyushu Inst. of Tech.
Muran Inst. Tech.
Nagoya Univ.

11:45-12:00

WeB06.6

Mobility and Kinematic Analysis of a Novel Dexterous Micro Gripper, pp. 2523-2528.

Xiao, Shunli
Li, Yangmin

Univ. of Macau
Univ. of Macau

WeB07

Meeting Room 7 (Remnicha)

Sampling-Based Motion Planning (Regular Session)

Chair: Amato, Nancy
Co-Chair: Brett, Timothy

Texas A&M Univ.
Univ. of Illinois at Urbana-Champaign

10:30-10:45

WeB07.1

A Scalable Method for Parallelizing Sampling-Based Motion Planning Algorithms, pp. 2529-2536.

Jacobs, Sam Ade	Texas A&M Univ.
Manavi, Kasra	Texas A & M Univ.
Burgos, Juan	Texas A & M Univ.
Denny, Jory	Texas A&M Univ.
Thomas, Shawna	Texas A&M Univ.
Amato, Nancy	Texas A&M Univ.

10:45-11:00 WeB07.2

LQR-RRT: Optimal Sampling-Based Motion Planning with Automatically Derived Extension Heuristics*, pp. 2537-2542.

Perez, Alejandro	MIT
Platt, Robert	MIT
Konidakis, George Dimitri	MIT
Kaelbling, Leslie	MIT
Lozano-Perez, Tomas	MIT

11:00-11:15 WeB07.3

SR-RRT: Selective Retraction-Based RRT Planner, pp. 2543-2550. [Attachment](#)

Lee, Junghwan	KAIST
Kwon, Osung	KAIST
Zhang, Liangjun	Stanford Univ.
Yoon, Sung-eui	KAIST

11:15-11:30 WeB07.4

Sampling-Based Motion Planning with Dynamic Intermediate State Objectives: Application to Throwing, pp. 2551-2556.

[Attachment](#)

Zhang, Yajia	Indiana Univ. Bloomington
Luo, Jingru	Indiana Univ. Bloomington
Hauser, Kris	Indiana Univ.

11:30-11:45 WeB07.5

Towards Small Asymptotically Near-Optimal Roadmaps, pp. 2557-2562.

Marble, James	Univ. of Nevada Reno
Bekris, Kostas E.	Univ. of Nevada, Reno

11:45-12:00 WeB07.6

Proving Path Non-Existence Using Sampling and Alpha Shapes, pp. 2563-2569.

McCarthy, Zoe	Univ. of Illinois at Urbana-Champaign
Bretl, Timothy	Univ. of Illinois at Urbana-Champaign
Hutchinson, Seth	Univ. of Illinois

WeB08 Meeting Room 8 (Wacipi)

Parts Handling and Manipulation (Regular Session)

Chair: Schimmels, Joseph	Marquette Univ.
Co-Chair: Kim, ChangHwan	Korea Inst. of Science and Tech.

10:30-10:45 WeB08.1

Design of Parts Handling and Gear Assembling Device, pp. 2570-2577. [Attachment](#)

Yamaguchi, Kengo	Tohoku Univ.
Hirata, Yasuhisa	Tohoku Univ.
Kaisumi, Aya	Tohoku Univ.
Kosuge, Kazuhiro	Tohoku Univ.

10:45-11:00 WeB08.2

Optimal Admittance Characteristics for Planar Force-Assembly of Convex Polygonal Parts, pp. 2578-2583.

Wiemer, Steven	Quarles & Brady LLP
Schimmels, Joseph	Marquette Univ.

11:00-11:15 WeB08.3

The Effect of Anisotropic Friction on Vibratory Velocity Fields, pp. 2584-2591. [Attachment](#)

Umbanhowar, Paul	Northwestern Univ.
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Vose, Thomas	Northwestern Univ.
Mitani, Atsushi	Sapporo City Univ.
Hirai, Shinichi	Ritsumeikan Univ.
Lynch, Kevin	Northwestern Univ.

11:15-11:30 WeB08.4

Sparse Spatial Coding: A Novel Approach for Efficient and Accurate Object Recognition, pp. 2592-2598.

Leivas, Gabriel	Univ. Federal de Minas Gerais
Nascimento, Erickson	Univ. Federal de Minas Gerais (UFMG)
Wilson Vieira, Antonio	Univ. Federal de Minas Gerais
Campos, Mario Montenegro	Univ. Federal de Minas Gerais

11:30-11:45 WeB08.5

Humanoid's Dual Arm Object Manipulation Based on Virtual Dynamics Model, pp. 2599-2604. [Attachment](#)

Shin, Sung Yul	Korea Inst. of Science and Tech.
Lee, Jun won	KIST
Kim, ChangHwan	Korea Inst. of Science and Tech.

11:45-12:00 WeB08.6

A Kernel-Based Approach to Direct Action Perception, pp. 2605-2610.

Kroemer, Oliver	Max-Planck Inst. for Biological Cybernetics
Ugur, Emre	National Inst. of Information and Communications Tech. (
Oztop, Erhan	Ozyegin Univ.
Peters, Jan	Tech. Univ. Darmstadt

WeB09 Meeting Room 9 (Sa)

Localization II (Regular Session)

Chair: Su, Jianbo	Shanghai Jiao Tong Univ.
Co-Chair: Newman, Paul	Oxford Univ.

10:30-10:45 WeB09.1

Road Vehicle Localization with 2D Push-Broom Lidar and 3D Priors, pp. 2611-2617.

Baldwin, Ian Alan	Oxford
Newman, Paul	Oxford Univ.

10:45-11:00 WeB09.2

Radar-Only Localization and Mapping for Ground Vehicle at High Speed and for Riverside Boat, pp. 2618-2624.

Vivet, Damien	Lasmea - Blaise Pascal Univ.
Checchin, Paul	LASMEA
Chapuis, Roland	LASMEA/FR-TIMS

11:00-11:15 WeB09.3

LAPS - Localisation Using Appearance of Prior Structure: 6-DoF Monocular Camera Localisation Using Prior Pointclouds, pp. 2625-2632.

Stewart, Alex	Oxford Univ.
Newman, Paul	Oxford Univ.

11:15-11:30 WeB09.4

An Outdoor High-Accuracy Local Positioning System for an Autonomous Robotic Golf Greens Mower, pp. 2633-2639.

Smith, Aaron	Precise Path Robotics
Chang, H. Jacky	Precise Path Robotics Inc.
Blanchard, Edward	Precise Path Robotics

11:30-11:45 WeB09.5

Curb-Intersection Feature Based Monte Carlo Localization on Urban Roads, pp. 2640-2646.

Qin, Baoxing	NUS
Chong, Zhuang Jie	NUS
Bandyopadhyay, Tirthankar	Singapore MIT Alliance for R & T
Ang Jr, Marcelo H	National Univ. of Singapore
Frazzoli, Emilio	Massachusetts Inst. of Tech.
Rus, Daniela	MIT

11:45-12:00	WeB09.6
<i>Satellite Image Based Precise Robot Localization on Sidewalks</i> , pp. 2647-2653.	
Senlet, Turgay	Rutgers, The State Univ. of New Jersey
Elgammal, Ahmed	Rutgers, The State Univ. of New Jersey

WeB110	Ballroom D
Interactive Session WeB-1 (Interactive Session)	

Chair: Roumeliotis, Stergios	Univ. of Minnesota
Co-Chair: Song, Jae-Bok	Korea Univ.

10:30-11:00	WeB110.1
<i>ModelRob: A Simulink Library for Model-Based Development of Robot Manipulators</i> , pp. 2654-2659.	
Saha, Indranil	Univ. of California, Los Angeles
Shankar, Natarajan	SRI International

10:30-11:00	WeB110.2
<i>Resonant Wireless Power Transfer to Ground Sensors from a UAV</i> , pp. 2660-2665. Attachment	
Griffin, Brent Austin	Univ. of Nebraska-Lincoln
Detweiler, Carrick	Univ. of Nebraska-Lincoln

10:30-11:00	WeB110.3
<i>Implementing a Variable Impedance Actuator</i> , pp. 2666-2672.	
Catalano, Manuel	Faculty of Engineering - Univ. of Pisa
Grioli, Giorgio	Univ. di Pisa
Garabini, Manolo	Univ. di Pisa
Belo, Felipe	Univ. of Pisa
Di Basco, Andrea	Univ. di Pisa
Tsagarakis, Nikolaos	Istituto Italiano di Tecnologia
Bicchi, Antonio	Univ. of Pisa

10:30-11:00	WeB110.4
<i>A Study on Sinus-Lifting Motion of a Snake Robot with Energetic Efficiency</i> , pp. 2673-2678.	
Toyoshima, Satoshi	Kyoto Univ.
Matsuno, Fumitoshi	Kyoto Univ.

10:30-11:00	WeB110.5
<i>Semi-Automatic Percutaneous Reduction of Intra-Articular Joint Fractures – an Initial Analysis</i> , pp. 2679-2684.	
Dogramadzi, Sanja	Univ. of the West of England
Dogramadzi, Sanja	Univ. of the West of England

WeB210	Ballroom D
Interactive Session WeB-2 (Interactive Session)	

Chair: Roumeliotis, Stergios	Univ. of Minnesota
Co-Chair: Song, Jae-Bok	Korea Univ.

11:00-11:30	WeB210.1
<i>Guideline for Determination of Link Length of a 3 DOF Planar Manipulator for Human-Robot Collision Safety</i> , pp. 2685-2690.	
Lee, Sang-Duck	Korea Univ.
Kim, Byeong-Sang	Korea Univ.
Song, Jae-Bok	Korea Univ.

11:00-11:30	WeB210.2
<i>Trajectory Generation for Swing-Free Maneuvers of a Quadrotor with Suspended Payload: A Dynamic Programming Approach</i> , pp. 2691-2697. Attachment	
Palunko, Ivana	Univ. of New Mexico
Fierro, Rafael	Univ. of New Mexico
Cruz, Patricio	Univ. of New Mexico

11:00-11:30	WeB210.3
<i>Adaptive Modeling of a Fully Hysteretic Magneto-Rheological Clutch</i> , pp. 2698-2703.	
Yadmellat, Peyman	The Univ. of Western Ontario

Kermani, Mehrdad R.	Univ. of Western Ontario
11:00-11:30	WeB210.4
<i>M3Express: A Low-Cost Independently-Mobile Reconfigurable Modular Robot</i> , pp. 2704-2710.	
Wolfe, Kevin	Johns Hopkins Univ.
Moses, Matthew S	Johns Hopkins Univ.
Kutzer, Michael Dennis Mays	Johns Hopkins Univ. Applied Physics Lab.
Chirikjian, Gregory	Johns Hopkins Univ.
11:00-11:30	WeB210.5
<i>A Study of EMG and EEG During Perception-Assist with an Upper-Limb Power-Assist Robot</i> , pp. 2711-2716.	
Kiguchi, Kazuo	Saga Univ.
Hayashi, Yoshiaki	Saga Univ.
WeB310	Ballroom D
Interactive Session WeB-3 (Interactive Session)	
Chair: Roumeliotis, Stergios	Univ. of Minnesota
Co-Chair: Song, Jae-Bok	Korea Univ.
11:30-12:00	WeB310.1
<i>Development of Kalman Filter Based Two-Port Body Force Observer for the Flexible Joint: Design and Experiments</i> , pp. 2717-2722.	
Park, Young Jin	POSTECH
Lee, Hosun	Korea Inst. of Science and Tech.
Oh, Yonghwan	KIST
Chung, Wan Kyun	POSTECH
11:30-12:00	WeB310.2
<i>Guaranteed Safe Online Learning Via Reachability: Tracking a Ground Target Using a Quadrotor</i> , pp. 2723-2730. Attachment	
Gillula, Jeremy	Stanford Univ.
Tomlin, Claire	UC Berkeley
11:30-12:00	WeB310.3
<i>SMD Pluggable Tactile Display Driven by Soft Actuator</i> , pp. 2731-2736.	
Lee, HyungSeok	Sungkyunkwan Univ.
Kwon, Hyeokyong	SungKyunKwan Univ.
Kim, Daegyeong	Sungkyunkwan Univ.
Kim, Uikyum	SungKyunKwan Univ.
Linh, Nguyengoc	SungKyunKwan Univ.
Toan, Nguyencanh	Sungkyunkwan Univ.
Moon, Hyungpil	Sungkyunkwan Univ.
Koo, Ja Choon	Sungkyunkwan Univ.
Nam, Jaedo	Sungkyunkwan Univ.
Choi, Hyouk Ryeol	Sungkyunkwan Univ.
11:30-12:00	WeB310.4
<i>Combot: Compliant Climbing Robotic Platform with Transitioning Capability and Payload Capacity</i> , pp. 2737-2742. Attachment	
Lee, Giuk	Seoul National Univ.
Wu, Geeyun	Seoul National Univ.
Kim, Sun Ho	Seoul National Univ.
Kim, Jongwon	Seoul National Univ.
Seo, TaeWon	Yeungnam Univ.
11:30-12:00	WeB310.5
<i>Strength Testing Machines for Wearable Walking Assistant Robots Based on Risk Assessment of Robot Suit HAL</i> , pp. 2743-2748.	
Nabeshima, Cota	CYBERDYNE Inc.
Kawamoto, Hiroaki	Univ. of Tsukuba
Sankai, Yoshiyuki	Univ. of Tsukuba
WeC01	Meeting Room 1 (Mini-sota)

Micro/Nanoscale Automation II (Regular Session)

Chair: Gupta, Satyandra K.

Univ. of Maryland, Coll. Park

Co-Chair: Fukuda, Toshio

Nagoya Univ.

14:30-14:45

WeC01.1

Gripper Synthesis for Indirect Manipulation of Cells Using Holographic Optical Tweezers, pp. 2749-2754. [Attachment](#)

Chowdhury, Sagar

Univ. of Maryland, Coll. Park

Svec, Petr

Univ. of Maryland, Coll. Park

Wang, Chenlu

Univ. of Maryland, Coll. Park

Losert, Wolfgang

Univ. of Maryland, Coll. Park

Gupta, Satyandra K.

Univ. of Maryland, Coll. Park

14:45-15:00

WeC01.2

Robotic Pick-Place of Nanowires for Electromechanical Characterization, pp. 2755-2760.

Ye, Xutao

Univ. of Toronto

Zhang, Yong

Univ. of Toronto

Sun, Yu

Univ. of Toronto

15:00-15:15

WeC01.3

Automated High Throughput Scalable Green Nanomanufacturing for Naturally Occurring Nanoparticles Using English Ivy, pp. 2761-2766.

Xu, Zhonghua

Univ. of Tennessee, Knoxville

Lenaghan, Scott

MABE

Gilmore, David

Swan valley farms

Xia, Lijin

Univ. of Tennessee, Knoxville

Zhang, Mingjun

Univ. of Tennessee

15:15-15:30

WeC01.4

Non-Vector Space Control for Nanomanipulations Based on Compressive Feedbacks, pp. 2767-2772.

Song, Bo

Michigan State Univ.

Zhao, Jianguo

Michigan State Univ.

Xi, Ning

Michigan State Univ.

Lai, King Wai Chiu

Michigan State Univ.

Yang, Ruiguo

Michigan State Univ.

Qu, Chengeng

Michigan State Univ.

Chen, Hongzhi

Michigan State Univ.

15:30-15:45

WeC01.5

Nanotool Exchanger System Based on E-SEM Nanorobotic Manipulation System, pp. 2773-2778.

Nakajima, Masahiro

Nagoya Univ.

Kawamoto, Takuya

Nagoya Univ.

Hirano, Takahiro

Nagoya Univ.

Kojima, Masaru

Nagoya Univ.

Fukuda, Toshio

Nagoya Univ.

15:45-16:00

WeC01.6

Controlled Positioning of Biological Cells Inside a Micropipette, pp. 2779-2784. [Attachment](#)

Zhang, Xuping

Univ. of Toronto

Leung, Clement

Univ. of Toronto

Lu, Zhe

Univ. of Toronto

Esfandiari, Navid

Univ. of Toronto

Casper, Robert

Univ. of Toronto

Sun, Yu

Univ. of Toronto

WeC02

Meeting Room 2 (Chief Red Wing)

Compliance Devices and Control (Regular Session)

Chair: Tsagarakis, Nikolaos

Istituto Italiano di Tecnologia

Co-Chair: Caldwell, Darwin G.

Italian Inst. of Tech.

14:30-14:45

WeC02.1

A Position and Stiffness Control Strategy for Variable Stiffness Actuators, pp. 2785-2791. [Attachment](#)

Sardellitti, Irene	Istituto Italiano di Tecnologia (IIT)
Medrano-Cerda, Gustavo	Italian Inst. of Tech.
Tsagarakis, Nikolaos	Istituto Italiano di Tecnologia
Jafari, Amir	Swiss Federal Inst. of Tech. (ETH) Zurich
Caldwell, Darwin G.	Italian Inst. of Tech.
14:45-15:00	WeC02.2
<i>How Design Can Affect the Energy Required to Regulate the Stiffness in Variable Stiffness Actuators</i> , pp. 2792-2797.	
Jafari, Amir	Swiss Federal Inst. of Tech. (ETH) Zurich
Tsagarakis, Nikolaos	Istituto Italiano di Tecnologia
Sardellitti, Irene	Istituto Italiano di Tecnologia (IIT)
Caldwell, Darwin G.	Italian Inst. of Tech.
15:00-15:15	WeC02.3
<i>Mechanics and Manipulation of Planar Elastic Kinematic Chains</i> , pp. 2798-2805. Attachment	
McCarthy, Zoe	Univ. of Illinois at Urbana-Champaign
Bretl, Timothy	Univ. of Illinois at Urbana-Champaign
15:15-15:30	WeC02.4
<i>Simultaneous Optimization of Robot Trajectory and Nonlinear Springs to Minimize Actuator Torque</i> , pp. 2806-2811.	
Attachment	
Schmit, Nicolas	Tokyo Inst. of Tech.
Okada, Masafumi	Tokyo Inst. of Tech.
15:30-15:45	WeC02.5
<i>Global Identification of Drive Gains Parameters of Robots Using a Known Payload</i> , pp. 2812-2817.	
Gautier, Maxime	Univ. of Nantes
Briot, Sébastien	IRCCyN
15:45-16:00	WeC02.6
<i>A Compact, Maneuverable, Underwater Robot for Direct Inspection of Nuclear Power Piping Systems</i> , pp. 2818-2823.	
Mazumdar, Anirban	Massachusetts Inst. of Tech.
Lozano, Martin	MIT
Fittery, Aaron	MIT
Asada, Harry	MIT
WeC03	
Meeting Room 3 (Mak'to)	
Underactuated Grasping (Regular Session)	
Chair: Dollar, Aaron	Yale Univ.
Co-Chair: Hammond III, Frank L.	Harvard Univ.
14:30-14:45	WeC03.1
<i>Selectively Compliant Underactuated Hand for Mobile Manipulation</i> , pp. 2824-2829. Attachment	
Aukes, Daniel	Stanford Univ.
Cutkosky, Mark	Stanford Univ.
Garcia, Pablo	SRI International
Kim, Susan	SRI International
Edsinger, Aaron	Meka Robotics
14:45-15:00	WeC03.2
<i>Precision Grasping and Manipulation of Small Objects from Flat Surfaces Using Underactuated Fingers</i> , pp. 2830-2835.	
Attachment	
Odhner, Lael	Yale Univ.
Ma, Raymond	Yale Univ.
Dollar, Aaron	Yale Univ.
15:00-15:15	WeC03.3
<i>Grasp and Manipulation Analysis for Synergistic Underactuated Hands under General Loading Conditions</i> , pp. 2836-2842.	
Gabiccini, Marco	Univ. di Pisa
Farnioli, Edoardo	Univ. di Pisa
Bicchi, Antonio	Univ. of Pisa

15:15-15:30	WeC03.4
<i>Towards a Design Optimization Method for Reducing the Mechanical Complexity of Underactuated Robotic Hands</i> , pp. 2843-2850.	
Hammond III, Frank L.	Harvard Univ.
Weisz, Jonathan	Columbia Univ.
de la Llera Kurth, Andres	Harvard Univ.
Allen, Peter	Columbia Univ.
Howe, Robert D.	Harvard Univ.
15:30-15:45	WeC03.5
<i>Seashell Effect Pretouch Sensing for Robotic Grasping</i> , pp. 2851-2858. Attachment	
Jiang, Liang-Ting	Univ. of Washington
Smith, Joshua R.	Univ. of Washington
15:45-16:00	WeC03.6
<i>Position Control of Tendon-Driven Fingers with Position Controlled Actuators</i> , pp. 2859-2864.	
Abdallah, Muhammad	General Motors R&D
Platt, Robert	MIT
Hargrave, Brian	Oceaneering Space Systems
Permenter, Frank	Oceaneering Space Systems
WeC04	Meeting Room 4 (Chief Wabasha)
Stochastic Motion Planning (Regular Session)	
Chair: Frazzoli, Emilio	Massachusetts Inst. of Tech.
Co-Chair: Laugier, Christian	INRIA Rhône-Alpes
14:30-14:45	WeC04.1
<i>An Incremental Sampling-Based Algorithm for Stochastic Optimal Control</i> , pp. 2865-2872.	
Huynh, Vu Anh	MIT
Karaman, Sertac	Massachusetts Inst. of Tech.
Frazzoli, Emilio	Massachusetts Inst. of Tech.
14:45-15:00	WeC04.2
<i>Stochastic Distributed Multi-Agent Planning and Applications to Traffic</i> , pp. 2873-2879.	
Lim, Sejoon	MIT
Rus, Daniela	MIT
15:00-15:15	WeC04.3
<i>Navigating between People: A Stochastic Optimization Approach</i> , pp. 2880-2885.	
Rios-Martinez, Jorge	INRIA Rhone-Alpes
Renzaglia, Alessandro	INRIA
Spalanzani, Anne	INRIA / UPMF-Grenoble 2
Martinelli, Agostino	INRIA Grenoble-Rhone-Alpes
Laugier, Christian	INRIA Rhône-Alpes
15:15-15:30	WeC04.4
<i>Probabilistic Path Planning for Multiple Robots with Subdimensional Expansion</i> , pp. 2886-2892. Attachment	
Wagner, Glenn	Carnegie Mellon
Kang, Minsu	Seoul National Univ.
Choset, Howie	Carnegie Mellon Univ.
15:30-15:45	WeC04.5
<i>Stochastic Receding Horizon Control for Robots with Probabilistic State Constraints</i> , pp. 2893-2898.	
Shah, Shridhar	Univ. of Delaware
Pahlajani, Chetan	Univ. of Delaware
Lacock, Nicholas	Univ. of Delaware
Tanner, Herbert G.	Univ. of Delaware
15:45-16:00	WeC04.6
<i>High-Speed Flight in an Ergodic Forest</i> , pp. 2899-2906.	
Karaman, Sertac	Massachusetts Inst. of Tech.

WeC05	Meeting Room 5 (Ska)
Image-Guided Interventions (Regular Session)	
Chair: Dupont, Pierre	Children's Hospital Boston, Harvard Medical School
Co-Chair: Hager, Gregory	Johns Hopkins Univ.
14:30-14:45	WeC05.1
<i>Tubular Enhanced Geodesic Active Contours for Continuum Robot Detection Using 3D Ultrasound</i> , pp. 2907-2912.	
Ren, Hongliang	Harvard Univ.
Dupont, Pierre	Children's Hospital Boston, Harvard Medical School
14:45-15:00	WeC05.2
<i>Ultrasound and Optically Controlled Robotic Instrument for Resternotomy in Cardiothoracic Surgery</i> , pp. 2913-2918.	
Korff, Alexander	RWTH Aachen Univ.
Jansen, Arne	RWTH Aachen Univ. Chair of Medical Engineering
Jalowy, Thomas	RWTH Aachen Univ. Chair of Medical Engineering
Mueller, Meiko	RWTH Aachen Univ.
Kunze, Sandra	Medical Faculty Mannheim, Univ. of Heidelberg
Dohmen, Guido	RWTH-Aachen Univ. Univ. Hospital Aachen, Department o
Heger, Stefan	RWTH Aachen Univ. Chair of Medical Engineering
Radermacher, Klaus	RWTH Aachen Univ.
15:00-15:15	WeC05.3
<i>Full State Visual Forceps Tracking under a Microscope Using Projective Contour Models</i> , pp. 2919-2925. Attachment	
Baek, Young Min	The Univ. of Tokyo
Tanaka, Shinichi	The Univ. of Tokyo
Harada, Kanako	The Univ. of Tokyo
Sugita, Naohiko	The Univ. of Tokyo
Morita, Akio	Kanto Medical Center NTT Ec.
Sora, Shigeo	Tokyo Metropolitan Pol. Hospital
Mochizuki, Ryo	NHK Engineering Service Inc.
Mitsubishi, Mamoru	The Univ. of Tokyo
15:15-15:30	WeC05.4
<i>MARVEL: A Wireless Miniature Anchored Robotic Videoscope for Expedited Laparoscopy</i> , pp. 2926-2931.	
Castro, Cristian	Univ. of South Florida
Smith, Sara	Univ. of South Florida
Alqassis, Adham	Univ. of South Florida
Ketterl, Thomas	Univ. of South Florida
Sun, Yu	Univ. of South Florida
Ross, Sharona	Univ. of South Florida
Rosemurgy, Alexander	Univ. of South Florida
Savage, Peter	independent consultant
Gitlin, Richard	Univ. of South Florida
15:30-15:45	WeC05.5
<i>Motion Planning for the Virtual Bronchoscopy</i> , pp. 2932-2937. Attachment	
Rosell, Jan	Tech. Univ. of Catalonia
Pérez, Alexander	Tech. Univ. of Catalonia
Cabras, Paolo	Inst. of Industrial and Control Engineering, Tech. Univ.
Rosell, Antoni	Servei de Pneumologia, Hospital Univ. de Bellvitge
15:45-16:00	WeC05.6
<i>Pose Reconstruction of Flexible Instruments from Endoscopic Images Using Markers</i> , pp. 2938-2943. Attachment	
Reilink, Rob	Univ. of Twente
Stramigioli, Stefano	Univ. of Twente
Misra, Sarthak	Univ. of Twente

WeC06		Meeting Room 6 (Oya'te)
Mobile Manipulation: Planning & Control (Regular Session)		
Chair: Lozano-Perez, Tomas		MIT
Co-Chair: Ryu, Jeha		Gwangju Inst. Science & Tech.
14:30-14:45		WeC06.1
<i>Planning with Adaptive Dimensionality for Mobile Manipulation</i> , pp. 2944-2951. Attachment		
Gochev, Kalin		Univ. of Pennsylvania
Safonova, Alla		Univ. of Pennsylvania
Likhachev, Maxim		Carnegie Mellon Univ.
14:45-15:00		WeC06.2
<i>Unifying Perception, Estimation and Action for Mobile Manipulation Via Belief Space Planning</i> , pp. 2952-2959.		
Kaelbling, Leslie		MIT
Lozano-Perez, Tomas		MIT
15:00-15:15		WeC06.3
<i>Distributed Cooperative Object Attitude Manipulation</i> , pp. 2960-2965.		
Markdahl, Johan		KTH Royal Inst. of Tech.
Karayiannidis, Yiannis		KTH Royal Insitute of Tech.
Hu, Xiaoming		Royal Inst. of Tech.
Kragic, Danica		KTH
15:15-15:30		WeC06.4
<i>A Hybrid Control for Automatic Docking of Electric Vehicles for Recharging</i> , pp. 2966-2971.		
Petrov, Plamen		Tech. Univ. - Sofia
Boussard, Clément		INRIA
Ammoun, Samer		Modulowatt ingénierie
Nashashibi, Fawzi		INRIA
15:30-15:45		WeC06.5
<i>Convex Hull-Based Power Manipulability Analysis of Robot Manipulators</i> , pp. 2972-2977.		
Choi, Hee-Byoung		Gwangju Inst. of Science and Tech.
Ryu, Jeha		Gwangju Inst. Science & Tech.
15:45-16:00		WeC06.6
<i>On Continuous Null Space Projections for Torque-Based, Hierarchical, Multi-Objective Manipulation</i> , pp. 2978-2985. Attachment		
Dietrich, Alexander		German Aerospace Center (DLR)
Albu-Schäffer, Alin		DLR - German Aerospace Center
Hirzinger, Gerd		German Aerospace Center (DLR)
WeC07		Meeting Room 7 (Remnicha)
Environment Mapping (Regular Session)		
Chair: Choi, Jongsuk		Korea Inst. of Sci. and Tech.
Co-Chair: Tomono, Masahiro		Chiba Inst. of Tech.
14:30-14:45		WeC07.1
<i>A Geological Perception System for Autonomous Mining</i> , pp. 2986-2991.		
Schneider, Sven		Australian Centre for Field Robotics, The Univ. of Sydney
Melkumyan, Arman		The Univ. of Sydney
Murphy, Richard		Australian Centre for Field Robotics, The Univ. of Sydney
Nettleton, Eric		The Univ. of Sydney
14:45-15:00		WeC07.2
<i>A Dependable Perception-Decision-Execution Cycle for Autonomous Robots</i> , pp. 2992-2998. Attachment		
Gspandl, Stephan		Inst. for Software Tech. Graz Univ. of Tech.
Podesser, Siegfried		Inst. for Software Tech. Graz Univ. of Tech.
Reip, Michael		Graz Univ. of Tech.
Steinbauer, Gerald		Graz Univ. of Tech.
Wolfram, Máté		Science Fund (FWF) by grant P22690. The authors are with the Ins

15:00-15:15	WeC07.3
<i>Efficient Change Detection in 3D Environment for Autonomous Surveillance Robots Based on Implicit Volume</i> , pp. 2999-3004.	
Wilson Vieira, Antonio	Univ. Federal de Minas Gerais
Drewe Jr, Paulo	Federal Univ. of Rio Grande (FURG)
Campos, Mario Montenegro	Univ. Federal de Minas Gerais
15:15-15:30	WeC07.4
<i>Image-Based Planar Reconstruction for Dense Robotic Mapping</i> , pp. 3005-3012.	
Tomono, Masahiro	Chiba Inst. of Tech.
15:30-15:45	WeC07.5
<i>Stochastic Source Seeking in Complex Environments</i> , pp. 3013-3018. Attachment	
Atanasov, Nikolay	Univ. of Pennsylvania
Le Ny, Jerome	Univ. of Pennsylvania
Michael, Nathan	Univ. of Pennsylvania
Pappas, George J.	Univ. of Pennsylvania
15:45-16:00	WeC07.6
<i>Robust Sound Localization for Various Platform of Robots Using TDOA Map Adaptation</i> , pp. 3019-3024.	
Shen, Guanghu, Guanghu	KIST, Biomedical Res. Inst.
Hwang, Dohyung	Korea Inst. of Science and Tech.
Nguyen, Quang	Korea Inst. of Science and Tech.
Choi, Jongsuk	Korea Inst. of Sci. and Tech.
WeC08	Meeting Room 8 (Wacipi)
Slam II (Regular Session)	
Chair: Birk, Andreas	Jacobs Univ.
Co-Chair: Park, Wooram	Univ. of Texas at Dallas
14:30-14:45	WeC08.1
<i>Efficient Data-Driven MCMC Sampling for Vision-Based 6D SLAM</i> , pp. 3025-3032.	
Min, Jihong	KAIST
Kim, Jungho	KAIST
Shin, Seunghak	KAIST
Kweon, In So	KAIST
14:45-15:00	WeC08.2
<i>Scan Segments Matching for Pairwise 3D Alignment</i> , pp. 3033-3040.	
Douillard, Bertrand	Univ. of Sydney
Quadros, Alastair James	The Univ. of Sydney
Morton, Peter	Univ. of Sydney
Underwood, James Patrick	The Univ. of Sydney
De Deuge, Mark	The Univ. of Sydney
Hugosson, Simon	Linköping Univ.
Hallström, Manfred	Linköping Univ.
Bailey, Tim	Univ. of Sydney
15:00-15:15	WeC08.3
<i>Planar Surface SLAM with 3D and 2D Sensors</i> , pp. 3041-3048.	
Trevor, Alexander J B	Georgia Inst. of Tech.
Rogers III, John G.	Georgia Inst. of Tech.
Christensen, Henrik Iskov	Georgia Inst. of Tech.
15:15-15:30	WeC08.4
<i>Uncertainty Estimation for a 6-DoF Spectral Registration Method As Basis for Sonar-Based Underwater 3D SLAM</i> , pp. 3049-3054.	
Pfingsthorn, Max	Jacobs Univ.
Birk, Andreas	Jacobs Univ.
Buelow, Heiko	Jacobs Univ.
15:30-15:45	WeC08.5

Interactive Acquisition of Residential Floor Plans, pp. 3055-3062. [Attachment](#)

Kim, Young Min	Stanford Univ.
Dolson, Jennifer	Stanford Univ.
Sokolsky, Michael	Stanford Univ.
Koltun, Vladlen	Stanford Univ.
Thrun, Sebastian	Stanford Univ.

15:45-16:00 WeC08.6

CFastSLAM: A New Jacobian Free Solution to SLAM Problem, pp. 3063-3068.

Song, Yu	Beijing Jiaotong Univ.
Li, Qingling	China Univ. of Mining & Tech.
Kang, Yifei	Beijing Jiaotong Univ.
Song, Yongduan	Beijing Jiaotong Univ.

WeC09 Meeting Room 9 (Sa)

Visual Tracking (Regular Session)

Chair: Maye, Jerome	ETH Zurich
Co-Chair: Hadj-Abdelkader, Hicham	IBISC

14:30-14:45 WeC09.1

Generic Realtime Kernel Based Tracking, pp. 3069-3074. [Attachment](#)

Hadj-Abdelkader, Hicham	IBISC
Mezouar, Youcef	Blaise Pascal Univ.
Chateau, Thierry	Blaise Pascal Univ.

14:45-15:00 WeC09.2

Generative Object Detection and Tracking in 3D Range Data, pp. 3075-3081.

Kaestner, Ralf	ETH Zurich
Maye, Jerome	ETH Zurich
Pilat, Yves	ETH Zurich
Sieglwart, Roland	ETH Zurich

15:00-15:15 WeC09.3

Moving Vehicle Detection and Tracking in Unstructured Environments, pp. 3082-3087. [Attachment](#)

Wojke, Nicolai	Univ. of Koblenz-Landau
Häselich, Marcel	Univ. of Koblenz-Landau

15:15-15:30 WeC09.4

Learning to Place New Objects, pp. 3088-3095. [Attachment](#)

Jiang, Yun	Cornell Univ.
Zheng, Changxi	Cornell Univ.
Lim, Marcus	Cornell Univ.
Saxena, Ashutosh	Cornell Univ.

15:30-15:45 WeC09.5

Lost in Translation (and Rotation): Rapid Extrinsic Calibration for 2D and 3D LIDARS, pp. 3096-3102. [Attachment](#)

Maddern, William	Queensland Univ. of Tech.
Harrison, Alastair	Univ. of Oxford
Newman, Paul	Oxford Univ.

15:45-16:00 WeC09.6

Automatic and Self-Contained Calibration of a Multi-Sensorial Humanoid's Upper Body, pp. 3103-3108. [Attachment](#)

Birbach, Oliver	DFKI
Bäumli, Berthold	German Aerospace Center (DLR)
Frese, Udo	Univ. Bremen

WeC110 Ballroom D

Interactive Session WeC-1 (Interactive Session)

Chair: Lee, C. S. George	Purdue Univ.
Co-Chair: Han, Chang-Soo	Hanyang Univ.

14:30-15:00	WeC110.1
<i>A Three-Link Module for Modular Dynamics and Control of High-Dimensional Humanoids</i> , pp. 3109-3115.	
Hemami, Hooshang	The Ohio State Univ.
Zheng, Yuan F.	The Ohio State Univ.
14:30-15:00	WeC110.2
<i>Kinetic Scrolling-Based Position Mapping for Haptic Teleoperation of Unmanned Aerial Vehicles</i> , pp. 3116-3121. Attachment	
Mersha, Abeje Y.	Univ. of Twente
Rüesch, Andreas	ETHZ
Stramigioli, Stefano	Univ. of Twente
Carloni, Raffaella	Univ. of Twente
14:30-15:00	WeC110.3
<i>A Bio-Inspired Compliant Parallel Mechanism for High-Precision Robots</i> , pp. 3122-3127. Attachment	
Kozuka, Hiroaki	Nagoya Inst. of Tech.
Arata, Jumpei	Nagoya Institute of Tech.
Okuda, Kenji	Brother Industries, Ltd.
Onaga, Akinori	Brother Industries, Ltd.
Ohno, Motoshi	Brother Industries, Ltd.
Sano, Akihito	Nagoya Inst. of Tech.
Fujimoto, Hideo	Nagoya Inst. of Tech.
14:30-15:00	WeC110.4
<i>Analysis Framework for Cooperating Mobile Cable Robots</i> , pp. 3128-3133.	
Zhou, Xiaobo	SUNY at Buffalo
Tang, Chinpei	Caterpillar Inc.
Krovi, Venkat	Univ. at Buffalo (SUNY)
14:30-15:00	WeC110.5
<i>Understanding and Reproducing Waltz Dancers' Body Dynamics in Physical Human-Robot Interaction</i> , pp. 3134-3140.	
Wang, Hongbo	Tohoku Univ.
Kosuge, Kazuhiro	Tohoku Univ.
WeC210	Ballroom D
Interactive Session WeC-2 (Interactive Session)	
Chair: Lee, C. S. George	Purdue Univ.
Co-Chair: Han, Chang-Soo	Hanyang Univ.
15:00-15:30	WeC210.1
<i>A Unified Framework for Virtual Passive Bipedal Gait Generation</i> , pp. 3141-3146.	
Xu, Chunquan	The Univ. of Electro-Communications
Ming, Aiguo	The Univ. of Electro-Communications
Shimojo, Makoto	Univ. of Electro-Communications
15:00-15:30	WeC210.2
<i>Mechanical Design of a Manipulation System for Unmanned Aerial Vehicles</i> , pp. 3147-3152.	
Keemink, Arvid Q.L.	Univ. of Twente
Fumagalli, Matteo	Univ. of Twente
Stramigioli, Stefano	Univ. of Twente
Carloni, Raffaella	Univ. of Twente
15:00-15:30	WeC210.3
<i>Hopping of a Monopedal Robot with a Biarticular Muscle Driven by Electromagnetic Linear Actuators</i> , pp. 3153-3160.	
Nakata, Yoshihiro	Osaka Univ.
Ide, Atsuhiko	Osaka Univ.
Nakamura, Yutaka	Osaka Univ.
Hirata, Katsuhiko	Osaka Univ.
Ishiguro, Hiroshi	Osaka Univ.
15:00-15:30	WeC210.4
<i>Modeling Human Motion Patterns for Multi-Robot Planning</i> , pp. 3161-3166.	

Karnad, Nikhil Isler, Volkan	Univ. of Minnesota, Twin-Cities Univ. of Minnesota
15:00-15:30	WeC210.5
<i>Verification of a Fast Training Algorithm for Multi-Channel Semg Signal Classification Systems to Decode Human Hand Configuration</i> , pp. 3167-3172.	
Lee, HanJin Kim, Keehoon Park, Myoung Soo Park, Jong Hyeon Oh, Sang-Rok	KIST Korea Inst. of Science and Tech. Korea Inst. of Science and Tech. Hanyang Univ. KIST
WeC310	Ballroom D
Interactive Session WeC-3 (Interactive Session)	
Chair: Lee, C. S. George Co-Chair: Han, Chang-Soo	Purdue Univ. Hanyang Univ.
15:30-16:00	WeC310.1
<i>Development of Dynamic Model-Based Controller for Upper Limb Exoskeleton Robot</i> , pp. 3173-3178.	
Byeong-kyu, Lee Hee-Don, Lee Lee, Ji-Yeong Shin, Kyoosik Han, Jungsoo Han, Chang-Soo	Hanyang Univ. Hanyang Univ. Hanyang Univ. Hanyang Univ. hansung Univ. Hanyang Univ.
15:30-16:00	WeC310.2
<i>Improving Endurance of Autonomous Aerial Vehicles through Intelligent Service-Station Placement</i> , pp. 3179-3184.	
Godzdanker, Roy Rutherford, Matthew Valavanis, Kimon	Univ. of Denver Univ. of Denver Univ. of Denver
15:30-16:00	WeC310.3
<i>Direct Teaching Method for Musculoskeletal Robots Driven by Pneumatic Artificial Muscles</i> , pp. 3185-3191.	
Ikemoto, Shuhei Nishigori, Yoichi Hosoda, Koh	Graduate School of Information Science and Tech. Osaka Univ. Osaka Univ.
15:30-16:00	WeC310.4
<i>A Sampling-Based Approach to Probabilistic Pursuit Evasion</i> , pp. 3192-3199.	
Mahadevan, Aditya Amato, Nancy	Texas A&M Univ. Texas A&M Univ.
15:30-16:00	WeC310.5
<i>PR2 Remote Lab: An Environment for Remote Development and Experimentation</i> , pp. 3200-3205. Attachment	
Pitzer, Benjamin Osentoski, Sarah Jay, Graylin Crick, Christopher Jenkins, Odest Chadwicke	Robert Bosch LLC Robert Bosch LLC Brown Univ. Brown Univ. Brown Univ.
WeD01	Meeting Room 1 (Mini-sota)
Non-Holonomic Motion Planning (Regular Session)	
Chair: Tanner, Herbert G. Co-Chair: Nakamura, Yoshihiko	Univ. of Delaware Univ. of Tokyo
16:30-16:45	WeD01.1
<i>Model Predictive Navigation for Position and Orientation Control of Nonholonomic Vehicles</i> , pp. 3206-3211.	
Karydis, Konstantinos Valbuena, Luis	Univ. of Delaware Univ. of Delaware

Tanner, Herbert G.	Univ. of Delaware
16:45-17:00	WeD01.2
<i>Regularity Properties and Deformation of Wheeled Robots Trajectories</i> , pp. 3212-3217.	
Pham, Quang-Cuong	Univ. of Tokyo
Nakamura, Yoshihiko	Univ. of Tokyo
17:00-17:15	WeD01.3
<i>A Homicidal Differential Drive Robot</i> , pp. 3218-3225.	
Ruiz, Ubaldo	CIMAT
Murrieta-Cid, Rafael	Center for Mathematical Res.
17:15-17:30	WeD01.4
<i>On the Dynamic Model and Motion Planning for a Class of Spherical Rolling Robots</i> , pp. 3226-3231.	
Svinin, Mikhail	Kyushu Univ.
Morinaga, Akihiro	Kyushu Univ.
Yamamoto, Motoji	Kyushu Univ.
17:30-17:45	WeD01.5
<i>Control of Nonprehensile Rolling Manipulation: Balancing a Disk on a Disk</i> , pp. 3232-3237.	
Ryu, Ji-Chul	Northwestern Univ.
Ruggiero, Fabio	Univ. di Napoli Federico II
Lynch, Kevin	Northwestern Univ.
17:45-18:00	WeD01.6
<i>Estimating Probability of Collision for Safe Motion Planning under Gaussian Motion and Sensing Uncertainty</i> , pp. 3238-3244.	
Patil, Sachin	Univ. of North Carolina at Chapel Hill
van den Berg, Jur	Univ. of Utah
Alterovitz, Ron	Univ. of North Carolina at Chapel Hill
WeD02	Meeting Room 2 (Chief Red Wing)
Grasping and Manipulation (Regular Session)	
Chair: Moon, Hyungpil	Sungkyunkwan Univ.
Co-Chair: Beetz, Michael	Tech. Univ. München
16:30-16:45	WeD02.1
<i>Movement-Aware Action Control - Integrating Symbolic and Control-Theoretic Action Execution</i> , pp. 3245-3251.	
Kresse, Ingo	TU Muenchen
Beetz, Michael	Tech. Univ. München
16:45-17:00	WeD02.2
<i>Externally Sensorless Dynamic Regrasping and Manipulation by a Triple-Fingered Robotic Hand with Torsional Fingertip Joints</i> , pp. 3252-3257. Attachment	
Tahara, Kenji	Kyushu Univ.
Maruta, Keigo	Kyushu Univ.
Kawamura, Akihiro	Kyushu Univ.
Yamamoto, Motoji	Kyushu Univ.
17:00-17:15	WeD02.3
<i>Physically-Based Grasp Quality Evaluation under Uncertainty</i> , pp. 3258-3263.	
Kim, Junggon	Carnegie Mellon Univ.
Iwamoto, Kunihiro	Toyota
Kuffner, James	Carnegie Mellon Univ.
Ota, Yasuhiro	Toyota Motor Eng. & Manufacturing
Pollard, Nancy S	Carnegie Mellon Univ.
17:15-17:30	WeD02.4
<i>Bimanual Regrasping from Unimanual Machine Learning</i> , pp. 3264-3270. Attachment	
Balaguer, Benjamin	Univ. of California, Merced
Carpin, Stefano	Univ. of California, Merced
17:30-17:45	WeD02.5
<i>Planar, Bimanual, Whole-Arm Grasping</i> , pp. 3271-3277.	

Seo, Jungwon	Univ. of Pennsylvania
Kim, Soonkyum	Univ. of Pennsylvania
Kumar, Vijay	Univ. of Pennsylvania

17:45-18:00 WeD02.6

Identification of Contact Formations: Resolving Ambiguous Force Torque Information, pp. 3278-3284.

Hertkorn, Katharina	German Aerospace Center (DLR)
Roa, Maximo A.	German Aerospace Center, DLR
Preusche, Carsten	German Aerospace Center (DLR)
Borst, Christoph	German Aerospace Center (DLR)
Hirzinger, Gerd	German Aerospace Center (DLR)

WeD03 Meeting Room 3 (Mak'to)

Modular Robots & Multi-Agent Systems (Regular Session)

Chair: Parker, Lynne	Univ. of Tennessee
Co-Chair: Abichandani, Pramod	Drexel Univ.

16:30-16:45 WeD03.1

A Distributed Algorithm for 2D Shape Duplication with Smart Pebble Robots, pp. 3285-3292.

Gilpin, Kyle	Massachusetts Inst. of Tech.
Rus, Daniela	MIT

16:45-17:00 WeD03.2

Kilobot: A Low Cost Scalable Robot System for Collective Behaviors, pp. 3293-3298. [Attachment](#)

Rubenstein, Michael	Harvard Univ.
Ahler, Christian	Harvard Univ.
Nagpal, Radhika	Harvard Univ.

17:00-17:15 WeD03.3

Programming and Controlling Self-Folding Sheets, pp. 3299-3306. [Attachment](#)

An, Byoungkwon	MIT, CSAIL
Rus, Daniela	MIT

17:15-17:30 WeD03.4

Task Allocation with Executable Coalitions in Multirobot Tasks, pp. 3307-3314.

Zhang, Yu (Tony)	Univ. of Tennessee
Parker, Lynne	Univ. of Tennessee

17:30-17:45 WeD03.5

Mathematical Programming for Multi-Vehicle Motion Planning Problems, pp. 3315-3322.

Abichandani, Pramod	Drexel Univ.
Ford, Gabriel	Drexel Univ.
Benson, Hande	Drexel Univ.
Kam, Moshe	Drexel Univ.

17:45-18:00 WeD03.6

Decentralized Multi-Robot Cooperation with Auctioned POMDPs, pp. 3323-3328.

Capitan, Jesus	Inst. Superior Tecnico
Spaan, Matthijs	Delft Univ. of Tech.
Merino, Luis	Pablo de Olavide Univ.
Ollero, Anibal	Univ. of Seville

WeD04 Meeting Room 4 (Chief Wabasha)

Embodied Intelligence - Compliant Actuators (Invited Session)

Chair: Accoto, Dino	Univ. Campus Bio-Medico
Co-Chair: Burdet, Etienne	imperial Coll. london

16:30-16:45 WeD04.1

A Versatile Biomimetic Controller for Contact Tooling and Tactile Exploration (I), pp. 3329-3334.

Ganesh, Gowrishankar	ATR International
Jarrassé, Nathanaël	Imperial Coll. London

Haddadin, Sami Albu-Schäffer, Alin Burdet, Etienne	German Aerospace Center (DLR) DLR - German Aerospace Center imperial Coll. london
16:45-17:00	WeD04.2
<i>Passive Impedance Control of a Multi-DOF VSA-CubeBot Manipulator (I)</i> , pp. 3335-3340.	
Mancini, Michele	Univ. di Pisa
Grioli, Giorgio	Univ. di Pisa
Catalano, Manuel	Faculty of Engineering - Univ. of Pisa
Garabini, Manolo	Univ. di Pisa
Bonomo, Fabio	Faculty of Engineering - Univ. of Pisa
Bicchi, Antonio	Univ. of Pisa
17:00-17:15	WeD04.3
<i>Optimality Principles in Stiffness Control: The VSA Kick (I)</i> , pp. 3341-3346.	
Garabini, Manolo	Univ. di Pisa
Belo, Felipe	Univ. of Pisa
Salaris, Paolo	Univ. of Pisa
Passaglia, Andrea	Univ. di Pisa
Bicchi, Antonio	Univ. of Pisa
17:15-17:30	WeD04.4
<i>Optimal Control for Exploiting the Natural Dynamics of Variable Stiffness Robots (I)</i> , pp. 3347-3354. Attachment	
Haddadin, Sami	German Aerospace Center (DLR)
Huber, Felix	German Aerospace Center
Albu-Schäffer, Alin	DLR - German Aerospace Center
17:30-17:45	WeD04.5
<i>The Vsaut-II: A Novel Rotational Variable Stiffness Actuator</i> , pp. 3355-3360. Attachment	
Groothuis, Stefan S.	Univ. of Twente
Rusticelli, Giacomo	Univ. of Bologna
Zucchelli, Andrea	University of Bologna
Stramigioli, Stefano	Univ. of Twente
Carlioni, Raffaella	Univ. of Twente
17:45-18:00	WeD04.6
<i>Pvej: A Modular Passive Viscoelastic Joint for Assistive Wearable Robots</i> , pp. 3361-3366.	
Accoto, Dino	Univ. Campus Bio-Medico
Tagliamonte, Nevio Luigi	Univ. Campus Bio-Medico di Roma
Carpino, Giorgio	Univ. Campus Bio-Medico
Sergi, Fabrizio	Univ. Campus Bio-Medico di Roma
Di Palo, Michelangelo	Univ. Campus Bio-Medico di Roma
Guglielmelli, Eugenio	Univ. Campus Bio-Medico
WeD05	Meeting Room 5 (Ska)
Minimally Invasive Interventions II (Regular Session)	
Chair: Simaan, Nabil	Vanderbilt Univ.
Co-Chair: Menciassi, Arianna	Scuola Superiore Sant'Anna - SSSA
16:30-16:45	WeD05.1
<i>Configuration Comparison for Surgical Robotic Systems Using a Single Access Port and Continuum Mechanisms</i> , pp. 3367-3374. Attachment	
Xu, Kai	Shanghai Jiao Tong Univ.
Zheng, Xidian	Shanghai Jiao Tong Univ.
16:45-17:00	WeD05.2
<i>Control of Untethered Magnetically Actuated Tools Using a Rotating Permanent Magnet in Any Position</i> , pp. 3375-3380. Attachment	
Mahoney, Arthur	Univ. of Utah
Cowan, Daniel Lewis	Univ. of Utah
Miller, Katie	Univ. of Utah

Abbott, Jake	Univ. of Utah
17:00-17:15	WeD05.3
<i>Integration and Preliminary Evaluation of an Insertable Robotic Effectors Platform for Single Port Access Surgery</i> , pp. 3381-3387. Attachment	
Bajo, Andrea	Vanderbilt Univ.
Goldman, Roger E.	Columbia Univ.
Wang, Long	Columbia Univ.
Fowler, Dennis	Columbia Univ.
Simaan, Nabil	Vanderbilt Univ.
17:15-17:30	WeD05.4
<i>Constrained Filtering with Contact Detection Data for the Localization and Registration of Continuum Robots in Flexible Environments</i> , pp. 3388-3394.	
Tully, Stephen	Carnegie Mellon Univ.
Bajo, Andrea	Vanderbilt Univ.
Kantor, George	Carnegie Mellon Univ.
Choset, Howie	Carnegie Mellon Univ.
Simaan, Nabil	Vanderbilt Univ.
17:30-17:45	WeD05.5
<i>Real-Time Control Architecture of a Novel Single-Port Laparoscopy Bimanual Robot (SPRINT)</i> , pp. 3395-3400. Attachment	
Niccolini, Marta	Univ. of Pisa
Petroni, Gianluigi	Scuola Superiore Sant'Anna
Menciassi, Arianna	Scuola Superiore Sant'Anna - SSSA
Dario, Paolo	Scuola Superiore Sant'Anna
17:45-18:00	WeD05.6
<i>Remote Centre-Of-Motion Control Algorithms of 6-RRCR Parallel Robot Assisted Surgery System (PRAMiSS)</i> , pp. 3401-3406.	
Moradi Dalvand, Mohsen	Monash Univ.
Shirinzadeh, Bijan	Monash Univ.
WeD06	Meeting Room 6 (Oya'te)
Space Robotics (Regular Session)	
Chair: Yoshida, Kazuya	Tohoku Univ.
Co-Chair: Parness, Aaron	Nasa Jet Propulsion Lab.
16:30-16:45	WeD06.1
<i>Automatic Rock Recognition from Drilling Performance Data</i> , pp. 3407-3412.	
Zhou, Hang	Univ. of Sydney
Hatherly, Peter	Univ. of Sydney
Monteiro, Sildomar	Univ. of Sydney
Ramos, Fabio	Univ. of Sydney
Oppolzer, Florian	Univ. of Sydney
Nettleton, Eric	The Univ. of Sydney
Scheding, Steven	The Univ. of Sydney
16:45-17:00	WeD06.2
<i>Evaluation of the Reconfiguration Effects of Planetary Rovers on Their Lateral Traversing of Sandy Slopes</i> , pp. 3413-3418.	
Inotsume, Hiroaki	Tohoku Univ.
Sutoh, Masataku	Tohoku Univ.
Nagaoka, Kenji	Tohoku Univ.
Nagatani, Keiji	Tohoku Univ.
Yoshida, Kazuya	Tohoku Univ.
17:00-17:15	WeD06.3
<i>Evaluation of Influence of Surface Shape of Locomotion Mechanism on Traveling Performance of Planetary Rovers</i> , pp. 3419-3424.	
Sutoh, Masataku	Tohoku Univ.
Nagaoka, Kenji	Tohoku Univ.
Nagatani, Keiji	Tohoku Univ.

Yoshida, Kazuya	Tohoku Univ.
17:15-17:30	WeD06.4
<i>The Robonaut 2 Hand Designed to Do Work with Tools</i> , pp. 3425-3430.	
Bridgwater, Lyndon	NASA
Ihrke, Chris	General Motors
Diftler, Myron	NASA Johnson Space Center
Abdallah, Muhammad	General Motors R&D
Radford, Nicolaus	NASA
Rogers, Jonathan	NASA Johnson Space Center
Yayathi, Sandeep	NASA Johnson Space Center
Askew, Roger, Scott	NASA
Linn, Marty	General Motors
17:30-17:45	WeD06.5
<i>Autonomous Detection of Volcanic Plumes on Outer Planetary Bodies</i> , pp. 3431-3436.	
Lin, Yucong	Arizona State Univ.
Bunte, Melissa	Arizona State Univ.
Saripalli, Srikanth	Arizona State Univ.
Greeley, Ronald	Arizona State Univ.
17:45-18:00	WeD06.6
<i>Gravity-Independent Mobility and Drilling on Natural Rock Using Microspines</i> , pp. 3437-3442.	
Parness, Aaron	Nasa Jet Propulsion Lab.
Frost, Matthew	NASA Jet Propulsion Lab.
Thatte, Nitish	Rutgers Univ.
King, Jonathan	The Ohio State Univ.
WeD07	Meeting Room 7 (Remnicha)
Results of ICRA 2011 Robot Challenge (Invited Session)	
Chair: Balakirsky, Stephen	NIST
Co-Chair: Gorman, Jason	National Inst. of Standards and Tech.
16:30-16:45	WeD07.1
<i>Cooperative Micromanipulation Using Optically Controlled Bubble Microrobots (I)</i> , pp. 3443-3448. Attachment	
Ishii, Kelly Ann	Univ. of Hawai'i at Mānoa
Hu, Wenqi	Univ. of Hawaii at Manoa
Ohta, Aaron	Univ. of Hawai'i at Mānoa
16:45-17:00	WeD07.2
<i>A Modular Control System for Warehouse Automation - Algorithms and Simulations in USARSim (I)</i> , pp. 3449-3454.	
Miklic, Damjan	Univ. of Zagreb
Petrovic, Tamara	Univ. of Zagreb
Coric, Mirko	Univ. of Zagreb
Piskovic, Zvonimir	Univ. of Zagreb
Bogdan, Stjepan	Univ. of Zagreb
17:00-17:15	WeD07.3
<i>Wireless Swimming Microrobots: Design and Development of a 2 DoF Magnetic-Based System (I)</i> , pp. 3455-3460. Attachment	
Palagi, Stefano	Istituto Italiano di Tecnologia/Scuola Superiore Sant'Anna
Lucarini, Gioia	Scuola Superiore Sant'Anna - SSSA
Pensabene, Virginia	Vanderbilt Univ.
Levi, Alessandro	Istituto Italiano di Tecnologia/Scuola Superiore Sant'Anna
Mazzolai, Barbara	Istituto Italiano di Tecnologia
Menciassi, Arianna	Scuola Superiore Sant'Anna - SSSA
Beccai, Lucia	Istituto Italiano di Tecnologia
17:15-17:30	WeD07.4
<i>Toward Fluidic Microrobots Using Electrowetting (I)</i> , pp. 3461-3466.	
Schaler, Ethan	Univ. of Maryland, Coll. Park

Tellers, Mary	Univ. of Maryland
Gerratt, Aaron P.	Univ. of Maryland, Coll. Park
Penskiy, Ivan	Univ. of Maryland, Coll. Park
Bergbreiter, Sarah	Univ. of Maryland, Coll. Park

17:30-17:45 WeD07.5

A Textured Object Recognition Pipeline for Color and Depth Image Data (I), pp. 3467-3474.

Tang, Jie	Univ. of California, Berkeley
Miller, Stephen	Stanford Univ.
Singh, Arjun	Univ. of California, Berkeley
Abbeel, Pieter	UC Berkeley

17:45-18:00 WeD07.6

The Jacobs Robotics Approach to Object Recognition and Localization in the Context of the ICRA'11 Solutions in Perception Challenge (I), pp. 3475-3481.

Vaskevicius, Narunas	Jacobs Univ.
Pathak, Kaustubh	Jacobs Univ. Bremen
Ichim, Alexandru-Eugen	Ec. Pol. Federale de Lausanne
Birk, Andreas	Jacobs Univ.

WeD08 Meeting Room 8 (Wacipi)

Visual Learning (Regular Session)

Chair: Dudek, Gregory	McGill Univ.
Co-Chair: Kosecka, Jana	George Mason Univ.

16:30-16:45 WeD08.1

Semi-Parametric Models for Visual Odometry, pp. 3482-3489. [Attachment](#)

Guizilini, Vitor	Univ. of Sydney
Ramos, Fabio	Univ. of Sydney

16:45-17:00 WeD08.2

Efficient On-Line Data Summarization Using Extremum Summaries, pp. 3490-3496.

Girdhar, Yogesh	McGill Univ.
Dudek, Gregory	McGill Univ.

17:00-17:15 WeD08.3

Place Representation in Topological Maps Based on Bubble Space, pp. 3497-3502.

Erkent, Ozgur	Bogazici Univ.
Bozma, Isil	Bogazici Univ.

17:15-17:30 WeD08.4

DP-FACT: Towards Topological Mapping and Scene Recognition with Color for Omnidirectional Camera, pp. 3503-3508.

Liu, Ming	ETH Zurich
Sieglwart, Roland	ETH Zurich

17:30-17:45 WeD08.5

Acquiring Semantics Induced Topology in Urban Environments, pp. 3509-3514.

Singh, Gautam	George Mason Univ.
Kosecka, Jana	George Mason Univ.

17:45-18:00 WeD08.6

Large-Scale Semantic Mapping and Reasoning with Heterogeneous Modalities, pp. 3515-3522.

Pronobis, Andrzej	Royal Inst. of Tech.
Jensfelt, Patric	KTH - Royal Inst. of Tech.

WeD09 Meeting Room 9 (Sa)

Video Session (Video Session)

Chair: Stramigioli, Stefano	Univ. of Twente
Co-Chair: Quinn, Roger, D.	Case Western Res. Univ.

16:30-16:35 WeD09.1

Robotic Finger Mechanism Equipped Omnidirectional Driving Roller with Two Active Rotational Axes, pp. 3523-3524.

Attachment

Tadakuma, Kenjiro	Osaka Univ.
Tadakuma, Riichiro	Yamagata Univ.
Higashimori, Mitsuru	Osaka Univ.
Kaneko, Makoto	Osaka Univ.

16:35-16:40 WeD09.2

Indoor and Outdoor Parametrized Gait Execution with Modular Snake Robots, pp. 3525-3526. Attachment

Melo, Kamilo	Pontificia Univ. Javeriana
Paez, Laura	Pontificia Univ. Javeriana
Parra, Carlos	Univ. Javeriana of Bogota

16:40-16:45 WeD09.3

Quick Slip-Turn of HRP-4C on Its Toes, pp. 3527-3528. Attachment

Miura, Kanako	National Inst. of AIST
Kanehiro, Fumio	National Inst. of AIST
Kaneko, Kenji	National Inst. of AIST
Kajita, Shuuji	National Inst. of AIST
Yokoi, Kazuhito	National Inst. of AIST

16:45-16:50 WeD09.4

Flight Stability in Aerial Redundant Manipulators, pp. 3529-3530. Attachment

Korpela, Christopher M.	Drexel Univ.
Orsag, Matko	Univ. of Zagreb
Danko, Todd	Lockheed Martin Advanced Tech. Lab.
Kobe, Bryan D	Drexel Univ.
McNeil, Clayton	Drexel Univ.
Pisch, Robert	Drexel Univ.
Oh, Paul Y.	Drexel Univ.

16:50-16:55 WeD09.5

Study on the Omnidirectional Driving Gear Mechanism, pp. 3531-3532. Attachment

Tadakuma, Kenjiro	Osaka Univ.
Tadakuma, Riichiro	Yamagata Univ.
Ioka, Kyohei	Yamagata Univ.
Kudo, Takeshi	Yamagata Univ.
Takagi, Minoru	Yamagata Univ.
Tsumaki, Yuichi	Yamagata Univ.
Higashimori, Mitsuru	Osaka Univ.
Kaneko, Makoto	Osaka Univ.

16:55-17:00 WeD09.6

Over-Tube Apparatus for Increasing the Capabilities of an Articulated Robotic Probe, pp. 3533-3534. Attachment

Degani, Amir	Tech. - Israel Inst. of Tech.
Tully, Stephen	Carnegie Mellon Univ.
Zubiate, Brett	Medrobotics
Choset, Howie	Carnegie Mellon Univ.

17:00-17:05 WeD09.7

Video Summary of D.R.O.P. the Durable Reconnaissance and Observation Platform, pp. 3535-3536. Attachment

McKenzie, Clifford	North Carolina State Univ.
Parness, Aaron	Nasa Jet Propulsion Lab.

17:05-17:10 WeD09.8

Worms, Waves and Robots, pp. 3537-3538. Attachment

Boxerbaum, Alexander	Case Western Res. Univ.
Horchler, Andrew	Case Western Res. Univ.
Shaw, Kendrick	Case Western Res. Univ.
Chiel, Hillel	Case Western Res. Univ.
Quinn, Roger, D.	Case Western Res. Univ.

17:10-17:15 WeD09.9

<i>Capture, Recognition and Imitation of Anthropomorphic Motion</i> , pp. 3539-3540. Attachment	
Hak, Sovannara	LAAS-CNRS, INSA Toulouse
Mansard, Nicolas	CNRS
Ramos, Oscar E.	LAAS-CNRS
Saab, Layale	LAAS-CNRS
Stasse, Olivier	CNRS
17:15-17:20	WeD09.10
<i>Automated Biomanipulation of Single Cells</i> , pp. 3541-3542. Attachment	
Steager, Edward	Univ. of Pennsylvania
Sakar, Mahmut Selman	Massachusetts Inst. of Tech.
Magee, Ceridwen	Univ. of Pennsylvania
Kennedy III, Monroe	Univ. of Maryland Baltimore County
Cowley, Anthony	Univ. of Pennsylvania
Kumar, Vijay	Univ. of Pennsylvania
17:20-17:25	WeD09.11
<i>Correct High-Level Robot Control from Structured English</i> , pp. 3543-3544. Attachment	
Jing, Gangyuan	Cornell Univ.
Finucane, Cameron	Cornell Univ.
Raman, Vasumathi	Cornell Univ.
Kress-Gazit, Hadas	Cornell Univ.
17:25-17:30	WeD09.12
<i>Learning to Place Objects: Organizing a Room</i> , pp. 3545-3546. Attachment	
Basu, Gaurab	IIT Kharagpur
Jiang, Yun	Cornell Univ.
Saxena, Ashutosh	Cornell Univ.
17:30-17:35	WeD09.13
<i>Demonstrations of Gravity-Independent Mobility and Drilling on Natural Rock Using Microspines</i> , pp. 3547-3548. Attachment	
Parness, Aaron	Nasa Jet Propulsion Lab.
Frost, Matthew	NASA Jet Propulsion Lab.
King, Jonathan	The Ohio State Univ.
Thatte, Nitish	Rutgers Univ.
17:35-17:40	WeD09.14
<i>Creating and Using RoboEarth Object Models</i> , pp. 3549-3550. Attachment	
Di Marco, Daniel	Univ. Stuttgart
Koch, Andreas	Univ. of Stuttgart
Zweigle, Oliver	Univ. of Stuttgart
Häussermann, Kai	Univ. of Stuttgart
Schießle, Björn	Univ. of Stuttgart
Levi, Paul	Univ. of Stuttgart
Galvez Lopez, Dorian	Univ. de Zaragoza
Riazuelo, Luis	Inst. de Investigación en Ingeniería de Aragón, Univ. o
Civera, Javier	Univ. de Zaragoza
Montiel, J.M.M	I3A. Univ. de Zaragoza
Tenorth, Moritz	TU München
Perzylo, Alexander Clifford	Tech. Univ. Muenchen
Waibel, Markus	ETH Zurich
van de Molengraft, Marinus Jacobus Gerardus	Univ. of Tech. Eindhoven
17:40-17:45	WeD09.15
<i>Dexterous Manipulation with Underactuated Fingers: Flip-And-Pinch Task</i> , pp. 3551-3552. Attachment	
Odhner, Lael	Yale Univ.
Ma, Raymond	Yale Univ.
Dollar, Aaron	Yale Univ.
17:45-17:50	WeD09.16
<i>Beyond Classical Teleoperation: Assistance, Cooperation, Data Reduction, and Spatial Audio</i> , pp. 3553-3554. Attachment	

Schauß, Thomas	Tech. Univ. München
Passenberg, Carolina	Univ. München
Stefanov, Nikolay	Tech. Univ. München
Feth, Daniela	Tech. Univ. München
Vittorias, Iason	Tech. Univ. München
Peer, Angelika	Tech. Univ. München
Hirche, Sandra	Tech. Univ. München
Buss, Martin	Tech. Univ. München
Rothbucher, Martin	Tech. Univ. München
Diepold, Klaus	Tech. Univ. München
Kammerl, Julius	Tech. Univ. München
Steinbach, Eckehard	Munich Univ. of Tech.
17:50-17:55	WeD09.17
<i>Image-Based Pose Estimation of an Endoscopic Instrument</i> , pp. 3555-3556. Attachment	
Reilink, Rob	Univ. of Twente
Stramigioli, Stefano	Univ. of Twente
Misra, Sarthak	Univ. of Twente
17:55-18:00	WeD09.18
<i>Geo-Referenced 3D Reconstruction: Fusing Public Geographic Data and Aerial Imagery</i> , pp. 3557-3558. Attachment	
Maurer, Michael	Graz Univ. of Tech.
Rumpler, Markus	Graz Univ. of Tech.
Wendel, Andreas	Graz Univ. of Tech.
Hoppe, Christof	Graz Univ. of Tech.
Irschara, Arnold	Graz Univ. of Tech.
Bischof, Horst	Graz Univ. of Tech.
WeD110	Ballroom D
Interactive Session WeD-1 (Interactive Session)	
Chair: Sugano, Shigeki	Waseda Univ.
Co-Chair: Fierro, Rafael	Univ. of New Mexico
16:30-17:00	WeD110.1
<i>Using Sound to Classify Vehicle-Terrain Interactions in Outdoor Environments</i> , pp. 3559-3566.	
Libby, Jacqueline Kemeny	Carnegie Mellon Univ.
Stentz, Anthony	Carnegie Mellon Univ.
16:30-17:00	WeD110.2
<i>Autonomous Human Tracking of Multiple Robotic Lamps</i> , pp. 3567-3572. Attachment	
Yoon, Dae-Keun	Hanyang Univ.
Lee, Yun-Seok	Hanyang Univ.
Seo, Jong Tae	Hanyang Univ.
Shengnan, Gai	Hanyang Univ.
Yi, Byung-Ju	Hanyang Univ.
16:30-17:00	WeD110.3
<i>Line-Based Camera Movement Estimation by Using Parallel Lines in Omnidirectional Video</i> , pp. 3573-3579. Attachment	
Kawanishi, Ryosuke	Shizuoka Univ.
Yamashita, Atsushi	The Univ. of Tokyo
Kaneko, Toru	Shizuoka Univ.
Asama, Hajime	The Univ. of Tokyo
16:30-17:00	WeD110.4
<i>A Two-View Based Multilayer Feature Graph for Robot Navigation</i> , pp. 3580-3587.	
Li, Haifeng	Nankai Univ.
Song, Dezhen	Texas A&M Univ.
Lu, Yan	Texas A&M Univ.
Liu, Jingtai	Nankai Univ.
16:30-17:00	WeD110.5

Road Detection from Aerial Imagery, pp. 3588-3593.

Lin, Yucong
Saripalli, Srikanth

Arizona State Univ.
Arizona State Univ.

WeD210	Ballroom D
Interactive Session WeD-2 (Interactive Session)	
Chair: Sugano, Shigeki	Waseda Univ.
Co-Chair: Fierro, Rafael	Univ. of New Mexico
17:00-17:30	WeD210.1
<i>Indoor Robotic Terrain Classification Via Angular Velocity Based Hierarchical Classifier Selection</i> , pp. 3594-3600.	
Tick, David	Univ. of Texas at Dallas
Rahman, Tauhidur	Univ. of Texas at Dallas
Busso, Carlos	Univ. of Texas at Dallas
Gans, Nicholas	Univ. Texas at Dallas
17:00-17:30	WeD210.2
<i>Sparse Representation of Point Trajectories for Action Classification</i> , pp. 3601-3606.	
Sivalingam, Ravishankar	Univ. of Minnesota
Somasundaram, Guruprasad	UMN
Bhatawadekar, Vineet	Univ. of Minnesota
Morellas, Vassilios	U. of Minnesota
Papanikolopoulos, Nikos	Univ. of Minnesota
17:00-17:30	WeD210.3
<i>Direction Augmented Probabilistic Scan Matching</i> , pp. 3607-3612.	
Choi, Minyong	POSTECH
Choi, Jinwoo	POSTECH
Nam, Sang Yep	Kookje Coll.
Chung, Wan Kyun	POSTECH
17:00-17:30	WeD210.4
<i>Indexing Visual Features: Real-Time Loop Closure Detection Using a Tree Structure</i> , pp. 3613-3618.	
Liu, Yang	Univ. of Alberta
Zhang, Hong	Univ. of Alberta
17:00-17:30	WeD210.5
<i>The Speed Assignment Problem for Conflict Resolution in Aerial Robotics</i> , pp. 3619-3624. Attachment	
Alejo, David	Univ. of Seville
Cobano, Jose A.	Univ. o Seville
Trujillo, Miguel Angel	Center for Advanced Aerospace Tech.
Viguria, Antidio	Center for Advanced Aerospace Tech. (CATEC)
Rodriguez Castaño, Angel	Univ. of Seville
Ollero, Anibal	Univ. of Seville
WeD310	
Ballroom D	
Interactive Session WeD-3 (Interactive Session)	
Chair: Sugano, Shigeki	Waseda Univ.
Co-Chair: Fierro, Rafael	Univ. of New Mexico
17:30-18:00	WeD310.1
<i>Incremental Probabilistic Geometry Estimation for Robot Scene Understanding</i> , pp. 3625-3630.	
Cahier, Louis-Kenzo	Kyôto Univ.
Ogata, Tetsuya	Kyoto Univ.
Okuno, Hiroshi G.	Kyoto Univ.
17:30-18:00	WeD310.2
<i>Logical Winnowing Methods from Multiple Identification Candidates Using Corresponding Appearance Identification Results in Time-Series</i> , pp. 3631-3636.	
Tanaka, Kazushi	Tohoku Univ.

Takeuchi, Eijiro
Ohno, Kazunori
Tadokoro, Satoshi
Yonezawa, Toru

Tohoku Univ.
Tohoku Univ.
Tohoku Univ.
GLORY LTD.

17:30-18:00

WeD310.3

Probabilistic Depth Image Registration Incorporating Nonvisual Information, pp. 3637-3644. [Attachment](#)

Wüthrich, Manuel
Pastor, Peter
Righetti, Ludovic
Billard, Aude
Schaal, Stefan

EPFL
Univ. of Southern California
Univ. of Southern California
EPFL
Univ. of Southern California

17:30-18:00

WeD310.5

Revisited Dos Samara Unmanned Aerial Vehicle: Design and Control, pp. 3645-3650.

Alexis, Kostas
Tzes, Anthony

Univ. of Patras
Univ. of Patras

Technical Program for Thursday May 17, 2012

ThA01	Meeting Room 1 (Mini-sota)
Data Based Learning (Regular Session)	
Chair: Berenson, Dmitry	Univ. of California, Berkeley
Co-Chair: Suh, Il Hong	Hanyang Univ.
08:30-08:45	ThA01.1
<i>Improving the Efficiency of Bayesian Inverse Reinforcement Learning</i> , pp. 3651-3656.	
Michini, Bernard	MIT
How, Jonathan	Massachusetts Inst. of Tech.
08:45-09:00	ThA01.2
<i>Learning Diffeomorphisms Models of Robotic Sensorimotor Cascades</i> , pp. 3657-3664.	
Censi, Andrea	California Inst. of Tech.
Murray, Richard	California Inst. of Tech.
09:00-09:15	ThA01.3
<i>Interactive Generation of Dynamically Feasible Robot Trajectories from Sketches Using Temporal Mimicking</i> , pp. 3665-3670.	
<u>Attachment</u>	
Luo, Jingru	Indiana Univ. Bloomington
Hauser, Kris	Indiana Univ.
09:15-09:30	ThA01.4
<i>A Robot Path Planning Framework That Learns from Experience</i> , pp. 3671-3678. <u>Attachment</u>	
Berenson, Dmitry	Univ. of California, Berkeley
Abbeel, Pieter	UC Berkeley
Goldberg, Ken	UC Berkeley
09:30-09:45	ThA01.5
<i>Evaluation of Commonsense Knowledge for Intuitive Robotic Service</i> , pp. 3679-3684.	
Ngo, Trung L.	Shibaura Inst. of Tech.
Lee, Haeyeon	Toyota Motor Engineering & Manufacturing North America, Inc.
Mayama, Katsuhiko	Shibaura Inst. of Tech.
Mizukawa, Makoto	Shibaura Inst. of Tech.
09:45-10:00	ThA01.6
<i>A Temporal Bayesian Network with Application to Design of a Proactive Robotic Assistant</i> , pp. 3685-3690. <u>Attachment</u>	
Kwon, Woo Young	Hanyang Univ.
Suh, Il Hong	Hanyang Univ.
ThA02	Meeting Room 2 (Chief Red Wing)
Medical Robotics II (Regular Session)	
Chair: Lynch, Kevin	Northwestern Univ.
Co-Chair: Suzuki, Kenji	Univ. of Tsukuba
08:30-08:45	ThA02.1
<i>Automatic Extraction of Command Hierarchies for Adaptive Brain-Robot Interfacing</i> , pp. 3691-3697.	
Bryan, Matthew	Univ. of Washington, Seattle
Nicoll, Griffin	Univ. of Washington, Seattle
Thomas, Vibinash	Univ. of Washington, Seattle
Chung, Mike	Univ. of Washington
Smith, Joshua R.	Univ. of Washington
Rao, Rajesh P. N.	Univ. of Washington
08:45-09:00	ThA02.2
<i>System Identification for 3D Force Control of a Human Arm Neuroprosthesis Using Functional Electrical Stimulation</i> , pp. 3698-3705.	
Scheerer, Eric	Northwestern Univ.
Liao, Yu-Wei	Northwestern Univ.
Perreault, Eric	Rehabilitaiton Inst. of Chicago

Tresch, Matthew	Northwestern Univ.
Memberg, William	Case Western Res. Univ.
Kirsch, Robert	Case Western Res. Univ.
Lynch, Kevin	Northwestern Univ.
09:00-09:15	ThA02.3
<i>Powered Wheelchair Navigation Assistance through Kinematically Correct Environmental Haptic Feedback</i> , pp. 3706-3712.	
Vander Poorten, Emmanuel B	Katholieke Univ. Leuven
Demeester, Eric	Katholieke Univ. Leuven
Reekmans, Eli	K.U.Leuven
Philips, Johan	Katholieke Univ. Leuven
Huntemann, Alexander	Katholieke Univ. Leuven
De Schutter, Joris	Katholieke Univ. Leuven
09:15-09:30	ThA02.4
<i>A Haptic Instruction Based Assisted Driving System for Training the Reverse Parking</i> , pp. 3713-3718.	
Hirokawa, Masakazu	Univ. of Tsukuba
Uesugi, Naohisa	Mazda Motor Corp.
Furugori, Satoru	Mazda Motor Corp.
Kitagawa, Tomoko	Mazda Motor Corp.
Suzuki, Kenji	Univ. of Tsukuba
09:30-09:45	ThA02.5
<i>Remote Palpation to Localize Tumors in Robot-Assisted Minimally Invasive Approach</i> , pp. 3719-3724.	
Talasaz, Ali	Univ. of Western Ontario
Patel, Rajnikant V.	The Univ. of Western Ontario
09:45-10:00	ThA02.6
<i>Improvements in the Control of a Flexible Endoscopic System</i> , pp. 3725-3732.	
Bardou, Berengere	Univ. of Strasbourg
Nageotte, Florent	Univ. of Strasbourg
Zanne, Philippe	Univ. of Strasbourg
de Mathelin, Michel	Univ. of Strasbourg
ThA03	Meeting Room 3 (Mak'to)
Novel Actuation Technologies (Regular Session)	
Chair: Kaminaga, Hiroshi	The Univ. of Tokyo
Co-Chair: Cutkosky, Mark	Stanford Univ.
08:30-08:45	ThA03.1
<i>SheetBot: Two-Dimensional Sheet-Like Robot As a Tool for Constructing Universal Decentralized Control Systems</i> , pp. 3733-3738. Attachment	
Kano, Takeshi	Tohoku Univ.
Watanabe, Yuki	Res. Inst. of Electrical Communication, Tohoku Univ.
Ishiguro, Akio	Tohoku Univ.
08:45-09:00	ThA03.2
<i>Deformable Robot Maneuvered by Magnetic Particles for Use in a Confined Environment</i> , pp. 3739-3744.	
Nokata, Makoto	Ritsumeikan Univ.
09:00-09:15	ThA03.3
<i>Design of Dielectric Electroactive Polymers for a Compact and Scalable Variable Stiffness Device</i> , pp. 3745-3750.	
Dastoor, Sanjay	Stanford Univ.
Cutkosky, Mark	Stanford Univ.
09:15-09:30	ThA03.4
<i>Viscous Screw Pump for Highly Backdrivable Electro-Hydrostatic Actuator</i> , pp. 3751-3756.	
Kaminaga, Hiroshi	The Univ. of Tokyo
Tanaka, Hirokazu	The Univ. of Tokyo
Yasuda, Kazuki	The Univ. of Tokyo
Nakamura, Yoshihiko	Univ. of Tokyo

09:30-09:45 ThA03.5

Development and Control of a Three DOF Planar Induction Motor, pp. 3757-3762. [Attachment](#)

Kumagai, Masaaki
Hollis, Ralph

Tohoku Gakuin Univ.
Carnegie Mellon Univ.

09:45-10:00 ThA03.6

Controlling the Locomotion of a Separated Inner Robot from an Outer Robot Using Electropermanent Magnets, pp. 3763-3770.

Marchese, Andrew
Rus, Daniela
Asada, Harry

Massachusetts Inst. of Tech.
MIT
MIT

ThA04 Meeting Room 4 (Chief Wabasha)

Simulation and Search in Grasping (Regular Session)

Chair: Chitta, Sachin
Co-Chair: Trinkle, Jeff

Willow Garage Inc.
Rensselaer Pol. Inst.

08:30-08:45 ThA04.1

Simulating Robot Handling of Large Scale Deformable Objects: Manufacturing of Unique Concrete Reinforcement Structures, pp. 3771-3776. [Attachment](#)

Cortsen, Jens
Jørgensen, Jimmy Alison
Soelvason, Dorthe
Petersen, Henrik Gordon

Univ. of Southern Denmark
Univ. of Southern Denmark
Univ. of Southern Denmark
Univ. of Southern Denmark

08:45-09:00 ThA04.2

Hybrid Physics Simulation of Multi-Fingered Hands for Dexterous In-Hand Manipulation, pp. 3777-3783.

Scharfe, Hanno
Hendrich, Norman
Zhang, Jianwei

Univ. of Hamburg
Univ. of Hamburg
Univ. of Hamburg

09:00-09:15 ThA04.3

Search-Based Planning for Dual-Arm Manipulation with Upright Orientation Constraints, pp. 3784-3790. [Attachment](#)

Cohen, Benjamin
Chitta, Sachin
Likhachev, Maxim

Univ. of Pennsylvania
Willow Garage Inc.
Carnegie Mellon Univ.

09:15-09:30 ThA04.4

Generalizing Grasps across Partly Similar Objects, pp. 3791-3797.

Detry, Renaud
Ek, Carl Henrik
Madry, Marianna
Piater, Justus
Kragic, Danica

Royal Inst. of Tech. (KTH)
Royal Inst. of Tech.
Royal Inst. of Tech. (KTH), Sweden
Univ. of Innsbruck
KTH

09:30-09:45 ThA04.5

A Grasp Strategy with the Geometric Centroid of a Groped Object Shape Derived from Contact Spots, pp. 3798-3804.

Bae, Ji-Hun
Park, Sung-Woo
Kim, Doik
Baeg, Moon-Hong
Oh, Sang-Rok

Korea Inst. of Industrial Tech.
KITECH, Univ. of Science & Tech.
KIST
Korea Inst. of Industrial Tech.
KIST

09:45-10:00 ThA04.6

The Application of Particle Filtering to Grasping Acquisition with Visual Occlusion and Tactile Sensing, pp. 3805-3812.

Zhang, Li
Trinkle, Jeff

Rensselaer Pol. Inst.
Rensselaer Pol. Inst.

ThA05 Meeting Room 5 (Ska)

Octopus-Inspired Robotics (Invited Session)

Chair: Mazzolai, Barbara Co-Chair: Margheri, Laura	Istituto Italiano di Tecnologia Scuola Superiore Sant'Anna
08:30-08:45	ThA05.1
<i>A General Mechanical Model for Tendon-Driven Continuum Manipulators (I)</i> , pp. 3813-3818.	
Renda, Federico Laschi, Cecilia	The BioRobotics Inst. Scuola Superiore Sant'Anna Pisa Scuola Superiore Sant'Anna
08:45-09:00	ThA05.2
<i>A Two Dimensional Inverse Kinetics Model of a Cable Driven Manipulator Inspired by the Octopus Arm (I)</i> , pp. 3819-3824.	
Giorelli, Michele Renda, Federico Calisti, Marcello Arienti, Andrea Ferri, Gabriele Laschi, Cecilia	Scuola Superiore Sant'Anna The BioRobotics Inst. Scuola Superiore Sant'Anna Pisa Scuola Superiore Sant'Anna Scuola Superiore Sant'Anna Scuola Superiore Sant'Anna, Pisa Scuola Superiore Sant'Anna
09:00-09:15	ThA05.3
<i>Characterizing the Stiffness of a Multi-Segment Flexible Arm During Motion</i> , pp. 3825-3832.	
Held, David Yekutieli, Yoram Flash, Tamar	Stanford Univ. Hadassah Coll. of Jerusalem Weizmann Inst. of Science
09:15-09:30	ThA05.4
<i>Robotic Underwater Propulsion Inspired by the Octopus Multi-Arm Swimming (I)</i> , pp. 3833-3839. Attachment	
Sfakiotakis, Michael Kazakidi, Asimina Pateromichelakis, Nikolaos Ekaterinaris, John A. Tsakiris, Dimitris	FORTH Foundation for Res. & Tech. - Hellas (FORTH) Foundation for Res. & Tech. - Hellas (FORTH) Inst. of Applied and Computational Mathematics, Foundation f FORTH
09:30-09:45	ThA05.5
<i>Developing Sensorized Arm Skin for an Octopus Inspired Robot</i> , pp. 3840-3845.	
Hou, Jinping Bonser, Richard Jeronimidis, George	Univ. of Reading Univ. of Reading Univ. of Reading
09:45-10:00	ThA05.6
<i>Artificial Adhesion Mechanisms Inspired by Octopus Suckers</i> , pp. 3846-3851.	
Tramacere, Francesca Beccai, Lucia Mattioli, Fabio Sinibaldi, Edoardo Mazzolai, Barbara	Scuola Superiore Sant'Anna, Italian Inst. of Tech. Istituto Italiano di Tecnologia Scuola Superiore Sant'Anna, Italian Inst. of Tech. Istituto Italiano di Tecnologia Istituto Italiano di Tecnologia
ThA06	Meeting Room 6 (Oya'te)
Intelligent Manipulation Grasping (Regular Session)	
Chair: De Schutter, Joris Co-Chair: Sturm, Jürgen	Katholieke Univ. Leuven Tech. Univ. of Munich
08:30-08:45	ThA06.1
<i>A Generalized Framework for Opening Doors and Drawers in Kitchen Environments</i> , pp. 3852-3858. Attachment	
Ruehr, Thomas Sturm, Jürgen Pangercic, Dejan Beetz, Michael Cremers, Daniel	Tech. Univ. Muenchen Tech. Univ. of Munich TU Muenchen Tech. Univ. München Tech. Univ. of Munich
08:45-09:00	ThA06.2
<i>FCL: A General Purpose Library for Collision and Proximity Queries</i> , pp. 3859-3866. Attachment	
Pan, Jia	UNC Chapel Hill

Chitta, Sachin Manocha, Dinesh	Willow Garage Inc. UNC at Chapel Hill
09:00-09:15	ThA06.3
<i>Learning Organizational Principles in Human Environments</i> , pp. 3867-3874. Attachment	
Schuster, Martin Johannes	Tech. Univ. München
Jain, Dominik	TU Muenchen
Tenorth, Moritz	TU München
Beetz, Michael	Tech. Univ. München
09:15-09:30	ThA06.4
<i>Interactive Singulation of Objects from a Pile</i> , pp. 3875-3882. Attachment	
Chang, Lillian	Intel Corp. Intel Science and Tech. Center
Smith, Joshua R.	Univ. of Washington
Fox, Dieter	Univ. of Washington
09:30-09:45	ThA06.5
<i>Using Manipulation Primitives for Brick Sorting in Clutter</i> , pp. 3883-3889. Attachment	
Gupta, Megha	Univ. of Southern California
Sukhatme, Gaurav	Univ. of Southern California
09:45-10:00	ThA06.6
<i>A Constraint-Based Programming Approach to Physical Human-Robot Interaction</i> , pp. 3890-3896.	
Borghesan, Gianni	K.U.Leuven
Willaert, Bert	K.U.Leuven
De Schutter, Joris	Katholieke Univ. Leuven
ThA07	Meeting Room 7 (Remnicha)
Physical Human-Robot Interaction (Regular Session)	
Chair: Tsumaki, Yuichi	Yamagata Univ.
Co-Chair: Nilanjan, Sarkar	Vanderbilt Univ.
08:30-08:45	ThA07.1
<i>Planning Body Gesture of Android for Multi-Person Human-Robot Interaction</i> , pp. 3897-3902.	
Kondo, Yutaka	Nara Inst. of Science and Tech.
Takemura, Kentaro	Nara Inst. of Science and Tech.
Takamatsu, Jun	Nara Inst. of Science and Tech.
Ogasawara, Tsukasa	Nara Inst. of Science and Tech.
08:45-09:00	ThA07.2
<i>Variable Admittance Control of a Four-Degree-Of-Freedom Intelligent Assist Device</i> , pp. 3903-3908. Attachment	
Lecours, Alexandre	Univ. Laval
Mayer-St-Onge, Boris	Univ. Laval
Gosselin, Clement	Univ. Laval
09:00-09:15	ThA07.3
<i>Extraction of Latent Kinematic Relationships between Human Users and Assistive Robots</i> , pp. 3909-3915.	
Morimoto, Jun	ATR Computational Neuroscience Lab.
Noda, Tomoyuki	ATR Computational Neuroscience Lab.
Hyon, Sang-Ho	Ritsumeikan Univ.
09:15-09:30	ThA07.4
<i>Design & Personalization of a Cooperative Carrying Robot Controller</i> , pp. 3916-3921.	
Parker, Chris	Univ. of British Columbia
Croft, Elizabeth	Univ. of British Columbia
09:30-09:45	ThA07.5
<i>Trust-Driven Interactive Visual Navigation for Autonomous Robots</i> , pp. 3922-3929.	
Xu, Anqi	McGill Univ.
Dudek, Gregory	McGill Univ.
09:45-10:00	ThA07.6
<i>The 20-DOF Miniature Humanoid MH-2: A Wearable Communication System</i> , pp. 3930-3935.	

Tsumaki, Yuichi
Ono, Fumiaki
Tsukuda, Taisuke

Yamagata Univ.
Yamagata University
Yamagata University

ThA08		Meeting Room 8 (Wacipi)
Calibration and Identification (Regular Session)		
Chair: Floreano, Dario		Ec. Pol. Federal, Lausanne
Co-Chair: Geiger, Andreas		Karlsruhe Inst. of Tech.
08:30-08:45		ThA08.1
<i>Automatic Camera and Range Sensor Calibration Using a Single Shot</i> , pp. 3936-3943.		
Geiger, Andreas		Karlsruhe Inst. of Tech.
Moosmann, Frank		Karlsruhe Inst. of Tech.
Car, Ömer		Karlsruhe Inst. of Tech.
Schuster, Bernhard		Karlsruhe Inst. of Tech.
08:45-09:00		ThA08.2
<i>Scale-Only Visual Homing from an Omnidirectional Camera</i> , pp. 3944-3949.		
Liu, Ming		ETH Zurich
Pradalier, Cedric		ETH Zurich
Pomerleau, Francois		ETH Zurich
Siegwart, Roland		ETH Zurich
09:00-09:15		ThA08.3
<i>3D Monocular Robotic Ball Catching with an Iterative Trajectory Estimation Refinement</i> , pp. 3950-3955. Attachment		
Lippiello, Vincenzo		Univ. di Napoli Federico II
Ruggiero, Fabio		Univ. di Napoli Federico II
09:15-09:30		ThA08.4
<i>Automatically Calibrating the Viewing Direction of Optic-Flow Sensors</i> , pp. 3956-3961.		
Briod, Adrien		Ec. Pol. Federale de Lausanne
Zufferey, Jean-Christophe		EPFL
Floreano, Dario		Ec. Pol. Federal, Lausanne
09:30-09:45		ThA08.5
<i>An Analytical Least-Squares Solution to the Odometer-Camera Extrinsic Calibration Problem</i> , pp. 3962-3968.		
Guo, Chao		Univ. of Minnesota
Mirzaei, Faraz		Univ. of Minnesota
Roumeliotis, Stergios		Univ. of Minnesota
09:45-10:00		ThA08.6
<i>Online Calibration of Vehicle Powertrain and Pose Estimation Parameters Using Integrated Dynamics</i> , pp. 3969-3974.		
Seegmiller, Neal Andrew		Carnegie Mellon Univ.
Kelly, Alonzo		Carnegie Mellon Univ.
Rogers-Marcovitz, Forrest		Carnegie Mellon Univ.
ThA09		Meeting Room 9 (Sa)
Motion Planning II (Regular Session)		
Chair: Cowlagi, Raghvendra		Massachusetts Inst. of Tech.
Co-Chair: Stilman, Mike		Georgia Tech.
08:30-08:45		ThA09.1
<i>Modelling Search with a Binary Sensor Utilizing Self-Conjugacy of the Exponential Family</i> , pp. 3975-3982. Attachment		
Bonnie, Devin		Univ. of Illinois at Urbana-Champaign
Candido, Salvatore		Google
Bretl, Timothy		Univ. of Illinois at Urbana-Champaign
Hutchinson, Seth		Univ. of Illinois
08:45-09:00		ThA09.2
<i>On the Probabilistic Completeness of the Sampling-Based Feedback Motion Planners in Belief Space</i> , pp. 3983-3990.		
Agha-mohammadi, Ali-akbar		Texas A&M Univ.

Chakravorty, Suman	Texas A&M Univ.
Amato, Nancy	Texas A&M Univ.
09:00-09:15	ThA09.3
<i>Egress: An Online Path Planning Algorithm for Boundary Exploration</i> , pp. 3991-3996.	
Guruprasad, Kr	National Inst. of Tech. Karnataka
Dasgupta, Raj	Univ. of Nebraska, Omaha
09:15-09:30	ThA09.4
<i>Shortest Paths for Visibility-Based Pursuit-Evasion</i> , pp. 3997-4002.	
Stiffler, Nicholas	Univ. of South Carolina
O'Kane, Jason	Univ. of South Carolina
09:30-09:45	ThA09.5
<i>Hierarchical Motion Planning with Kinodynamic Feasibility Guarantees: Local Trajectory Planning Via Model Predictive Control</i> , pp. 4003-4008.	
Cowlagi, Raghvendra	Massachusetts Inst. of Tech.
Tsiotras, Panagiotis	Georgia Tech.
09:45-10:00	ThA09.6
<i>Using State Dominance for Path Planning in Dynamic Environments with Moving Obstacles</i> , pp. 4009-4015. Attachment	
Gonzalez, Juan Pablo	GDRS
Dornbush, Andrew	General Dynamics Robotic Systems
Likhachev, Maxim	Carnegie Mellon Univ.
ThA110	Ballroom D
Interactive Session ThA-1 (Interactive Session)	
Chair: Beard, Randy	Brigham Young Univ.
Co-Chair: Zheng, Yuan F.	The Ohio State Univ.
08:30-09:00	ThA110.1
<i>Design and Experimental Characterization of an Omnidirectional Unmanned Ground Vehicle for Outdoor Terrain</i> , pp. 4016-4021. Attachment	
Nie, Chenghui	Illinois Inst. of Tech.
Hauschka, Guillaume	Illinois Inst. of Tech.
Spenko, Matthew	Illinois Inst. of Tech.
08:30-09:00	ThA110.2
<i>Unsupervised Incremental Learning for Long-Term Autonomy</i> , pp. 4022-4029. Attachment	
Ott, Lionel	Univ. of Sydney
Ramos, Fabio	Univ. of Sydney
08:30-09:00	ThA110.3
<i>A Psychological Scale for General Impressions of Humanoids</i> , pp. 4030-4037.	
Kamide, Hiroko	Osaka Univ.
Mae, Yasushi	Osaka Univ.
Kawabe, Koji	Honda R&D Co., Ltd.
Shigemi, Satoshi	Honda R&D Co., Ltd.
Arai, Tatsuo	Osaka Univ.
08:30-09:00	ThA110.4
<i>What Could Move? Finding Cars, Pedestrians and Bicyclists in 3D Laser Data</i> , pp. 4038-4044.	
Wang, Dominic Zeng	Univ. of Oxford
Posner, Ingmar	Oxford Univ.
Newman, Paul	Oxford Univ.
08:30-09:00	ThA110.5
<i>Scaled-Up Helical Nanobelt Modeling and Simulation at Low Reynolds Numbers</i> , pp. 4045-4051. Attachment	
Xu, Tiantian	UPMC Pierre and Marie Curie Univ.
Hwang, Gilgueng	CNRS
Régnier, Stéphane	Univ. Pierre et Marie Curie
Andreff, Nicolas	Univ. de Franche Comté

ThA210	Ballroom D
Interactive Session ThA-2 (Interactive Session)	
Chair: Beard, Randy	Brigham Young Univ.
Co-Chair: Zheng, Yuan F.	The Ohio State Univ.
09:00-09:30	ThA210.1
<i>A Comprehensive Pressure-Sinkage Model for Small-Wheeled Unmanned Ground Vehicles on Dilative, Deformable Terrain</i> , pp. 4052-4057. Attachment	
Meirion-Griffith, Gareth	Illinois Inst. of Tech.
Spenko, Matthew	Illinois Inst. of Tech.
09:00-09:30	ThA210.2
<i>How Was Your Day? Online Visual Workspace Summaries Using Incremental Clustering in Topic Space</i> , pp. 4058-4065.	
Paul, Rohan	Univ. of Oxford
Rus, Daniela	MIT
Newman, Paul	Oxford Univ.
09:00-09:30	ThA210.3
<i>Semantic Map Segmentation Using Function-Based Energy Maximization</i> , pp. 4066-4073.	
Sjöö, Kristoffer	KTH, Royal Inst. of Tech.
09:00-09:30	ThA210.4
<i>Computing Occupancy Grids from Multiple Sensors Using Linear Opinion Pools</i> , pp. 4074-4079.	
Adarve, Juan David	INRIA Grenoble
Perrollaz, Mathias	INRIA Grenoble - Rhône-Alpes
Makris, Alexandros	INRIA
Laugier, Christian	INRIA Rhône-Alpes
09:00-09:30	ThA210.5
<i>Rotation of Bacteria Sheet Driven Micro Gear in Open Micro Channel</i> , pp. 4080-4085.	
Miyamoto, Tatsuya	Nagoya Univ.
Kojima, Masaru	Nagoya Univ.
Nakajima, Masahiro	Nagoya Univ.
Homma, Michio	Nagoya Univ.
Fukuda, Toshio	Nagoya Univ.
ThA310	Ballroom D
Interactive Session ThA-3 (Interactive Session)	
Chair: Beard, Randy	Brigham Young Univ.
Co-Chair: Zheng, Yuan F.	The Ohio State Univ.
09:30-10:00	ThA310.1
<i>A Car Transportation System Grasping Two Drive Wheels</i> , pp. 4086-4091.	
Yonezawa, Naoaki	Tohoku Univ.
Kashiwazaki, Koshi	Tohoku Univ.
Kosuge, Kazuhiro	Tohoku Univ.
Hirata, Yasuhisa	Tohoku Univ.
Sugahara, Yusuke	Tohoku Univ.
Endo, Mitsuru	Tohoku Univ.
Kanbayashi, Takashi	IHI Transport Machinery Co. Ltd.
Suzuki, Kouki	IHI Transport Machinery Co. Ltd.
Murakami, Kazunori	IHI Transport Machinery Co. Ltd.
Nakamura, Kenichi	IHI Transport Machinery Co. Ltd.
09:30-10:00	ThA310.2
<i>Motion Segmentation of Multiple Objects from a Freely Moving Monocular Camera</i> , pp. 4092-4099. Attachment	
Namdev, Rahul Kumar	International Inst. of Information Tech. - Hyderabad
Kundu, Abhijit	IIIT Hyderabad
Krishna, Madhava	IIIT Hyderabad
Jawahar, C.V.	IIIT, Hyderabad

09:30-10:00	ThA310.3
<i>Generalized Spatial Behavior Cognition Model and Its Applications for Intelligent Robots</i> , pp. 4100-4105.	
Huang, Han-Pang	National Taiwan Univ.
Wu, Po-Wei	Mechanical Engineering Department, National Taiwan University
09:30-10:00	ThA310.4
<i>Real-Time Emotion Identification for Socially Intelligent Robots</i> , pp. 4106-4111.	
Al Azrai, Rami	Purdue Univ.
Lee, C. S. George	Purdue Univ.
09:30-10:00	ThA310.5
<i>On-Chip Manipulation and Sensing of Microorganisms by Magnetically Driven Microtools with a Force Sensing Structure</i> , pp. 4112-4117. <u>Attachment</u>	
Kawahara, Tomohiro	Kyushu Inst. of Tech.
Sugita, Masakuni	Nagoya Univ.
Hagiwara, Masaya	Nagoya Univ.
Yamanishi, Yoko	Nagoya Univ.
Arai, Fumihito	Nagoya Univ.
Kawano, Hiroyuki	RIKEN
Shihira-Ishikawa, Ikuko	RIKEN
Miyawaki, Atsushi	RIKEN
ThB01	Meeting Room 1 (Mini-sota)
Mechanism Design of Mobile Robots (Regular Session)	
Chair: Choi, Hyouk Ryeol	Sungkyunkwan Univ.
Co-Chair: Youcef-Toumi, Kamal	Massachusetts Inst. of Tech.
10:30-10:45	ThB01.1
<i>Design and Analysis of Novel Friction Controlling Mechanism with Minimal Energy for In-Pipe Robot Applications</i> , pp. 4118-4123.	
Choi, Changrak	Massachusetts Inst. of Tech.
Youcef-Toumi, Kamal	Massachusetts Inst. of Tech.
Chatzigeorgiou, Dimitris	Massachusetts Inst. of Tech.
Ben-Mansour, Rached	KFUPM
10:45-11:00	ThB01.2
<i>Developing a Gait Enhancing Mobile Shoe to Alter Over-Ground Walking Coordination</i> , pp. 4124-4129. <u>Attachment</u>	
Handzic, Ismet	Univ. of South Florida
Vasudevan, Erin	Moss Rehabilitation Res. Inst.
Reed, Kyle Brandon	Univ. of South Florida
11:00-11:15	ThB01.3
<i>Cycloid vs. Harmonic Drives for Use in High Ratio, Single Stage Robotic Transmissions</i> , pp. 4130-4135.	
Sensinger, Jonathon	Northwestern Univ.
Lipsey, James	Rehabilitation Inst. of Chicago
11:15-11:30	ThB01.4
<i>Robot Environment for Combat Vehicle Driving Simulation</i> , pp. 4136-4141.	
Kamnik, Roman	Univ. of Ljubljana, Faculty of Electrical Engineering
Ambrož, Miha	Univ. of Ljubljana, Faculty of Mechanical Engineering
Kuželjčki, Jernej	Iskra Avtoelektrika d.d.
Prebil, Ivan	Univ. of Ljubljana, Faculty of Mechanical Engineering
Munih, Marko	Univ. of Ljubljana
11:30-11:45	ThB01.5
<i>Frictional Step Climbing Analysis of Tumbling Locomotion</i> , pp. 4142-4147.	
Hemes, Brett	CSE, UMN
Papanikolopoulos, Nikos	Univ. of Minnesota
11:45-12:00	ThB01.6
<i>Hex-DMR: A Modular Robotic Test-Bed for Demonstrating Team Repair</i> , pp. 4148-4153.	

Ackerman, Martin Kendal
Chirikjian, Gregory

Johns Hopkins Univ.
Johns Hopkins Univ.

ThB02		Meeting Room 2 (Chief Red Wing)
Grasping: Modeling, Analysis and Planning (Regular Session)		
Chair: Sato, Tomomasa		The Univ. of Tokyo
Co-Chair: Iliev, Boyko		Orebro Univ.
10:30-10:45		ThB02.1
<i>On the Caging Region of a Third Finger with Object Boundary Clouds and Two Given Contact Positions</i> , pp. 4154-4161.		
Wan, Weiwei		The Univ. of Tokyo
Fukui, Rui		The Univ. of Tokyo
Shimosaka, Masamichi		Univ. of Tokyo
Sato, Tomomasa		The Univ. of Tokyo
Kuniyoshi, Yasuo		The Univ. of Tokyo
10:45-11:00		ThB02.2
<i>Independent Contact Regions Based on a Patch Contact Model</i> , pp. 4162-4169.		
Charusta, Krzysztof Andrzej	Center for Applied Autonomous Sensor Systems ÖrebroUniversity,,	
Krug, Robert		Oerebro Univ.
Dimitrov, Dimitar Nikolaev		Oerebro Univ.
Iliev, Boyko		Orebro Univ.
11:00-11:15		ThB02.3
<i>A Grasping Force Optimization Algorithm for Dexterous Robotic Hands</i> , pp. 4170-4175. Attachment		
Lippiello, Vincenzo		Univ. di Napoli Federico II
Siciliano, Bruno		Univ. Napoli Federico II
Villani, Luigi		Univ. di Napoli Federico II
11:15-11:30		ThB02.4
<i>Local Force Closure</i> , pp. 4176-4182.		
Kruger, Heinrich		Utrecht Univ.
Rimon, Elon		Tech. - Israel Inst. of Tech.
van der Stappen, Frank		Utrecht Univ.
11:30-11:45		ThB02.5
<i>Two-Fingered Caging of Polygons Via Contact-Space Graph Search</i> , pp. 4183-4189.		
Allen, Thomas F		California Inst. of Tech.
Burdick, Joel		California Inst. of Tech.
Rimon, Elon		Tech. - Israel Inst. of Tech.
11:45-12:00		ThB02.6
<i>Object Categorization and Grasping by Parts from Range Scan Data</i> , pp. 4190-4196. Attachment		
Aleotti, Jacopo		Univ. of Parma
Lodi Rizzini, Dario		Univ. of Parma
Caselli, Stefano		Univ. of Parma
ThB03		Meeting Room 3 (Mak'to)
Biologically Inspired Robotics II (Regular Session)		
Chair: Zhang, Mingjun		Univ. of Tennessee
Co-Chair: Wood, Robert		Harvard Univ.
10:30-10:45		ThB03.1
<i>Approximating the Stance Map of the SLIP Runner Based on Perturbation Approach</i> , pp. 4197-4203.		
Yu, Haitao		Harbin Inst. of Tech.
Li, Mantian		Harbin Inst. of Tech.
Cai, Hegao		Harbin Inst. of Tech.
10:45-11:00		ThB03.2
<i>Analysis of Dynamics and Planar Motion Strategies of a Swimming Microorganism -- Giardia Lamblia</i> , pp. 4204-4209.		
Chen, Jun		Univ. of Tennessee

Lenaghan, Scott Zhang, Mingjun	MABE Univ. of Tennessee
11:00-11:15	ThB03.3
<i>Against the Flow: A Braitenberg Controller for a Fish Robot</i> , pp. 4210-4215. Attachment	
Salumae, Taavi	Tallinn Univ. of Tech.
Rano, Inaki	Ruhr-Univ.
Akanyeti, Otar	Univ. of Verona
Kruusmaa, Maarja	Tallinn Univ. of Tech.
11:15-11:30	ThB03.4
<i>Simplified Motion Modeling for Snake Robots</i> , pp. 4216-4221. Attachment	
Enner, Florian	Salzburg Univ. of Applied Sciences
Rollinson, David	Carnegie Mellon Univ.
Choset, Howie	Carnegie Mellon Univ.
11:30-11:45	ThB03.5
<i>Conical Sidewinding</i> , pp. 4222-4227.	
Gong, Chaohui	Carnegie Mellon Univ.
Hatton, Ross	Carnegie Mellon Univ.
Choset, Howie	Carnegie Mellon Univ.
11:45-12:00	ThB03.6
<i>Altitude Feedback Control of a Flapping-Wing Microrobot Using an On-Board Biologically Inspired Optical Flow Sensor</i> , pp. 4228-4235. Attachment	
Duhamel, Pierre-Emile	Harvard Univ.
Perez-Arancibia, Nestor O	Harvard Univ.
Barrows, Geoffrey	Centeye, Inc.
Wood, Robert	Harvard Univ.
ThB04	Meeting Room 4 (Chief Wabasha)
Stochastic in Robotics and Biological Systems (Invited Session)	
Chair: Hsieh, M. Ani	Drexel Univ.
Co-Chair: Chirikjian, Gregory	Johns Hopkins Univ.
10:30-10:45	ThB04.1
<i>Low-Cost Collaborative Localization for Large-Scale Multi-Robot Systems</i> , pp. 4236-4241.	
Prorok, Amanda	EPFL
Bahr, Alexander	Ec. Pol. Federale de Lausanne
Martinoli, Alcherio	EPFL
10:45-11:00	ThB04.2
<i>Robotic Manifold Tracking of Coherent Structures in Flows</i> , pp. 4242-4247. Attachment	
Hsieh, M. Ani	Drexel Univ.
Forgoston, Eric	Montclair State Univ.
Mather, T, William	Drexel Univ.
Schwartz, Ira	US Naval Res. Lab.
11:00-11:15	ThB04.3
<i>Ensemble Synthesis of Distributed Control and Communication Strategies</i> , pp. 4248-4253.	
Mather, T, William	Drexel Univ.
Hsieh, M. Ani	Drexel Univ.
11:15-11:30	ThB04.4
<i>Almost-Uniform Sampling of Rotations for Conformational Searches in Robotics and Structural Biology (I)</i> , pp. 4254-4259.	
Yan, Yan	Johns Hopkins Univ.
Chirikjian, Gregory	Johns Hopkins Univ.
11:30-11:45	ThB04.5
<i>Randomly Distributed Delayed Communication and Coherent Swarm Patterns (I)</i> , pp. 4260-4265. Attachment	
Lindley, Brandon	US Naval Res. Lab.
Mier-Y-Teran-Romero, Luis	US Naval Res. Lab.

Schwartz, Ira	US Naval Res. Lab.
11:45-12:00	ThB04.6
<i>Real-Time Automated Modeling and Control of Self-Assembling Systems (I)</i> , pp. 4266-4273.	
Mermoud, Gregory	EPFL
Mastrangeli, Massimo	EPFL
Upadhyay, Utkarsh	EPFL
Martinoli, Alcherio	EPFL
ThB05	Meeting Room 5 (Ska)
Teleoperation (Regular Session)	
Chair: Casals, Alicia	Inst. for Bioengineering of Catalonia and Universitat Politècnica de Catalunya, Barcelona Tech.
Co-Chair: Albu-Schäffer, Alin	DLR - German Aerospace Center
10:30-10:45	ThB05.1
<i>Bilateral Teleoperation of Cooperative Manipulators</i> , pp. 4274-4279.	
Aldana, Carlos Iván	Univ. Pol. de Catalunya
Nuno, Emmanuel	Univ. of Guadalajara
Basanez, Luis	Tech. Univ. of Catalonia
10:45-11:00	ThB05.2
<i>Direct Force Reflecting Teleoperation with a Flexible Joint Robot</i> , pp. 4280-4287. Attachment	
Tobergte, Andreas	German Aerospace Center (DLR)
Albu-Schäffer, Alin	DLR - German Aerospace Center
11:00-11:15	ThB05.3
<i>Dynamic Scaling Interface for Assisted Teleoperation</i> , pp. 4288-4293. Attachment	
Munoz, Luis Miguel	Tech. Univ. of Catalonia
Casals, Alicia	Inst. for Bioengineering of Catalonia and Univ.
11:15-11:30	ThB05.4
<i>A Proportional Plus Damping Injection Controller for Teleoperators with Joint Flexibility and Time-Delays</i> , pp. 4294-4299.	
Nuno, Emmanuel	Univ. of Guadalajara
Sarras, Ioannis	Service d'Automatique et d'Analyse des Systèmes
Basanez, Luis	Tech. Univ. of Catalonia
Kinnaert, Michel	Univ. Libre de Bruxelles
11:30-11:45	ThB05.5
<i>Stability of Position-Based Bilateral Telemanipulation Systems by Damping Injection</i> , pp. 4300-4306.	
Franken, Michel	Univ. of Twente
Misra, Sarthak	Univ. of Twente
Stramigioli, Stefano	Univ. of Twente
11:45-12:00	ThB05.6
<i>Bilateral Teleoperation of a Group of UAVs with Communication Delays and Switching Topology</i> , pp. 4307-4314. Attachment	
Secchi, Cristian	Univ. of Modena & Reggio Emilia
Franchi, Antonio	Max Planck Inst. for Biological Cybernetics
Buelthoff, Heinrich H.	Max Planck Inst. for Biol. Cybernetics
Robuffo Giordano, Paolo	Max Planck Inst. for Biological Cybernetics
ThB06	Meeting Room 6 (Oya'te)
Continuum Robots (Regular Session)	
Chair: Hirai, Shinichi	Ritsumeikan Univ.
Co-Chair: Choset, Howie	Carnegie Mellon Univ.
10:30-10:45	ThB06.1
<i>Development of Linear Inchworm Drive Using Flexible Pneumatic Actuator for Active Scope Camera</i> , pp. 4315-4321.	
Wakana, Kazuhito	Tohoku Univ.
Ishikura, Michihisa	Tohoku Univ.
Konyo, Masashi	Tohoku Univ.

Tadokoro, Satoshi	Tohoku Univ.
10:45-11:00	ThB06.2
<i>Robotic Body Extension Based on Hot Melt Adhesives</i> , pp. 4322-4327. Attachment	
Brodbeck, Luzius	Bio-Inspired Robotics Lab. ETH Zurich
Wang, Liyu	Bio-Inspired Robotics Lab. ETH Zurich
Iida, Fumiya	ETH Zurich
11:00-11:15	ThB06.3
<i>Design and Analysis of a Robust, Low-Cost, Highly Articulated Manipulator Enabled by Jamming of Granular Media</i> , pp. 4328-4333. Attachment	
Cheng, Nadia	Massachusetts Inst. of Tech.
Lobovsky, Maxim	Massachusetts Inst. of Tech.
Keating, Steven	Massachusetts Inst. of Tech.
Setapen, Adam	MIT Media Lab.
Gero, Katy Ilonka	MIT
Hosoi, Anette	MIT
Iagnemma, Karl	MIT
11:15-11:30	ThB06.4
<i>Path Planning for Belt Object Manipulation</i> , pp. 4334-4339.	
Wakamatsu, Hidefumi	Grad. School of Eng., Osaka Univ.
Morinaga, Eiji	Osaka Univ.
Arai, Eiji	Graduate School of Eng., Osaka Univ.
Hirai, Shinichi	Ritsumeikan Univ.
11:30-11:45	ThB06.5
<i>Exact and Efficient Collision Detection for a Multi-Section Continuum Manipulator</i> , pp. 4340-4346.	
Li, Jinglin	Univ. of North Carolina - Charlotte
Xiao, Jing	UNC-Charlotte
11:45-12:00	ThB06.6
<i>Design and Architecture of the Unified Modular Snake Robot</i> , pp. 4347-4354.	
Wright, III, Cornell	Carnegie Mellon Univ.
Buchan, Austin D	UC Berkeley
Brown, H. Ben	Carnegie Mellon Univ.
Geist, Jason C.	Carnegie-Mellon Univ.
Schwerin, Michael	Carnegie-Mellon Univ.
Rollinson, David	Carnegie Mellon Univ.
Tesch, Matthew	Carnegie Mellon Univ.
Choset, Howie	Carnegie Mellon Univ.
ThB07	Meeting Room 7 (Remnicha)
AI Reasoning Methods (Regular Session)	
Chair: v. Wichert, Georg	Siemens AG
Co-Chair: Joshi, Saket	Oregon State Univ.
10:30-10:45	ThB07.1
<i>An Adaptive Nonparametric Particle Filter for State Estimation</i> , pp. 4355-4360.	
Wang, Yali	Laval Univ.
Chaib-draa, Brahim	Laval Univ.
10:45-11:00	ThB07.2
<i>Online Semantic Exploration of Indoor Maps</i> , pp. 4361-4366.	
Liu, Ziyuan	Inst. of Automatic Control Engineering, Tech.
Chen, Dong	Tech. Univ. München
v. Wichert, Georg	Siemens AG
11:00-11:15	ThB07.3
<i>Game Solving for Industrial Automation and Control</i> , pp. 4367-4372.	
Cheng, Chih-Hong	fortiss GmbH
Buckl, Christian	fortiss

Knoll, Alois	TU Munich
Geisinger, Michael	Fortiss GmbH
Ruess, Harald	fortiss
11:15-11:30	ThB07.4
<i>Learning Relational Affordance Models for Robots in Multi-Object Manipulation Tasks</i> , pp. 4373-4378. Attachment	
Moldovan, Bogdan	Katholieke Univ. Leuven
Moreno, Plinio	Inst. Superior Técnico - Inst. for Systems and Robotics
van Otterlo, Martijn	Radboud Univ. Nijmegen
Santos-Victor, José	Inst. Superior Técnico - Inst. for Systems and Robotics
De Raedt, Luc	Katholieke Univ. Leuven
11:30-11:45	ThB07.5
<i>Abstract Planning for Reactive Robots</i> , pp. 4379-4384.	
Joshi, Saket	Oregon State Univ.
Schermerhorn, Paul	Indiana Univ.
Khardon, Roni	Tufts Univ.
Scheutz, Matthias	Tufts Univ.
11:45-12:00	ThB07.6
<i>Searching Objects in Large-Scale Indoor Environments: A Decision-Theoretic Approach</i> , pp. 4385-4390.	
Kunze, Lars	Tech. Univ. München
Beetz, Michael	Tech. Univ. München
Saito, Manabu	Univ. of Tokyo
Azuma, Haseru	The Univ. of Tokyo
Okada, Kei	The Univ. of Tokyo
Inaba, Masayuki	The Univ. of Tokyo
ThB08	Meeting Room 8 (Wacipi)
Range Imaging (Regular Session)	
Chair: Chong, Nak Young	Japan Advanced Inst. of Sci. and Tech.
Co-Chair: Fox, Dieter	Univ. of Washington
10:30-10:45	ThB08.1
<i>Performance of Histogram Descriptors for the Classification of 3D Laser Range Data in Urban Environments</i> , pp. 4391-4398.	
Behley, Jens	Univ. of Bonn
Steinhage, Volker	Univ. of Bonn
Cremers, Armin	Univ. of Bonn
10:45-11:00	ThB08.2
<i>Exploiting Segmentation for Robust 3D Object Matching</i> , pp. 4399-4405.	
Krainin, Michael	Univ. of Washington
Konolige, Kurt	Willow Garage
Fox, Dieter	Univ. of Washington
11:00-11:15	ThB08.3
<i>Segmenting "Simple" Objects Using RGB-D</i> , pp. 4406-4413.	
Mishra, Ajay	Univ. of Maryland, National Univ. of Singapore
Shrivastava, Ashish	Univ. of Maryland
Aloimonos, Yiannis	Univ. of Maryland
11:15-11:30	ThB08.4
<i>Sparse Online Low-Rank Projection and Outlier Rejection (SOLO) for 3-D Rigid-Body Motion Registration</i> , pp. 4414-4421.	
Yang, Allen	Univ. of California, Berkeley
Slaughter, Chris	Univ. of Texas, Austin
Bagwell, Justin	Univ. of Texas, Austin
Checkles, Costa	Univ. of Texas, Austin
Sentis, Luis	The Univ. of Texas at Austin
Vishwanath, Sriram	The Univ. of Texas at Austin
11:30-11:45	ThB08.5

An Integrated 2D and 3D Location Measurement System Using Spiral Motion Positioner, pp. 4422-4427.

Lee, Geunho
Noguchi, Naoto
Kawasaki, Nobuya
Chong, Nak Young

Japan Advanced Inst. of Sci. & Tech.
Japan Advanced Inst. of Science and Tech.
Japan Advanced Institute of Science and Tech.
Japan Advanced Inst. of Sci. and Tech.

11:45-12:00

ThB08.6

An Occlusion-Aware Feature for Range Images, pp. 4428-4435.

Quadros, Alastair James
Underwood, James Patrick
Douillard, Bertrand

The Univ. of Sydney
The Univ. of Sydney
Univ. of Sydney

ThB09

Meeting Room 9 (Sa)

Vision-Based Attention and Interaction (Regular Session)

Chair: Spinello, Luciano
Co-Chair: Song, Dezhen

Univ. of Freiburg
Texas A&M Univ.

10:30-10:45

ThB09.1

Computing Object-Based Saliency in Urban Scenes Using Laser Sensing, pp. 4436-4443.

Zhao, Yipu
He, Mengwen
Zhao, Huijing
Davoine, Franck
Zha, Hongbin

Peking Univ.
Peking Univ.
Peking Univ.
CNRS
Peking Univ.

10:45-11:00

ThB09.2

Where Do I Look Now? Gaze Allocation During Visually Guided Manipulation, pp. 4444-4449.

Nunez-Varela, Jose
Ravindran, Balaraman
Wyatt, Jeremy

Univ. of Birmingham
IIT Madras
Univ. of Birmingham

11:00-11:15

ThB09.3

3D AAM Based Face Alignment under Wide Angular Variations Using 2D and 3D Data, pp. 4450-4455. [Attachment](#)

Wang, Chieh-Chih
Dopfer, Andreas

National Taiwan Univ.
National Taiwan Univ.

11:15-11:30

ThB09.4

Robots That Validate Learned Perceptual Models, pp. 4456-4462.

Klank, Ulrich
Mösenlechner, Lorenz
Maldonado, Alexis
Beetz, Michael

Tech. Univ. München
Tech. Univ. München
Tech. Univ. München
Tech. Univ. München

11:30-11:45

ThB09.5

Uncalibrated Visual Servoing for Intuitive Human Guidance of Robots, pp. 4463-4468.

Marshall, Matthew
Matthews, James
Hu, Ai-Ping
McMurray, Gary
Lipkin, Harvey

Georgia Tech. Res. Inst.
Georgia Tech. Res. Inst.
Georgia Tech. Res. Inst.
Georgia Tech.
x

11:45-12:00

ThB09.6

Leveraging RGB-D Data: Adaptive Fusion and Domain Adaptation for Object Detection, pp. 4469-4474.

Spinello, Luciano
Arras, Kai Oliver

Univ. of Freiburg
Univ. of Freiburg

ThB110

Ballroom D

Interactive Session ThB-1 (Interactive Session)

Chair: Dillmann, Rüdiger
Co-Chair: Likhachev, Maxim

KIT Karlsruhe Inst. for Tech.
Carnegie Mellon Univ.

10:30-11:00	ThB110.1
<i>A Compact 3-DOF Compliant Serial Mechanism for Trajectory Tracking with Flexures Made by Rapid Prototyping</i> , pp. 4475-4480.	
Zhao, Su	Nanyang Tech. Univ.
Aye, Yan Naing	Nanyang Tech. Univ.
Shee, Cheng Yap	Nanyang Tech. Univ. Singapore
Chen, I-Ming	Nanyang Tech. Univ.
Ang, Wei Tech	Nanyang Tech. Univ.
10:30-11:00	ThB110.2
<i>A System That Assists Group Conversation of Older Adults by Evaluating Speech Duration and Facial Expression of Each Participant During Conversation</i> , pp. 4481-4486.	
Yamaguchi, Taichi	Univ. of Tokyo
Ota, Jun	The Univ. of Tokyo
Otake, Mihoko	The Univ. of Tokyo
10:30-11:00	ThB110.3
<i>Quantification of Comprehensive Work Flow Using Time-Series Primitive Static States for Human-Operated Work Machine</i> , pp. 4487-4492.	
Kamezaki, Mitsuhiro	Waseda Univ.
Iwata, Hiroyasu	Waseda Univ.
Sugano, Shigeki	Waseda Univ.
10:30-11:00	ThB110.4
<i>Localization and Road Boundary Recognition in Urban Environments Using Digital Street Maps</i> , pp. 4493-4499.	
Irie, Kiyoshi	Chiba Institute of Tech.
Tomono, Masahiro	Chiba Inst. of Tech.
10:30-11:00	ThB110.5
<i>Combining Global and Local Planning with Guarantees on Completeness</i> , pp. 4500-4506. Attachment	
Zhang, Haojie	Beijing Inst. of Tech.
Butzke, Jonathan	Carnegie Mellon Univ.
Likhachev, Maxim	Carnegie Mellon Univ.
ThB210	Ballroom D
Interactive Session ThB-2 (Interactive Session)	
Chair: Dillmann, Rüdiger	KIT Karlsruhe Inst. for Tech.
Co-Chair: Likhachev, Maxim	Carnegie Mellon Univ.
11:00-11:30	ThB210.1
<i>External Force Estimation Using Joint Torque Sensors for a Robot Manipulator</i> , pp. 4507-4512.	
Le, Dinh Phong	Korea Inst. of Science and Tech.
Choi, Junho	Korea Inst. of Science & Tech.
Kang, Sungchul	Korea Inst. of Science & Tech.
11:00-11:30	ThB210.2
<i>Alternative Interface System by Using Surface Electromyogram from Unusual Muscles Contraction</i> , pp. 4513-4518.	
Takahashi, Junji	Univ. of Tsukuba
Hasegawa, Yasuhisa	Univ. of Tsukuba
Sankai, Yoshiyuki	Univ. of Tsukuba
11:00-11:30	ThB210.3
<i>Analytical Time-Optimal Trajectories for an Omni-Directional Vehicle</i> , pp. 4519-4524.	
Wang, Weifu	Dartmouth Coll.
Balkcom, Devin	Dartmouth Coll.
11:00-11:30	ThB210.4
<i>Practice Makes Perfect? Managing and Leveraging Visual Experiences for Lifelong Navigation</i> , pp. 4525-4532.	
Churchill, Winston	Oxford Univ.
Newman, Paul	Oxford Univ.
11:00-11:30	ThB210.5

Accurate Calibration of Two Wheel Differential Mobile Robots by Using Experimental Heading Errors, pp. 4533-4538.

Jung, Changbae
Chung, Woojin

Korea Univ.
Korea Univ.

ThB310		Ballroom D
Interactive Session ThB-3 (Interactive Session)		
Chair: Dillmann, Rüdiger		KIT Karlsruhe Inst. for Tech.
Co-Chair: Likhachev, Maxim		Carnegie Mellon Univ.
11:30-12:00		ThB310.1
<i>Open-Loop Self-Calibration of Articulated Robots with Artificial Skins</i> , pp. 4539-4545. Attachment		
Mittendorfer, Philipp		Tech. Univ. München
Cheng, Gordon		Tech. Univ. Munich
11:30-12:00		ThB310.2
<i>Intuitive Operability Evaluation of Robotic Surgery Using Brain Activity Measurement to Identify Hand-Eye Coordination</i> , pp. 4546-4552. Attachment		
Miura, Satoshi		Waseda Univ.
Kobayashi, Yo		Waseda Univ.
Seki, Masatoshi		Waseda Univ.
Noguchi, Takehiko		Waseda Univ.
Kasuya, Masahiro		Waseda Univ.
Yokoo, Yuki		Waseda Univ.
Fujie, Masakatsu G.		Waseda Univ.
11:30-12:00		ThB310.3
<i>Formation Control of Mobile Robots Subject to Wheel Slip</i> , pp. 4553-4558.		
Tian, Yu		Vanderbilt Univ.
Sarkar, Nilanjan		Vanderbilt Univ.
11:30-12:00		ThB310.4
<i>Super Resolution Image Reconstruction Using Averaged Image and Regularized Deconvolution</i> , pp. 4559-4564.		
Park, Wooram		Univ. of Texas at Dallas
11:30-12:00		ThB310.5
<i>Loop Closure through Vanishing Points in a Line-Based Monocular SLAM</i> , pp. 4565-4570. Attachment		
Zhang, Guoxuan		Hanyang Univ.
Suh, Il Hong		Hanyang Univ.
Kang, Dong Hun		Hanyang Univ.
ThC01		Meeting Room 1 (Mini-sota)
Micro/Nanoscale Automation III (Regular Session)		
Chair: Sun, Dong		City Univ. of Hong Kong
Co-Chair: Rakotondrabe, Micky		FEMTO-st Inst. UMR CNRS 6174 - UFC / ENSMM / UTBM
14:30-14:45		ThC01.1
<i>Automated Parallel Cell Isolation and Deposition Using Microwell Array and Optical Tweezers</i> , pp. 4571-4576. Attachment		
Wang, Xiaolin		City Univ. of Hong Kong
Yan, Xiao		City Univ. of Hong Kong
Chen, Shuxun		City Univ. of Hong Kong
Sun, Dong		City Univ. of Hong Kong
14:45-15:00		ThC01.2
<i>Modeling and Compensation of Multivariable Creep in Multi-DOF Piezoelectric Actuators</i> , pp. 4577-4581.		
Rakotondrabe, Micky		FEMTO-st Inst. UMR CNRS 6174 - UFC / ENSMM / UTBM
15:00-15:15		ThC01.3
<i>High Speed Cell Patterning by Dielectrophoresis and On-Chip Fabrication of Microstructure Embedding Patterned Cells</i> , pp. 4582-4587.		
Yue, Tao		Nagoya Univ.
Nakajima, Masahiro		Nagoya Univ.

Kojima, Masaru	Nagoya Univ.
Fukuda, Toshio	Nagoya Univ.
15:15-15:30	ThC01.4
<i>Automatic Flocking Manipulation of Micro Particles with Robot-Tweezers Technologies</i> , pp. 4588-4593.	
Chen, Haoyao	Harbin Inst. of Tech. Shenzhen Graduate School
Sun, Dong	City Univ. of Hong Kong
15:30-15:45	ThC01.5
<i>Development of the Auto Manipulation System towards the Single Cell Automatic Analysis Inside an Environmental SEM</i> , pp. 4594-4599.	
Shen, Yajing	Nagoya Univ.
Nakajima, Masahiro	Nagoya Univ.
Di, Pei	Nagoya Univ.
Yue, Tao	Nagoya Univ.
Kojima, Seiji	Nagoya Univ.
Homma, Michio	Nagoya Univ.
Fukuda, Toshio	Nagoya Univ.
15:45-16:00	ThC01.6
μ -Cell Fatigue Test, pp. 4600-4605.	
Fukui, Wataru	Osaka Univ.
Kaneko, Makoto	Osaka Univ.
Sakuma, Shinya	Tohoku Univ.
Kawahara, Tomohiro	Nagoya Univ.
Arai, Fumihito	Nagoya Univ.
ThC02	Meeting Room 2 (Chief Red Wing)
Control of UAVs (Regular Session)	
Chair: Bergbreiter, Sarah	Univ. of Maryland, Coll. Park
Co-Chair: Byl, Katie	UCSB
14:30-14:45	ThC02.1
<i>Modeling and Control of a Quadrotor UAV with Tilting Propellers</i> , pp. 4606-4613. Attachment	
Ryll, Markus	Max Planck Inst. for Biological Cybernetics
Buelthoff, Heinrich H.	Max Planck Inst. for Biol. Cybernetics
Robuffo Giordano, Paolo	Max Planck Inst. for Biological Cybernetics
14:45-15:00	ThC02.2
<i>Bilateral Teleoperation of Underactuated Unmanned Aerial Vehicles: The Virtual Slave Concept</i> , pp. 4614-4620.	
Mersha, Abeje Y.	Univ. of Twente
Stramigioli, Stefano	Univ. of Twente
Carloni, Raffaella	Univ. of Twente
15:00-15:15	ThC02.3
<i>Tunable Impedance: A Semi-Passive Approach to Practical Motion Control of Insect-Inspired MAVs</i> , pp. 4621-4628.	
Mahjoubi, Hosein	Univ. of California Santa Barbara
Byl, Katie	UCSB
15:15-15:30	ThC02.4
<i>Learning Hover with Scarce Samples</i> , pp. 4629-4634. Attachment	
Lau, Tak Kit	The Chinese Univ. of Hong Kong
Liu, Yunhui	Chinese Univ. of Hong Kong
15:30-15:45	ThC02.5
<i>A Bio-Inspired Active Tail Control Actuator for Nano Air Vehicles</i> , pp. 4635-4640.	
Penskiy, Ivan	Univ. of Maryland, Coll. Park
Samuel, Paul	Daedalus Flight Systems, LLC
Humbert, James Sean	Univ. of Maryland
Bergbreiter, Sarah	Univ. of Maryland, Coll. Park
15:45-16:00	ThC02.6

Indoor Navigation with a Swarm of Flying Robots, pp. 4641-4647.

Stirling, Timothy
Roberts, James F.
Zufferey, Jean-Christophe
Floreano, Dario

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Ec. Pol. Federal, Lausanne

ThC03		Meeting Room 3 (Mak'to)
Soft Tissue Interaction (Regular Session)		
Chair: Hannaford, Blake		Univ. of Washington
Co-Chair: Poignet, Philippe		LIRMM UMR 5506 CNRS UM2
14:30-14:45		ThC03.1
<i>Novel Indentation Depth Measuring System for Stiffness Characterization in Soft Tissue Palpation</i> , pp. 4648-4653.		
Wanninayake, Indika Bandara		King's Coll. London
Althoefer, Kaspar		Kings Coll. London
Seneviratne, Lakmal		Kings Coll. London
14:45-15:00		ThC03.2
<i>Robotic Compression of Soft Tissue</i> , pp. 4654-4659.		
Nia Kosari, Sina		Univ. of Washington
Ramadurai, Srikrishnan		Univ. of Washington
Chizeck, Howard		Univ. of Washington
Hannaford, Blake		Univ. of Washington
15:00-15:15		ThC03.3
<i>Soft Tissue Force Control Using Active Observers and Viscoelastic Interaction Model</i> , pp. 4660-4666.		
Moreira, Pedro		Univ. Montpellier 2
Liu, Chao		LIRMM (UMR5506), CNRS, France
Zemiti, Nabil		Univ. Montpellier II - CNRS UMR 5506
Poignet, Philippe		LIRMM UMR 5506 CNRS UM2
15:15-15:30		ThC03.4
<i>Estimation of Soft Tissue Mechanical Parameters from Robotic Manipulation Data</i> , pp. 4667-4674.		
Boonvisut, Pasu		Case Western Res. Univ.
Jackson, Russell		Case Western Res. Univ.
Cavusoglu, M. Cenk		Case Western Res. Univ.
15:30-15:45		ThC03.5
<i>Modeling of Needle-Tissue Interaction Forces During Surgical Suturing</i> , pp. 4675-4680.		
Jackson, Russell		Case Western Res. Univ.
Cavusoglu, M. Cenk		Case Western Res. Univ.
15:45-16:00		ThC03.6
<i>Modeling of a Steerable Catheter Based on Beam Theory</i> , pp. 4681-4686.		
Khoshnam, Mahta		Univ. of Western Ontario
Azizian, Mahdi		Children's National Hospital
Patel, Rajnikant V.		The Univ. of Western Ontario

ThC04		Meeting Room 4 (Chief Wabasha)
Formal Methods (Regular Session)		
Chair: Kazanzides, Peter		Johns Hopkins Univ.
Co-Chair: Platt, Robert		MIT
14:30-14:45		ThC04.1
<i>Temporal Logic Motion Control Using Actor-Critic Methods</i> , pp. 4687-4692.		
Ding, Xu Chu		Boston Univ.
Wang, Jing		Boston Univ.
Lahijanian, Morteza		Boston Univ.
Paschalidis, Yannis		Boston Univ.
Belta, Calin		Boston Univ.

14:45-15:00	ThC04.2
<i>Robust Multi-Robot Optimal Path Planning with Temporal Logic Constraints</i> , pp. 4693-4698. Attachment	
Ulusoy, Alphan	Boston Univ.
Smith, Stephen L.	Univ. of Waterloo
Ding, Xu Chu	Boston Univ.
Belta, Calin	Boston Univ.
15:00-15:15	ThC04.3
<i>Stunt Driving Via Policy Search</i> , pp. 4699-4704. Attachment	
Lau, Tak Kit	The Chinese Univ. of Hong Kong
Liu, Yunhui	Chinese Univ. of Hong Kong
15:15-15:30	ThC04.4
<i>Probabilistic Control from Time-Bounded Temporal Logic Specifications in Dynamic Environments</i> , pp. 4705-4710.	
Medina Ayala, Ana Ivonne	Boston Univ.
Andersson, Sean	Boston Univ.
Belta, Calin	Boston Univ.
15:30-15:45	ThC04.5
<i>Non-Gaussian Belief Space Planning: Correctness and Complexity</i> , pp. 4711-4717.	
Platt, Robert	MIT
Tedrake, Russ	Massachusetts Inst. of Tech.
Kaelbling, Leslie	MIT
Lozano-Perez, Tomas	MIT
15:45-16:00	ThC04.6
<i>Proving the Correctness of Concurrent Robot Software</i> , pp. 4718-4723.	
Kazanzides, Peter	Johns Hopkins Univ.
Kouskoulas, Yanni	Johns Hopkins Univ.
Deguet, Anton	Johns Hopkins Univ.
Shao, Zhong	Yale Univ.
ThC05	Meeting Room 5 (Ska)
Robotic Software, Programming Environments, and Frameworks (Regular Session)	
Chair: Anderson, Monica	The Univ. of Alabama
Co-Chair: Jenkins, Odest Chadwicke	Brown Univ.
14:30-14:45	ThC05.1
<i>A Framework for Autonomous Self-Righting of a Generic Robot on Planar Surfaces</i> , pp. 4724-4729.	
Kessens, Chad C.	United States Army Res. Lab.
Smith, Daniel	West Virginia Univ.
Osteen, Philip	Motile Robotics Inc
14:45-15:00	ThC05.2
<i>OpenFABMAP: An Open Source Toolbox for Appearance-Based Loop Closure Detection</i> , pp. 4730-4735.	
Glover, Arren	Queensland Univ. of Tech.
Maddern, William	Queensland Univ. of Tech.
Warren, Michael	Queensland Univ. of Tech.
Reid, Stephanie	Queensland Univ. of Tech.
Milford, Michael J	Queensland Univ. of Tech.
Wyeth, Gordon	Queensland Univ. of Tech.
15:00-15:15	ThC05.3
<i>A Scripting-Based Approach to Robot Behavior Engineering Using Hierarchical Generators</i> , pp. 4736-4741.	
de Haas, Thijs Jeffry	Univ. Bremen
Laue, Tim	Deutsches Forschungszentrum für Künstliche Intelligenz
Röfer, Thomas	Deutsches Forschungszentrum für Künstliche Intelligenz
15:15-15:30	ThC05.4
<i>High-Resolution Depth Maps Based on TOF-Stereo Fusion</i> , pp. 4742-4749.	
Gandhi, Vineet	INRIA Rhone Alpes

Cech, Jan	INRIA
Horaud, Radu	INRIA Rhone-Alpes
15:30-15:45	ThC05.5
<i>RoboFrameNet: Verb-Centric Semantics for Actions in Robot Middleware</i> , pp. 4750-4755.	
Thomas, Brian	Brown Univ.
Jenkins, Odest Chadwicke	Brown Univ.
15:45-16:00	ThC05.6
<i>Building Occupancy Maps with a Mixture of Gaussian Processes</i> , pp. 4756-4761.	
Kim, Soohwan	Australian National Univ.
Kim, Jonghyuk	The Australian National Univ.
ThC06	Meeting Room 6 (Oya'te)
Compliant Nanopositioning (Invited Session)	
Chair: Yong, Yuen Kuan	The Univ. of Newcastle
Co-Chair: Leang, Kam K.	Univ. of Nevada, Reno
14:30-14:45	ThC06.1
<i>Compliances of Symmetric Flexure Hinges for Planar Compliant Mechanisms (I)</i> , pp. 4762-4767.	
Lobontiu, Nicolae	Univ. of Alaska Anchorage
Cullin, Matt	Univ. of Alaska Anchorage
Ephrahim, Garcia	Cornell Univ.
McFerran Brock, Jennifer	Univ. of Alaska Anchorage
Ali, Muhammad	Univ. of Alaska Anchorage
14:45-15:00	ThC06.2
<i>Flexure Design Using Metal Matrix Composite Materials: Nanopositioning Example (I)</i> , pp. 4768-4773.	
Leang, Kam K.	Univ. of Nevada, Reno
15:00-15:15	ThC06.3
<i>Using Frequency-Weighted Data Fusion to Improve the Performance of a Digital Charge Amplifier (I)</i> , pp. 4774-4779.	
Bazghaleh, Mohsen	Univ. of Adelaide
Grainger, Steven	Univ. of Adelaide
Cazzolato, Benjamin Seth	Univ. of Adelaide
Lu, Tien-Fu	Univ. of Adelaide
15:15-15:30	ThC06.4
<i>A Z-Scanner Design for High-Speed Scanning Probe Microscopy (I)</i> , pp. 4780-4785.	
Yong, Yuen Kuan	The Univ. of Newcastle
Moheimani, Reza	Univ. of Newcastle
15:30-15:45	ThC06.5
<i>Estimating the Resolution of Nanopositioning Systems from Frequency Domain Data (I)</i> , pp. 4786-4791.	
Fleming, Andrew J.	Univ. of Newcastle
ThC07	Meeting Room 7 (Remnicha)
Multi Robots: Task Allocation (Regular Session)	
Chair: Shell, Dylan	Texas A&M Univ.
Co-Chair: Collins, Emmanuel	FAMU-FSU Coll. of Engineering
14:30-14:45	ThC07.1
<i>Competitive Analysis of Repeated Greedy Auction Algorithm for Online Multi-Robot Task Assignment</i> , pp. 4792-4799.	
Luo, Lingzhi	Carnegie Mellon Univ.
Chakraborty, Nilanjan	Carnegie Mellon Univ.
Sycara, Katia	Carnegie Mellon Univ.
14:45-15:00	ThC07.2
<i>Tunable Routing Solutions for Multi-Robot Navigation Via the Assignment Problem: A 3D Representation of the Matching Graph</i> , pp. 4800-4805.	
Liu, Lantao	Texas A&M Univ.
Shell, Dylan	Texas A&M Univ.

15:00-15:15	ThC07.3
<i>An Efficient Stochastic Clustering Auction for Heterogeneous Robot Teams</i> , pp. 4806-4813.	
Zhang, Kai	FAMU-FSU Coll. of Engineering, Florida State Univ.
Collins, Emmanuel	FAMU-FSU Coll. of Engineering
Barbu, Adrian	Florida State Univ.
15:15-15:30	ThC07.4
<i>Stochastic Motion Planning with Path Constraints and Application to Optimal Agent, Resource and Route Planning</i> , pp. 4814-4821.	
Lim, Sejoon	MIT
Rus, Daniela	MIT
15:30-15:45	ThC07.5
<i>Accounting for Uncertainty in Simultaneous Task and Motion Planning Using Task Motion Multigraphs</i> , pp. 4822-4828.	
Sucan, Ioan Alexandru	Willow Garage
Kavraki, Lydia	Rice Univ.
ThC08	Meeting Room 8 (Wacipi)
Navigation and Visual Sensing (Regular Session)	
Chair: Chaumette, Francois	INRIA Rennes-Bretagne Atlantique
Co-Chair: LaValle, Steven M	Univ. of Illinois
14:30-14:45	ThC08.1
<i>Navigation among Visually Connected Sets of Partially Distinguishable Landmarks</i> , pp. 4829-4835.	
Erickson, Lawrence H	Univ. of Illinois at Urbana-Champaign
LaValle, Steven M	Univ. of Illinois
14:45-15:00	ThC08.2
<i>Natural Landmark Extraction in Cluttered Forested Environments</i> , pp. 4836-4843.	
Song, Meng	Nankai Univ.
Sun, Fengchi	Nankai Univ.
Iagnemma, Karl	MIT
15:00-15:15	ThC08.3
<i>Rapid Vanishing Point Estimation for General Road Detection</i> , pp. 4844-4849.	
Miksik, Ondrej	Brno Univ. of Tech.
15:15-15:30	ThC08.4
<i>A New Tentacles-Based Technique for Avoiding Obstacles During Visual Navigation</i> , pp. 4850-4855. Attachment	
Cherubini, Andrea	LIRMM - Univ. de Montpellier 2 CNRS
Spindler, Fabien	INRIA
Chaumette, Francois	INRIA Rennes-Bretagne Atlantique
15:30-15:45	ThC08.5
<i>Maintaining Visibility Constraints During Tele-Echography with Ultrasound Visual Servoing</i> , pp. 4856-4861. Attachment	
Li, Tao	INRIA Rennes-Bretagne Atlantique
Kermorgant, Olivier	INRIA Rennes-Bretagne Atlantique
Krupa, Alexandre	INRIA Rennes - Bretagne Atlantique
15:45-16:00	ThC08.6
<i>Simple and Robust Visual Servo Control of Robot Arms Using an On-Line Trajectory Generator</i> , pp. 4862-4869.	
Kroeger, Torsten	Stanford Univ.
Padial, Jose	Stanford Univ.
ThC09	Meeting Room 9 (Sa)
Marine Robotics I (Regular Session)	
Chair: Bishop, Bradley	United States Naval Acad.
Co-Chair: Silvestre, Carlos	Inst. Superior Tecnico
14:30-14:45	ThC09.1
<i>Towards Improving Mission Execution for Autonomous Gliders with an Ocean Model and Kalman Filter</i> , pp. 4870-4877.	

Smith, Ryan N.	Queensland Univ. of Tech.
Kelly, Jonathan	MIT
Sukhatme, Gaurav	Univ. of Southern California
14:45-15:00	ThC09.2
<i>Position and Velocity Filters for Intervention AUVs Based on Single Range and Depth Measurements</i> , pp. 4878-4883.	
Viegas, Daniel	Inst. for Systems and Robotics / Inst. Superior Técnico
Batista, Pedro	Inst. Superior Técnico, Univ. Técnica de Lisboa
Oliveira, Paulo	Inst. Superior Técnico 501507930
Silvestre, Carlos	Inst. Superior Tecnico
15:00-15:15	ThC09.3
<i>Uncertainty-Driven View Planning for Underwater Inspection</i> , pp. 4884-4891.	
Hollinger, Geoffrey	Univ. of Southern California
Englot, Brendan	MIT
Hover, Franz	MIT
Mitra, Urbashi	Univ. of Southern California
Sukhatme, Gaurav	Univ. of Southern California
15:15-15:30	ThC09.4
<i>Formation Control of Underactuated Autonomous Surface Vessels Using Redundant Manipulator Analogs</i> , pp. 4892-4897.	
Bishop, Bradley	United States Naval Acad.
15:30-15:45	ThC09.5
<i>Delayed State Information Filter for USBL-Aided AUV Navigation</i> , pp. 4898-4903.	
Ribas, David	Univ. de Girona
Ridao, Pere	Univ. de Girona
Mallios, Angelos	Univ. de Girona
Palomeras, Narcis	Univ. de Girona - VAT:ESQ6750002E
15:45-16:00	ThC09.6
<i>Miniature Underwater Glider: Design, Modeling, and Experimental Results</i> , pp. 4904-4910. Attachment	
Zhang, Feitian	Michigan State Univ.
Thon, John	Michigan State Univ.
Thon, Cody	Michigan State Univ.
Tan, Xiaobo	Michigan State Univ.
ThC110	Ballroom D
Interactive Session ThC-1 (Interactive Session)	
Chair: Kyriakopoulos, Kostas	National Tech. Univ. of Athens
Co-Chair: Moon, Hyungpil	Sungkyunkwan Univ.
14:30-15:00	ThC110.1
<i>A Reduced-Order Recursive Algorithm for the Computation of the Operational-Space Inertia Matrix</i> , pp. 4911-4917.	
Wensing, Patrick	The Ohio State Univ.
Featherstone, Roy	The Australian National Univ.
Orin, David	The Ohio State Univ.
14:30-15:00	ThC110.2
<i>Behavior Switching Using Reservoir Computing for a Soft Robotic Arm</i> , pp. 4918-4924.	
Li, Tao	Univ. of Zurich
Nakajima, Kohei	Univ. of Zurich
Cianchetti, Matteo	Scuola Superiore Sant'Anna
Laschi, Cecilia	Scuola Superiore Sant'Anna
Pfeifer, Rolf	Univ. of Zurich
14:30-15:00	ThC110.3
<i>Tactile SLAM with a Biomimetic Whiskered Robot</i> , pp. 4925-4930. Attachment	
Fox, Charles	Univ. of Sheffield
Evans, Mathew	Univ. of Sheffield
Pearson, Martin	Bristol Robotics Lab.

Prescott, Tony J	Univ. of Sheffield
14:30-15:00	ThC110.4
<i>Motion Control of a Quadruped Robot in Unknown Rough Terrains Using 3D Spring Damper Leg Model</i> , pp. 4931-4936.	
<u>Attachment</u>	
Tran, Duc Trong	SungKyunKwan Univ.
Koo, Ig Mo	Sung Kyun Kwan Univ.
Moon, Hyungpil	Sungkyunkwan Univ.
Cho, Jung-San	Pohang Inst. of Intelligent Robotics
Park, Sangdeok	Korea Inst. of Industrial Tech.
Choi, Hyouk Ryeol	Sungkyunkwan Univ.
14:30-15:00	ThC110.5
<i>Relative Navigation and Control of a Hexacopter</i> , pp. 4937-4942.	
Leishman, Robert	Brigham Young Univ.
Macdonald, John	Brigham Young Univ.
McLain, T.W.	Bringham Young Univ.
Beard, Randy	Brigham Young Univ.
ThC210	Ballroom D
Interactive Session ThC-2 (Interactive Session)	
Chair: Kyriakopoulos, Kostas	National Tech. Univ. of Athens
Co-Chair: Moon, Hyungpil	Sungkyunkwan Univ.
15:00-15:30	ThC210.1
<i>A Dedicated Solver for Fast Operational-Space Inverse Dynamics</i> , pp. 4943-4949.	
Mansard, Nicolas	CNRS
15:00-15:30	ThC210.2
<i>Design and Development of a Soft Robot with Crawling and Grasping Capabilities</i> , pp. 4950-4955. <u>Attachment</u>	
Calisti, Marcello	Scuola Superiore Sant'Anna
Arienti, Andrea	Scuola Superiore Sant'Anna
Renda, Federico	The BioRobotics Inst. Scuola Superiore Sant'Anna Pisa
Levy, Guy	Hebrew Univ. of Jerusalem
Hochner, Binyamin	Hebrew Univ. of Jerusalem
Mazzolai, Barbara	Istituto Italiano di Tecnologia
Dario, Paolo	Scuola Superiore Sant'Anna
Laschi, Cecilia	Scuola Superiore Sant'Anna
15:00-15:30	ThC210.3
<i>Sequential Scan Matching with Sensor Order</i> , pp. 4956-4961.	
Song, Jianyu	Hong Kong Univ. of Science and Tech.
Li, Zexiang	HKUST
15:00-15:30	ThC210.4
<i>Inverse Optimal Control for a Hybrid Dynamical System with Impacts</i> , pp. 4962-4967.	
Aghasadeghi, Navid	Univ. of Illinois at Urbana Champaign
Long, Andrew	Northwestern Univ.
Brett, Timothy	Univ. of Illinois at Urbana-Champaign
15:00-15:30	ThC210.5
<i>Fabrication and Analysis of Planar Dielectric Elastomer Actuators Capable of Complex 3-D Deformation</i> , pp. 4968-4973.	
Lai, William	Iowa State Univ.
Bastawros, Ashraf	Iowa State Univ.
Hong, Wei	Iowa State Univ.
Chung, Soon-Jo	Univ. of Illinois at Urbana-Champaign
ThC310	Ballroom D
Interactive Session ThC-3 (Interactive Session)	
Chair: Kyriakopoulos, Kostas	National Tech. Univ. of Athens

Co-Chair: Moon, Hyungpil	Sungkyunkwan Univ.
15:30-16:00	ThC310.1
<i>A New Coriolis Matrix Factorization</i> , pp. 4974-4979.	
Bjerkeng, Magnus	Norwegian Univ. of Science and Tech.
Pettersen, Kristin Y.	Norwegian Univ. of Science and Tech.
15:30-16:00	ThC310.2
<i>Pneumatic Muscle Actuated Continuum Arms: Modeling and Experimental Assessment</i> , pp. 4980-4985. Attachment	
Godage, Isuru S.	Istituto Italiano di Tecnologia
Branson, David	Istituto Italiano di Tecnologia (IIT)
Guglielmino, Emanuele	Istituto Italiano di Tecnologia
Caldwell, Darwin G.	Italian Inst. of Tech.
15:30-16:00	ThC310.3
<i>Degrees-Of-Freedom of a Robotic Exoskeleton and Human Adaptation to New Gait Templates</i> , pp. 4986-4991.	
Stegall, Paul	Univ. of Delaware
Winfrey, Kyle	Univ. of Delaware
Agrawal, Sunil	Univ. of Delaware
15:30-16:00	ThC310.4
<i>Robot Localization Using Soft Object Detection</i> , pp. 4992-4999.	
Anati, Roy	Univ. of Pennsylvania
Scaramuzza, Davide	Univ. of Pennsylvania
Derpanis, Konstantinos	Univ. of Pennsylvania
Daniilidis, Kostas	Univ. of Pennsylvania
15:30-16:00	ThC310.5
<i>Point Clouds Can Be Represented As Implicit Surfaces for Constraint-Based Haptic Rendering</i> , pp. 5000-5005. Attachment	
Leeper, Adam Eric	Stanford Univ.
Chan, Sonny	Stanford Univ.
Salisbury, Kenneth	Stanford Univ.
ThD01	Meeting Room 1 (Mini-sota)
Animation & Simulation (Regular Session)	
Chair: Murphey, Todd	Northwestern Univ.
Co-Chair: Fiorini, Paolo	Univ. of Verona
16:30-16:45	ThD01.1
<i>Conditions for Uniqueness in Simultaneous Impact with Application to Mechanical Design</i> , pp. 5006-5011.	
Seghete, Vlad	Northwestern Univ.
Murphey, Todd	Northwestern Univ.
16:45-17:00	ThD01.2
<i>Dynamics Simulation for the Training of Teleoperated Retrieval of Spent Nuclear Fuel</i> , pp. 5012-5017.	
Cornella, Jordi	Joint Res. Centre - European Commission
Zerbato, Davide	Univ. of Verona
Giona, Luca	Univ. of Verona
Fiorini, Paolo	Univ. of Verona
Sequeira, Vitor	Joint Res. Centre
17:00-17:15	ThD01.3
<i>Putting the Fish in the Fish Tank: Immersive VR for Animal Behavior Experiments</i> , pp. 5018-5023. Attachment	
Butail, Sachit	Univ. of Maryland
Chicoli, Amanda	Univ. of Maryland
Paley, Derek	Univ. of Maryland
17:15-17:30	ThD01.4
<i>Design and Implementation of Dynamic Simulators for the Testing of Inertial Sensors</i> , pp. 5024-5029.	
Allotta, Benedetto	Univ. of Florence
Becciolini, Lorenzo	Univ. di Firenze
Costanzi, Riccardo	Univ. di Firenze

Giardi, Francesca	Univ. di Firenze
Ridolfi, Alessandro	Univ. di Firenze
Vettori, Gregorio	Univ. di Firenze

17:30-17:45 ThD01.5

Automatic Data Driven Vegetation Modeling for Lidar Simulation, pp. 5030-5036.

Deschaud, Jean-Emmanuel	Carnegie Mellon Univ.
Prasser, David	Carnegie Mellon Univ.
Dias, M. Freddie	Carnegie Mellon Univ.
Browning, Brett	Carnegie Mellon Univ.
Rander, Peter	Carnegie Mellon Univ.

17:45-18:00 ThD01.6

Simulation of Tactile Sensors Using Soft Contacts for Robot Grasping Applications, pp. 5037-5043.

Moisio, Sami	Lappeenranta Univ. of Tech.
Leon, Beatriz	Univ. Jaume I
Korkealaakso, Pasi	Lappeenranta Univ. of Tech.
Morales, Antonio	Univ. Jaume I

ThD02	Meeting Room 2 (Chief Red Wing)
Semiconductor Manufacturing (Regular Session)	

Chair: Cheng, Fan-Tien	National Cheng Kung Univ.
Co-Chair: Zhou, MengChu	New Jersey Inst. of Tech.

16:30-16:45 ThD02.1

Preliminary Study of a Dynamic-Moving-Window Scheme for Virtual-Metrology Model Refreshing, pp. 5044-5049.

Wu, Wei-Ming	National Cheng Kung Univ.
Cheng, Fan-Tien	National Cheng Kung Univ.
Hung, Min-Hsiung	Chinese Culture Univ.

16:45-17:00 ThD02.2

Fabrication of a Microcoil through Parallel Microassembly, pp. 5050-5055.

Chu, Henry	Univ. of Toronto
Mills, James K.	Univ. of Toronto
Cleghorn, William L.	Univ. of Toronto

17:00-17:15 ThD02.3

Petri Net-Based Real-Time Scheduling of Time-Constrained Single-Arm Cluster Tools with Activity Time Variation, pp. 5056-5061.

Qiao, Yan	Guangdong Univ. of Tech.
Wu, Naiqi	Guangdong Univ. of Tech.
Zhou, MengChu	New Jersey Inst. of Tech.

17:15-17:30 ThD02.4

Scheduling Transient Periods of Single-Armed Cluster Tools, pp. 5062-5067.

Lee, Jun-Ho	KAIST (Korea Advanced Inst. of Science and Tech.)
Lee, Tae-Eog	KAIST

17:30-17:45 ThD02.5

DNA As Template for Nanobonding and Novel Nanoelectronic Components, pp. 5068-5073.

Weigel-Jech, Michael	Carl von Ossietzky Univ. Oldenburg, Div.
Fatikow, Sergej	Univ. of Oldenburg

17:45-18:00 ThD02.6

The Robustness of Scheduling Policies in Multi-Product Manufacturing Systems with Sequence-Dependent Setup Times and Finite Buffers, pp. 5074-5079.

Feng, Wei	Tsinghua Univ.
Zheng, Li	Tsinghua Univ.
Li, Jingshan	Univ. of Wisconsin - Madison

ThD03	Meeting Room 3 (Mak'to)
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Biomimetics (Regular Session)

Chair: Dario, Paolo Scuola Superiore Sant'Anna
Co-Chair: Agrawal, Sunil Univ. of Delaware

16:30-16:45 ThD03.1

Experimental Validation of Locomotion Efficiency of Worm-Like Robots and Contact Compliance, pp. 5080-5085.

Zarrouk, David UC Berkeley
Sharf, Inna McGill Univ.
Shoham, Moshe Tech. Israel Inst. of Tech.

16:45-17:00 ThD03.2

Dynamic Turning of 13 Cm Robot Comparing Tail and Differential Drive, pp. 5086-5093.

Pullin, Andrew UC Berkeley
Kohut, Nicholas Joseph Univ. of California, Berkeley
Zarrouk, David UC Berkeley
Fearing, Ronald Univ. of California at Berkeley

17:00-17:15 ThD03.3

A Compliant Bioinspired Swimming Robot with Neuro-Inspired Control and Autonomous Behavior, pp. 5094-5098. [Attachment](#)

Stefanini, Cesare Scuola Superiore Sant'Anna
Orofino, Stefano Scuola Superiore Sant'Anna
Manfredi, Luigi Scuola Superiore Sant'Anna
Mintchev, Stefano Scuola Superiore Sant'Anna
Marrazza, Stefano Scuola Superiore Sant'Anna
Assaf, Tareq Italian Inst. of Tech. (IIT)
Capantini, Lorenza Scuola Superiore Sant'Anna
Sinibaldi, Edoardo Istituto Italiano di Tecnologia
Grillner, Sten Karolinska Inst.
Wallén, Peter Karolinska Inst.
Dario, Paolo Scuola Superiore Sant'Anna

17:15-17:30 ThD03.4

Kinematic Design of an Asymmetric In-Phase Flapping Mechanism for MAVs, pp. 5099-5104. [Attachment](#)

Park, Joon-Hyuk Univ. of Delaware
Yang, Emily Massachusetts Inst. of Tech.
Zhang, Chengkun Univ. of Delaware
Agrawal, Sunil Univ. of Delaware

17:30-17:45 ThD03.5

Maintaining Odor Tracking Behavior Using an Established Tracking Direction in a Dynamic Wind Environment, pp. 5105-5110. [Attachment](#)

Taylor, Brian Case Western Res. Univ.
Wu, Dora Case Western Res. Univ.
Willis, Mark Case Western Res. Univ.
Quinn, Roger, D. Case Western Res. Univ.

17:45-18:00 ThD03.6

Brain-Inspired Bayesian Perception for Biomimetic Robot Touch, pp. 5111-5116.

Lepora, Nathan Univ. of Sheffield
Sullivan, John C W Bristol Robotics Lab.
Mitchinson, Ben Univ. of Sheffield
Pearson, Martin Bristol Robotics Lab.
Gurney, Kevin Univ. of Sheffield
Prescott, Tony J Univ. of Sheffield

ThD04

Meeting Room 4 (Chief Wabasha)

Hand Modeling and Control (Regular Session)

Chair: Maeda, Yusuke Yokohama National Univ.
Co-Chair: Dollar, Aaron Yale Univ.

16:30-16:45 ThD04.1

<i>Reduced Dimensionality Control for the ACT Hand</i> , pp. 5117-5122. Attachment	
Malhotra, Mark	Univ. of Washington
Rombokas, Eric	Univ. of Washington
Theodorou, Evangelos	Univ. of Southern California
Todorov, Emanuel	Univ. of Washington
Matsuoka, Yoky	Univ. of Washington
16:45-17:00	ThD04.2
<i>A Functional Anatomy Based Kinematic Human Hand Model with Simple Size Adaptation</i> , pp. 5123-5129.	
van der Hulst, Frank	Delft Univ. of Tech.
Schätzle, Simon	DLR, German Aerospace Center
Preusche, Carsten	German Aerospace Center (DLR)
Schiele, Andre	European Space Agency
17:00-17:15	ThD04.3
<i>Balancing Anatomy and Function in a Musculoskeletal Model of Hands</i> , pp. 5130-5135.	
Blasdel, Aaron Michael	Tokyo Univ.
Ikegami, Yosuke	Univ. of Tokyo
Ayusawa, Ko	Univ. of Tokyo
Nakamura, Yoshihiko	Univ. of Tokyo
17:15-17:30	ThD04.4
<i>Object Manipulation in 3D Space by Two Cone-Shaped Finger Robots Based on Finger-Thumb Opposability without Object Sensing</i> , pp. 5136-5141.	
Kim, Sung-Kyun	Korea Inst. of Science and Tech.
Oh, Yonghwan	KIST
Oh, Sang-Rok	KIST
17:30-17:45	ThD04.5
<i>Grasping by Caging: A Promising Tool to Deal with Uncertainty</i> , pp. 5142-5149. Attachment	
Wan, Weiwei	The Univ. of Tokyo
Fukui, Rui	The Univ. of Tokyo
Shimosaka, Masamichi	Univ. of Tokyo
Sato, Tomomasa	The Univ. of Tokyo
Kuniyoshi, Yasuo	The Univ. of Tokyo
17:45-18:00	ThD04.6
<i>Caging-Based Grasping by a Robot Hand with Rigid and Soft Parts</i> , pp. 5150-5155. Attachment	
Maeda, Yusuke	Yokohama National Univ.
Kodera, Naoki	Yokohama National Univ.
Egawa, Tomohiro	Yokohama National Univ.
ThD05	Meeting Room 5 (Ska)
High Level Robot Behaviors (Invited Session)	
Chair: Belta, Calin	Boston Univ.
Co-Chair: Kress-Gazit, Hadas	Cornell Univ.
16:30-16:45	ThD05.1
<i>Automated Feedback for Unachievable High-Level Robot Behaviors (I)</i> , pp. 5156-5162. Attachment	
Raman, Vasumathi	Cornell Univ.
Kress-Gazit, Hadas	Cornell Univ.
16:45-17:00	ThD05.2
<i>Backtracking Temporal Logic Synthesis for Uncertain Environments (I)</i> , pp. 5163-5170.	
Livingston, Scott	California Inst. of Tech.
Murray, Richard	California Inst. of Tech.
Burdick, Joel	California Inst. of Tech.
17:00-17:15	ThD05.3
<i>On the Revision Problem of Specification Automata (I)</i> , pp. 5171-5176.	
Kim, Kangjin	Arizona State Univ.

Fainekos, Georgios Sankaranarayanan, Sriram	Arizona State Univ. Univ. of Colorado, Boulder
17:15-17:30	ThD05.4
<i>LTL Robot Motion Control Based on Automata Learning of Environmental Dynamics (I)</i> , pp. 5177-5182. Attachment	
Chen, Yushan	Boston Univ.
Tumova, Jana	Masaryk Univ.
Belta, Calin	Boston Univ.
17:30-17:45	ThD05.5
<i>Towards Formal Synthesis of Reactive Controllers for Dexterous Robotic Manipulation</i> , pp. 5183-5189.	
Chinchali, Sandeep	Caltech
Livingston, Scott	California Inst. of Tech.
Topcu, Ufuk	California Inst. of Tech.
Burdick, Joel	California Inst. of Tech.
Murray, Richard	California Inst. of Tech.
17:45-18:00	ThD05.6
<i>Sequential Composition of Robust Controller Specifications (I)</i> , pp. 5190-5195.	
Le Ny, Jerome	Univ. of Pennsylvania
Pappas, George J.	Univ. of Pennsylvania
ThD06	Meeting Room 6 (Oya'te)
Localization and Mapping (Regular Session)	
Chair: Bozma, Isil	Bogazici Univ.
Co-Chair: Sheng, Weihua	Oklahoma State Univ.
16:30-16:45	ThD06.1
<i>Point Set Registration through Minimization of the L2 Distance between 3D-NDT Models</i> , pp. 5196-5201.	
Stoyanov, Todor	Learning Systems Lab. Center for Applied Autonomous Sensor Syste
Magnusson, Martin	Örebro Univ.
Lilienthal, Achim, J.	Örebro Univ.
16:45-17:00	ThD06.2
<i>Consistency Analysis for Sliding-Window Visual Odometry</i> , pp. 5202-5209.	
Dong-Si, Tue-Cuong	Univ. of California, Riverside
Mourikis, Anastasios	Univ. of California, Riverside
17:00-17:15	ThD06.3
<i>Efficient Visual Odometry Using a Structure-Driven Temporal Map</i> , pp. 5210-5215. Attachment	
Martinez-Carranza, Jose	Univ. of Bristol
Calway, Andrew	Univ. of Bristol
17:15-17:30	ThD06.4
<i>Using Depth in Visual Simultaneous Localisation and Mapping</i> , pp. 5216-5221.	
Scherer, Sebastian Andreas	Univ. of Tuebingen
Dube, Daniel	Univ. of Tuebingen
Zell, Andreas	Univ. of Tübingen
17:30-17:45	ThD06.5
<i>A Visual Marker for Precise Pose Estimation Based on Lenticular Lenses</i> , pp. 5222-5227. Attachment	
Tanaka, Hideyuki	National Inst. of Advanced Industrial Science and Technology (AI
Sumi, Yasushi	National Inst. of Advanced Industrial Science and Technology (
Matsumoto, Yoshio	National Inst. of Advanced Industrial Science and Technology (
17:45-18:00	ThD06.6
<i>Robot Semantic Mapping through Wearable Sensor-Based Human Activity Recognition</i> , pp. 5228-5233.	
Sheng, Weihua	Oklahoma State Univ.
Li, Gang	Oklahoma State Univ.
Zhu, Chun	Oklahoma State Univ.
Du, Jianhao	Oklahoma State Univ.
Cheng, Qi	Oklahoma State Univ.

ThD07		Meeting Room 7 (Remnicha)
Industrial Robotics (Regular Session)		
Chair: Tomizuka, Masayoshi		Univ. of California
Co-Chair: Hamel, William R.		Univ. of Tennessee
16:30-16:45		ThD07.1
<i>Tool Position Estimation of a Flexible Industrial Robot Using Recursive Bayesian Methods</i> , pp. 5234-5239.		
Axelsson, Patrik		Linköping Univ.
Karlsson, Rickard		Linköping Univ.
Norrlöf, Mikael		Linköping Univ.
16:45-17:00		ThD07.2
<i>A Sensor-Based Approach for Error Compensation of Industrial Robotic Workcells</i> , pp. 5240-5245.		
Tao, Pey Yuen		SIMTech
Yang, Guilin		Singapore Inst. of Manufacturing Tech.
Tomizuka, Masayoshi		Univ. of California
17:00-17:15		ThD07.3
<i>A Modular and Extensible Framework for Real and Virtual Bin-Picking Environments</i> , pp. 5246-5251.		
Schyja, Adrian		TU Dortmund
Hypki, Alfred		TU Dortmund
Kuhlenkötter, Bernd		TU Dortmund, Chair of Industrial Robotics and Production Automat
17:15-17:30		ThD07.4
<i>Robot End-Effector Sensing with Position Sensitive Detector and Inertial Sensors</i> , pp. 5252-5257.		
Wang, Cong		Univ. of California, Berkeley
Chen, Wenjie		Univ. of California, Berkeley
Tomizuka, Masayoshi		Univ. of California
17:30-17:45		ThD07.5
<i>Experiments towards Automated Sewing with a Multi-Robot System</i> , pp. 5258-5263.		
Schrimpf, Johannes		NTNU
Wetterwald, Lars Erik		SINTEF Raufoss Manufacturing
17:45-18:00		ThD07.6
<i>Automated Throwing and Capturing of Cylinder-Shaped Objects</i> , pp. 5264-5270. Attachment		
Frank, Thorsten		Heilbronn Univ.
Janoske, Uwe		Univ. of Wuppertal
Mitnacht, Anton		Reinhold-Wuerth-Univ.
Schroedter, Christian		Heilbronn Univ. Campus Kuenzelsau Reinhold-Wuerth-Univ.
ThD08		Meeting Room 8 (Wacipi)
Embodied Soft Robots (Invited Session)		
Chair: Cianchetti, Matteo		Scuola Superiore Sant'Anna
Co-Chair: Laschi, Cecilia		Scuola Superiore Sant'Anna
16:30-16:45		ThD08.1
<i>Design and Development of a Soft Robotic Octopus Arm Exploiting Embodied Intelligence (I)</i> , pp. 5271-5276. Attachment		
Cianchetti, Matteo		Scuola Superiore Sant'Anna
Follador, Maurizio		Scuola Superiore Sant'Anna
Mazzolai, Barbara		Istituto Italiano di Tecnologia
Dario, Paolo		Scuola Superiore Sant'Anna
Laschi, Cecilia		Scuola Superiore Sant'Anna
16:45-17:00		ThD08.2
<i>The Application of Embodiment Theory to the Design and Control of an Octopus-Like Robotic Arm (I)</i> , pp. 5277-5282. Attachment		
Guglielmino, Emanuele		Istituto Italiano di Tecnologia
Zullo, Letizia		Italian Inst. of Tech.

Cianchetti, Matteo	Scuola Superiore Sant'Anna
Follador, Maurizio	Scuola Superiore Sant'Anna
Branson, David	Istituto Italiano di Tecnologia (IIT)
Caldwell, Darwin G.	Italian Inst. of Tech.
17:00-17:15	ThD08.3
<i>Control Architecture for Robots with Continuum Arms Inspired by Octopus Vulgaris Neurophysiology (I)</i> , pp. 5283-5288.	
<u>Attachment</u>	
Branson, David	Istituto Italiano di Tecnologia (IIT)
Kang, Rongjie	Istituto Italiano di Tecnologia
Guglielmino, Emanuele	Italian Inst. of Tech.
Caldwell, Darwin G.	Italian Inst. of Tech.
17:15-17:30	ThD08.4
<i>Dynamic Continuum Arm Model for Use with Underwater Robotic Manipulators Inspired by Octopus Vulgaris (I)</i> , pp. 5289-5294. <u>Attachment</u>	
Zheng, Tianjiang	Italian Inst. of Tech.
Branson, David	Istituto Italiano di Tecnologia (IIT)
Kang, Rongjie	Istituto Italiano di Tecnologia
Cianchetti, Matteo	Scuola Superiore Sant'Anna
Guglielmino, Emanuele	Istituto Italiano di Tecnologia
Follador, Maurizio	Scuola Superiore Sant'Anna
Medrano-Cerda, Gustavo	Italian Inst. of Tech.
Godage, Isuru S.	Istituto Italiano di Tecnologia
Caldwell, Darwin G.	Italian Inst. of Tech.
17:30-17:45	ThD08.5
<i>Hydrodynamic Analysis of Octopus-Like Robotic Arms</i> , pp. 5295-5300.	
Kazakidi, Asimina	Foundation for Res. & Tech. - Hellas (FORTH)
Vavourakis, Vasileios	Foundation for Res. & Tech. - Hellas (FORTH)
Pateromichelakis, Nikolaos	Foundation for Res. & Tech. - Hellas (FORTH)
Ekaterinaris, John A.	Inst. of Applied and Computational Mathematics, Foundation f
Tsakiris, Dimitris	FORTH
17:45-18:00	ThD08.6
<i>Design and Performance of Nubbed Fluidizing Jamming Grippers</i> , pp. 5301-5306.	
Kapadia, Jaimeen	Univ. of Pennsylvania
Yim, Mark	Univ. of Pennsylvania
ThD09	Meeting Room 9 (Sa)
Marine Robotics II (Regular Session)	
Chair: Whitcomb, Louis	The Johns Hopkins Univ.
Co-Chair: Saripalli, Srikanth	Arizona State Univ.
16:30-16:45	ThD09.1
<i>Opportunistic Localization of Underwater Robots Using Drifters and Boats</i> , pp. 5307-5314. <u>Attachment</u>	
Arrichiello, Filippo	Univ. di Cassino e del Lazio Meridionale
Heidarsson, Hordur K	Univ. of Southern California
Sukhatme, Gaurav	Univ. of Southern California
16:45-17:00	ThD09.2
<i>Tracking of a Tagged Leopard Shark with an AUV: Sensor Calibration and State Estimation</i> , pp. 5315-5321.	
Forney, Christina	California Pol. State Univ. San Luis Obispo
Manii, Esfandiar	California Pol. State Univ. San Luis Obispo
Farris, Michael	California State Univ. Long Beach
Moline, Mark A.	California Pol. State Univ. San Luis Obispo
Lowe, Christopher G.	California State Univ. Long Beach
Clark, Christopher M.	Princeton Univ.
17:00-17:15	ThD09.3
<i>An Experimental Momentum-Based Front Detection Method for Autonomous Underwater Vehicles</i> , pp. 5322-5327.	

Gottlieb, Jeremy	UC Santa Cruz
Graham, Rishi	Monterey Bay Aquarium Res. Inst.
Maughan, Thom	Monterey Bay Aquarium Res. Inst.
Py, Frederic	Monterey Bay Aquarium Res. Inst.
Elkaim, Gabriel Hugh	UC Santa Cruz
Rajan, Kanna	Monterey Bay Aquarium Res. Inst.
17:15-17:30	ThD09.4
<i>An Evaluation of Sampling Path Strategies for an Autonomous Underwater Vehicle</i> , pp. 5328-5333.	
Ho, Colin	Arizona State Univ.
Mora, Andres	Arizona State Univ.
Saripalli, Srikanth	Arizona State Univ.
17:30-17:45	ThD09.5
<i>Field Performance Evaluation of New Methods for In-Situ Calibration of Attitude and Doppler Sensors for Underwater Vehicle Navigation</i> , pp. 5334-5339.	
Troni, Giancarlo	Johns Hopkins Univ.
Kinsey, James	Woods Hole Oceanographic Inst.
Yoerger, Dana	Woods Hole Oceanographic Inst.
Whitcomb, Louis	The Johns Hopkins Univ.
17:45-18:00	ThD09.6
<i>A Bio-Inspired Compliant Robotic Fish: Design and Experiments</i> , pp. 5340-5345.	
El Daou, Hadi	Tallinn Univ. of Tech. Centre of Biorobotics
Salumae, Taavi	Tallinn Univ. of Tech.
Toming, Gert	Tallinn Univ. of Tech.
Kruusmaa, Maarja	Tallinn Univ. of Tech.
ThD110	Ballroom D
Interactive Session ThD-1 (Interactive Session)	
Chair: Gini, Maria	Univ. of Minnesota
Co-Chair: Lee, Sukhan	Sungkyunkwan Univ.
16:30-17:00	ThD110.1
<i>Ray-Tracing Codec for Structured Light 3D Camera</i> , pp. 5346-5352. Attachment	
Bui, Lam Quang	Sungkyunkwan Univ.
Lee, Sukhan	Sungkyunkwan Univ.
16:30-17:00	ThD110.2
<i>Coverage Optimized Active Learning for K-NN Classifiers</i> , pp. 5353-5358.	
Joshi, Ajay	Univ. of Minnesota
Porikli, Fatih	Mitsubishi Electric Res. Lab.
Papanikolopoulos, Nikos	Univ. of Minnesota
16:30-17:00	ThD110.3
<i>Tissue Stiffness Simulation and Abnormality Localization Using Pseudo-Haptic Feedback</i> , pp. 5359-5364.	
Li, Min	King's Coll. London
Liu, Hongbin	King's Coll. London
Li, Jichun	King's Coll. London, Univ. of London
Seneviratne, Lakmal	Kings Coll. London
Althoefer, Kaspar	Kings Coll. London
16:30-17:00	ThD110.4
<i>Prescribed Performance Tracking for Flexible Joint Robots with Unknown Dynamics and Elasticity</i> , pp. 5365-5370.	
Kostarigka, Artemis	Aristotle Univ. of Thessaloniki
Doulgeri, Zoe	Aristotle Univ. of Thessaloniki
Rovithakis, George	Aristotel Univ. of Thessaloniki
16:30-17:00	ThD110.5
<i>A Combined Potential Function and Graph Search Approach for Free Gait Generation of Quadruped Robots</i> , pp. 5371-5376. Attachment	
Geva, Yam	Ben-Gurion Univ. of the Negev

ThD210		Ballroom D
Interactive Session ThD-2 (Interactive Session)		
Chair: Gini, Maria		Univ. of Minnesota
Co-Chair: Lee, Sukhan		Sungkyunkwan Univ.
17:00-17:30		ThD210.1
<i>Lateral and Feedback Schemes for the Inhibition of False-Positive Responses in Edge Orientation Channels</i> , pp. 5377-5383.		
Park, Young-Bin		hanyang Univ.
Suh, Il Hong		Hanyang Univ.
17:00-17:30		ThD210.2
<i>3DNet: Large-Scale Object Class Recognition from CAD Models</i> , pp. 5384-5391.		
Wohlkinger, Walter		Vienna Univ. of Tech. (VUT)
Aldoma, Aitor		Vienna Univ. of Tech.
Rusu, Radu Bogdan		Willow Garage, Inc
Vincze, Markus		Vienna Univ. of Tech.
17:00-17:30		ThD210.3
<i>An Evaluation of Closed-Loop Control Options for Continuum Manipulators</i> , pp. 5392-5397.		
Penning, Ryan		Univ. of Wisconsin-Madison
Jung, Jinwoo		Univ. of Wisconsin-Madison
Ferrier, Nicola		Univ. of Wisconsin-Madison
Zinn, Michael		Univ. of Wisconsin - Madison
17:00-17:30		ThD210.4
<i>On Cartesian Motions with Singularities Avoidance for Free-Floating Space Robots</i> , pp. 5398-5403.		
Papadopoulos, Evangelos		National Tech. Univ. of Athens
Nanos, Kostas		National Tech. Univ. of Athens
17:00-17:30		ThD210.5
<i>Optimal Parametric Controllers for Perturbed Walking</i> , pp. 5404-5409.		
Xing, Dengpeng		Shanghai Jiaotong Univ.
Su, Jianbo		Shanghai Jiao Tong Univ.
ThD310		Ballroom D
Interactive Session ThD-3 (Interactive Session)		
Chair: Gini, Maria		Univ. of Minnesota
Co-Chair: Lee, Sukhan		Sungkyunkwan Univ.
17:30-18:00		ThD310.1
<i>Automatic Removal of Foreground Occluder from Multi-Focus Images</i> , pp. 5410-5416.		
Yamashita, Atsushi		The Univ. of Tokyo
Tsurumi, Fumiya		Shizuoka Univ.
Kaneko, Toru		Shizuoka Univ.
Asama, Hajime		The Univ. of Tokyo
17:30-18:00		ThD310.2
<i>Sequential Scene Parsing Using Range and Intensity Information</i> , pp. 5417-5424.		
Brucker, Manuel		German Aerospace Center
Leonard, Simon		The Johns Hopkins Univ.
Bodenmueller, Tim		German Aerospace Center (DLR)
Hager, Gregory		Johns Hopkins Univ.
17:30-18:00		ThD310.3
<i>In Situ Heading Drift Correction for Human Position Tracking Using Foot-Mounted Inertial/Magnetic Sensors</i> , pp. 5425-5430.		
Bachmann, Eric		Miami Univ.
Calusdian, James		Naval Postgraduate School
Yun, Xiaoping		Naval Postgraduate School
Hodgson, Eric		Miami Univ.

17:30-18:00

ThD310.4

A Cost Function Inspired by Human Arms Movement for a Bimanual Robotic Machining, pp. 5431-5436.

Lee, Jinh

KAIST

Chang, Pyung Hun

DGIST

Gweon, Dae Gab

KAIST

[[\A-Ca-Gab]] H H H