

# **2011 15th International Conference on Advanced Robotics (ICAR 2011)**

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## Content List of The 15th International Conference on Advanced Robotics

### Technical Program for Tuesday June 21, 2011

<b>TuB1</b>	X212
<b>Dexterous Manipulation (Oral Session)</b>	
Chair: Dollar, Aaron	Yale Univ.
Co-Chair: Vincze, Markus	Vienna Univ. of Tech.
13:30-13:45	TuB1.1
<i>On Dexterity and Dexterous Manipulation</i> , pp. 1-7.	
Ma, Raymond	Yale Univ.
Dollar, Aaron	Yale Univ.
13:45-14:00	TuB1.2
<i>Dynamic Object Manipulation Using a Multi-Fingered Hand-Arm System: Enhancement of a Grasping Capability Using Relative Attitude Constraints of Fingers</i> , pp. 8-14.	
Kawamura, Akihiro	Kyushu Univ.
Tahara, Kenji	Kyushu Univ.
Kurazume, Ryo	Kyushu Univ.
Hasegawa, Tsutomu	Kyushu Univ.
14:00-14:15	TuB1.3
<i>Haptic Object Recognition Using Statistical Point Cloud Features</i> , pp. 15-20.	
Gorges, Nicolas	Karlsruhe Inst. of Tech.
Escalda Navarro, Stefan	Karlsruhe Inst. of Tech.
Woern, Heinz	Karlsruhe Inst. of Tech. (KIT)
14:15-14:30	TuB1.4
<i>Object Part Segmentation and Classification in Range Images for Grasping</i> , pp. 21-27.	
Varadarajan, Karthik Mahesh	ACIN, TU Wien (Tech. Univ. of Vienna)
Vincze, Markus	Vienna Univ. of Tech.
14:30-14:45	TuB1.5
<i>Preliminary Evidence of Dynamic Muscular Synergies in Human Grasping</i> , pp. 28-33.	
Castellini, Claudio	DLR - German Aerospace Res. Center
van der Smagt, Patrick	DLR
14:45-15:00	TuB1.6
<i>Simulation of Dynamics and Realistic Contact Forces for Manipulators and Legged Robots with High Joint Elasticity</i> , pp. 34-41.	
Lens, Thomas	Tech. Univ. Darmstadt
Radkhah, Katayon	Tech. Univ. Darmstadt
von Stryk, Oskar	Tech. Univ. Darmstadt
<b>TuB2</b>	X213
<b>Computer Vision (Oral Session)</b>	
Chair: Kyrki, Ville	Lappeenranta Univ. of Tech.
Co-Chair: Lee, Sukhan	Sungkyunkwan Univ.
13:30-13:45	TuB2.1
<i>Background Elimination Technique in the Structured Light System for Dynamic Environment</i> , pp. 42-47.	
Kim, Yeonsoo	Sungkyunkwan Univ.
Lee, Sukhan	Sungkyunkwan Univ.
13:45-14:00	TuB2.2
<i>Robust Localization of Furniture Parts by Integrating Depth and Intensity Data Suitable for Range Sensors with Varying Image Quality</i> , pp. 48-54.	
Meißner, Pascal	FZI - Res. Center for Information

Schmidt-Rohr, Sven R.	Karlsruhe Inst. of Tech.
Lösch, Martin	Karlsruhe Inst. of Tech. (KIT)
Jäkel, Rainer	Karlsruhe Inst. of Tech.
Dillmann, Rüdiger	KIT Karlsruher Inst. für Tech.
14:00-14:15	TuB2.3
<i>Detection of Parametrized 3-D Primitives from Stereo for Robotic Grasping</i> , pp. 55-60.	
Fernandez Gallardo, Laura	Lappeenranta Univ. of Tech.
Kyrki, Ville	Lappeenranta Univ. of Tech.
14:15-14:30	TuB2.4
<i>Real-Time Traffic Sign Recognition Using Spatially Weighted HOG Trees</i> , pp. 61-66.	
Zaklouta, Fatin	Mines - ParisTech
Stanculescu, Bogdan	Mines - ParisTech
14:30-14:45	TuB2.5
<i>Robust Robot-Camera Calibration</i> , pp. 67-74.	
Ilonen, Jarmo	Lappeenranta Univ. of Tech.
Kyrki, Ville	Lappeenranta Univ. of Tech.
14:45-15:00	TuB2.6
<i>A Method for Kinematic Calibration of a Parallel Robot by Using One Camera in Hand and a Spherical Object</i> , pp. 75-81.	
Traslosheros-Michel, Alberto	Univ. Pol. de Madrid
Sebastian, Jose Maria	Univ. Pol. de Madrid
Castillo-Castaneda, Eduardo	Inst. Pol. Nacional, CICATA
Roberti, Flavio	Univ. Nacional de San Juan
Carelli, Ricardo	Univ. Nacional de San Juan
<b>TuC1</b>	X212
<b>Path Planning (Oral Session)</b>	
Chair: Pêtrès, Clément	Univ. Paris VI
Co-Chair: Kim, Byoung-Ho	Kyungshung Univ.
15:30-15:45	TuC1.1
<i>Falling-Based Optimal Foot Trajectory Planning for 3D Bipedal Robotic Walking</i> , pp. 82-87.	
Kim, Byoung-Ho	Kyungshung Univ.
15:45-16:00	TuC1.2
<i>Human-Like Motion Planning for Robotic Arm System</i> , pp. 88-93.	
Xie, Biyun	Beijing Univ. of Tech.
Zhao, Jing	Beijing Univ. of Tech.
Liu, Yu	Beijing Univ. of Tech.
16:00-16:15	TuC1.3
<i>Trajectory Generation for Operational Task Execution with Manipulability Analysis</i> , pp. 94-99.	
Akli, Isma	CDTA
Haddad, Moussa	Lab. of Structure Mechanics, EMP, Algeria
Bouzouia, Brahim	Advanced Tech. Development Centre (CDTA)
Achour, Nouara	USTHB
16:15-16:30	TuC1.4
<i>A Minimal Touch Approach for Optimizing Energy Efficiency in Pick-And-Place Manipulators</i> , pp. 100-105.	
Pellicciari, Marcello	Univ. of Modena and Reggio Emilia
Berselli, Giovanni	Univ. di Bologna
Leali, Francesco	Univ. of Modena and Reggio Emilia

Vergnano, Alberto	Univ. of Modena and Reggio Emilia
16:30-16:45	TuC1.5
<i>Path Optimization for Rhombic-Like Vehicles: An Approach Based on Rigid Body Dynamics</i> , pp. 106-111.	
Fonte, Daniel	Inst. Superior Técnico
Valente, Filipe	Inst. Superior Técnico
Vale, Alberto	Inst. Superior Técnico
Ribeiro, Isabel	Inst. Superior Técnico
16:45-17:00	TuC1.6
<i>Reactive Path Planning for Autonomous Sailboat</i> , pp. 112-117.	
Pêtrès, Clément	Univ. Paris VI
Romero-Ramirez, Miguel-Angel	ISIR, UPMC
Plumet, Frederic	UPMC
<b>TuC2</b>	X213
<b>Human-Robot Interaction I (Oral Session)</b>	
Chair: Pandey, Amit Kumar	LAAS-CNRS
Co-Chair: Sjö, Kristoffer	Royal Inst. of Tech.
15:30-15:45	TuC2.1
<i>Vibrating Insoles for Tactile Communication with the Feet</i> , pp. 118-123.	
Velazquez, Ramiro	Univ. Panamericana
Bazan, Omar	Univ. Panamericana
Alonso, Claudia	Univ. Panamericana
Delgado-Mata, Carlos	Univ. Panamericana
15:45-16:00	TuC2.2
<i>Robot Learning from Demonstration of Force-Based Tasks with Multiple Solution Trajectories</i> , pp. 124-129.	
Rozo, Leonel	UPC-CSIC
Jiménez, Pablo	Inst. of Robotics and Industrial Informatics (UPC-CSIC)
Torras, Carme	CSIC - UPC
16:00-16:15	TuC2.3
<i>Functional Topological Relations for Qualitative Spatial Representation</i> , pp. 130-136.	
Sjö, Kristoffer	Royal Inst. of Tech.
Pronobis, Andrzej	Royal Inst. of Tech.
Jensfelt, Patric	Royal Inst. of Tech.
16:15-16:30	TuC2.4
<i>Mobile Robot Emotion Expression with Motion Base on MACE-GRACE Model</i> , pp. 137-142.	
Dang, Thi-Hai-Ha	Evry Univ.
Hutzler, Guillaume	Evry Univ.
Hoppenot, Philippe	Univ. of Evry
16:30-16:45	TuC2.5
<i>Towards Multi-State Visuo-Spatial Reasoning Based Proactive Human-Robot Interaction</i> , pp. 143-149.	
Pandey, Amit Kumar	LAAS-CNRS
Ali, Muhammad	LAAS-CNRS, Univ. of Toulouse
Warnier, Matthieu	CNRS - LAAS
Alami, Rachid	CNRS
16:45-17:00	TuC2.6
<i>Development of Small Autonomous Flying Robot with 4-Rotor System</i> , pp. 150-154.	
Yoon, K. J.	Konkuk Univ.
Goo, Nam Seo	Konkuk Univ.

<b>Tu1</b>	TUT Library
<b>Localization and Navigation (Interactive) (Interactive Session)</b>	
Chair: Laschi, Cecilia	Scuola Superiore Sant'Anna
Co-Chair: Laanelaid, Mihkel	Tallinn Univ. of Tech.
18:30-21:30	Tu1.1
<i>Context-Based Object Recognition for Door Detection</i> , pp. 155-160.	
Kim, Soohwan	Australian National Univ.
Cheong, Howon	KIST/Yonsei Univ.
Kim, Dong Hwan	Korea Inst. of Science and Tech.
Park, Sung-Kee	Korea Inst. of Science and Tech.
18:30-21:30	Tu1.2
<i>Navigation Strategy and Path Planning for Autonomous Road Crossing by Outdoor Mobile Robots</i> , pp. 161-167.	
Chand, Aneesh Neeschal	Univ. of Tsukuba
Yuta, Shinichi	Univ. of Tsukuba
18:30-21:30	Tu1.3
<i>Evaluating LICF for Indoor Modeling</i> , pp. 168-174.	
Lee, Yeonho	Sungkunkwan Univ.
Lee, Sukhan	Sungkyunkwan Univ.
18:30-21:30	Tu1.4
<i>Fuzzy Logic Based 2D Position Estimation for Small Robotic Fish Using Low Cost MEMS Accelerometer</i> , pp. 175-179.	
Yoo, Tae Suk	Sejong Univ.
Hong, Sung Kyung	Sejong Univ.
Youngsun, Ryuh	Korea Inst. of Industrial Tech.
18:30-21:30	Tu1.5
<i>Detection and Tracking Experiments in Various Environments</i> , pp. 180-185.	
Tamas, Levente	Tech. Univ. of Cluj-Napoca
Marcu, Cosmin	Tech. Univ. of Cluj-Napoca
18:30-21:30	Tu1.6
<i>High Level Assisted Control Mode Based on SLAM for a Remotely Controlled Robot</i> , pp. 186-191.	
Devaux, Jean-Clément	Univ. of Evry, IBISC
Nadrag, Paul	Univ. of Evry
Colle, Etienne	Univ. d'Evry Val d'Essonne
Hoppenot, Philippe	Univ. of Evry
18:30-21:30	Tu1.7
<i>Localization of Intelligent Ground Vehicles in Outdoor Urban Environments Using Stereovision and GPS Integration</i> , pp. 192-197.	
Wei, Lijun	Univ. of Tech. of Belfort-Montbéliard, France
Cappelle, Cindy	SeT - Lab. Systèmes et Transports
Ruichek, Yassine	Univ. of Tech. of Belfort-Montbéliard - France
18:30-21:30	Tu1.8
<i>Magnetic Field-Based SLAM Method for Solving the Localization Problem in Mobile Robot Floor-Cleaning Task</i> , pp. 198-203.	
Vallivaara, Ilari	Univ. of Oulu
Haverinen, Janne	Univ. of Oulu
Kemppainen, Anssi Juhani	Univ. of Oulu
Röning, Juha Jaakko	Univ. of Oulu
<b>Tu2</b>	TUT Library
<b>Human-Robot Interaction (Interactive) (Interactive Session)</b>	
Chair: Laschi, Cecilia	Scuola Superiore Sant'Anna
Co-Chair: Laanelaid, Mihkel	Tallinn Univ. of Tech.

18:30-21:30	Tul2.1
<i>Development of an Intelligent Object for Grasp and Manipulation Research</i> , pp. 204-210.	
Kõiva, Risto	Bielefeld Univ.
Haschke, Robert	Bielefeld Univ.
Ritter, Helge Joachim	Bielefeld Univ.

18:30-21:30	Tul2.2
<i>Remote Control of an Assistive Robot Using Force Feedback</i> , pp. 211-216.	
Nadrag, Paul	Univ. of Evry
Temzi, Lounis	IBISC, Univ. of Evry
Arioui, Hichem	Evry Val d'Essonne Univ.
Hoppenot, Philippe	Univ. of Evry

18:30-21:30	Tul2.3
<i>Kinematic Calibration of a 7 DoF Haptic Device</i> , pp. 217-222.	
Baser, Ozgur	Middle East Tech. Univ.
Konukseven, Erhan Ilhan	Middle East Tech. Univ.

18:30-21:30	Tul2.4
<i>Vibrotactile Display for Hand-Held Devices and Its Preferable Pattern Generation</i> , pp. 223-228.	
Yang, Gi-Hun	KITECH
Jin, Yeonsub	Univ. of Seoul
Jin, Moon-sub	KIST
Kang, Sungchul	Korea Inst. of Science & Tech.

18:30-21:30	Tul2.5
<i>A Motion Recognition Using Data Mining for a Service Robot</i> , pp. 229-234.	
Ho, YiHsin	Tokyo Metropolitan Univ.
Kawagishi, Yoshihiro	Tokyo Metropolitan Univ.
sato-Shimokawara, Eri	Tokyo Metropolitan Univ.
Yamaguchi, Toru	Tokyo Metropolitan Univ.

18:30-21:30	Tul2.6
<i>A Knowledge Base for Learning Probabilistic Decision Making from Human Demonstrations by a Multimodal Service Robot</i> , pp. 235-240.	
Schmidt-Rohr, Sven R.	Karlsruhe Inst. of Tech.
Gerhard, Dirschl	Karlsruhe Inst. of Tech.
Meißner, Pascal	FZI - Res. Center for Information Tech.
Dillmann, Rüdiger	KIT Karlsruher Inst. für Tech.

18:30-21:30	Tul2.7
<i>Narrative Monologue As a First Step towards Advanced Mission Debrief for AUV Operator Situational Awareness</i> , pp. 241-246.	
Johnson, Nick	Heriot Watt Univ.
Lane, David	Heriot-Watt Univ.

<b>Tull1</b>	TUT Library
<b>Autonomous Robots (Interactive I)</b> (Interactive Session)	
Chair: Laschi, Cecilia	Scuola Superiore Sant'Anna
Co-Chair: Laanelaid, Mihkel	Tallinn Univ. of Tech.

18:30-21:30	Tull1.1
<i>Manipulation Planning of Similar Objects by Part Correspondence</i> , pp. 247-252.	
Aleotti, Jacopo	Univ. of Parma
Caselli, Stefano	Univ. of Parma

18:30-21:30	Tull1.2
<i>Hexapod Walking Robot Gait Generation Using Genetic-Gravitational Hybrid Algorithm</i> , pp. 253-258.	
Seljanko, Filipp	Tallinn Univ. of Tech.

18:30-21:30	Tull1.3
<i>Error Modelling and Experimental Validation for a Planar 3-PPR Parallel Manipulator</i> , pp. 259-264.	
Wu, Guanglei	Aalborg Univ.
Bai, Shaoping	Aalborg Univ.
Kepler, Jørgen	Aalborg Univ. Department of Mechanical and Manufacturing E

18:30-21:30	Tull1.4
<i>Behavior-Based Control System of a Robot Actively Recognizing Hand Postures</i> , pp. 265-270.	
Kornuta, Tomasz	Warsaw Univ. of Tech.
Zielinski, Cezary	Warsaw Univ. of Tech.

18:30-21:30	Tull1.5
<i>Gait Synthesis for a Three-Legged Robot Using Learning Automata</i> , pp. 271-276.	
Santos, Jeeves Lopes dos	Inst. Tecnológico de Aeronáutica - ITA
Nascimento Jr., Cairo Lúcio	Inst. Tecnológico de Aeronáutica - ITA

18:30-21:30	Tull1.6
<i>Harnessing the Dynamics of a Soft Body with "Timing": Octopus Inspired Control Via Recurrent Neural Networks</i> , pp. 277-284.	
Nakajima, Kohei	Univ. of Zurich
Li, Tao	Univ. of Zurich
Kuppuswamy, Naveen	Korea Advanced Inst. of Science and Tech.
Suresh	
Pfeifer, Rolf	Univ. of Zurich

<b>Tull2</b>	TUT Library
<b>Autonomous Robots (Interactive II)</b> (Interactive Session)	
Chair: Laschi, Cecilia	Scuola Superiore Sant'Anna
Co-Chair: Laanelaid, Mihkel	Tallinn Univ. of Tech.

18:30-21:30	Tull2.1
<i>Runtime Monitoring of Robotics Software Components: Increasing Robustness of Service Robotic Systems</i> , pp. 285-290.	
Lotz, Alex	Univ. of Applied Sciences Ulm
Steck, Andreas	Univ. of Applied Sciences Ulm
Schlegel, Christian	Univ. of Applied Sciences Ulm

18:30-21:30	Tull2.2
<i>Disassembly Automation for Lithium-Ion Battery Systems Using a Flexible Gripper</i> , pp. 291-297.	
Schmitt, Jan	Tech. Univ. Braunschweig
Haupt, Hannes	Tech. Univ. Braunschweig
Kurrat, Michael	Tech. Univ. Braunschweig
Raatz, Annika	Tech. Univ. Braunschweig

18:30-21:30	Tull2.3
<i>Anytime Error Recovery by Integrating Local and Global Feedback with Monitoring Task States</i> , pp. 298-303.	
Ueda, Ryohei	The Univ. of Tokyo
Kakiuchi, Yohei	The Univ. of Tokyo
Nozawa, Shunichi	The Univ. of Tokyo
Okada, Kei	The Univ. of Tokyo
Inaba, Masayuki	The Univ. of Tokyo

18:30-21:30	Tull2.4
<i>Real-Time Dynamic Power Management Based on Pearson's Correlation Coefficient</i> , pp. 304-309.	
Miranda Neto, Arthur, Arthur	Univ. of Tech. of Compiègne – Heudiasyc UMR CNRS 6599,
Victorino, Alessandro Correa	Heudiasyc utc compiegne
Fantoni, Isabelle	Heudiasyc - Univ. of Tech. of Compiègne - CNRS

Zampieri, Douglas

Computational Mechanics  
Department at the State Univ. of  
Ca

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18:30-21:30

Tull2.5

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*3D Data Classification Based on Mid-Level Geometric Features*,  
pp. 310-315.

Georgiev, Kristiyan

Temple Univ.

Lakaemper, Rolf

Temple Univ.

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18:30-21:30

Tull2.6

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*A Study on Trunk Stiffness and Gait Stability in Quadrupedal  
Locomotion Using Musculoskeletal Robot*, pp. 316-321.

Tsujita, Katsuyoshi

Osaka Inst. of Tech.

Miki, Kenji

Osaka Inst. of Tech.

## Technical Program for Wednesday June 22, 2011

<b>WeA1</b>	X212
<b>Human-Robot Interaction II (Oral Session)</b>	
Chair: Gregory, John	Michigan State Univ.
Co-Chair: Vincze, Markus	Vienna Univ. of Tech.
10:30-10:45	WeA1.1
<i>How Force Perception Changes in Different Refresh Rate Conditions</i> , pp. 322-327.	
Scandola, Michele	Univ. of Verona
Vicentini, Marco	Univ. of Verona
Fiorini, Paolo	Univ. of Verona
10:45-11:00	WeA1.2
<i>Visual Information Abstraction for Interactive Robot Learning</i> , pp. 328-334.	
Zhou, Kai	Automation and Control Inst. Vienna Univ. of Technology
Richtsfeld, Andreas	Vienna Univ. of Tech.
Zillich, Michael	Vienna Univ. of Tech.
Vincze, Markus	Vienna Univ. of Tech.
Vrecko, Alen	Univ. of Ljubljana, Faculty of Computer and Information Sci
Skocaj, Danijel	Univ. of Ljubljana
11:00-11:15	WeA1.3
<i>Mechanical Brake Design for Passive Haptic Device</i> , pp. 335-340.	
Yilmaz, Serter	Middle East Tech. Univ.
Konukseven, Erhan İlhan	Middle East Tech. Univ.
Gurocak, Hakan	Washington State Univ. Vancouver
11:15-11:30	WeA1.4
<i>Stimulation Current Control for Load-Aware Electrotactile Haptic Rendering: Modeling and Simulation</i> , pp. 341-346.	
Gregory, John	Michigan State Univ.
Shen, Yantao	Univ. of Nevada, Reno
Xi, Ning	Michigan State Univ.
11:30-11:45	WeA1.5
<i>Modelling of Joint Angle Limits for ICP-Based Body Tracking</i> , pp. 347-352.	
Lösch, Martin	Karlsruhe Inst. of Tech. (KIT)
Mayer, Dirk	Karlsruhe Inst. of Tech. (KIT)
Schmidt-Rohr, Sven R.	Karlsruhe Inst. of Tech.
Jäkel, Rainer	Karlsruhe Inst. of Tech.
Dillmann, Rüdiger	KIT Karlsruher Inst. für Tech.
11:45-12:00	WeA1.6
<i>Assist Control for Finishing Process Considering Material Removal Rate</i> , pp. 353-358.	
Yano, Ken'ichi	Mie Univ.
Sakai, Nobuaki	Gifu Univ.
Kato, Norihiko	Mie Univ.
<b>WeA2</b>	X213
<b>Robot Control (Oral Session)</b>	
Chair: Ailon, Amit	Ben Gurion Univ. of the Negev
Co-Chair: Finzi, Alberto	Univ. of Naples "Federico II"
10:30-10:45	WeA2.1
<i>Cognitive Control in Cognitive Robotics: Attentional Executive Control</i> , pp. 359-364.	
Burattini, Ernesto	Univ. of Naples "Federico II"
Finzi, Alberto	Univ. of Naples "Federico II"

Rossi, Silvia	Univ. of Naples "Federico II"
Staffa, MariaCarla	Univ. of Naples "Federico II"
10:45-11:00	WeA2.2
<i>Formation Control of Unicycle Robots Using the Virtual Structure Approach</i> , pp. 365-370.	
Sadowska, Anna	Queen Mary, Univ. of London
Huijberts, Henri	Queen Mary, Univ. of London
Kostic, Dragan	Eindhoven Univ. of Tech.
van de Wouw, Nathan	Eindhoven Univ. of Tech.
Nijmeijer, Hendrik	Eindhoven Univ. of Tech.
11:00-11:15	WeA2.3
<i>Control for Teams of Kinematic Unicycle-Like and Skid-Steering Mobile Robots with Restricted Inputs: Analysis and Applications</i> , pp. 371-376.	
Ailon, Amit	Ben Gurion Univ. of the Negev
Cosic, Aleksandar	Robotics Lab. Univ. of Belgrade, Inst. Mihajlo
Zohar, Ilan	Dept. of Electrical and Computer Engineering, Ben-Gurion Univ.
Rodic, Aleksandar	Robotics Lab. Univ. of Belgrade, Inst. Mihajlo P
11:15-11:30	WeA2.4
<i>Studying Robot Environment Interaction Via Transparent Controllers</i> , pp. 377-382.	
Akanyeti, Otari	Univ. of Verona
Fiorini, Paolo	Univ. of Verona
Billings, Stephen Alec	Univ. of Sheffield
11:30-11:45	WeA2.5
<i>Real-Time Visual Predictive Control of Manipulation Systems</i> , pp. 383-388.	
Burlacu, Adrian	Tech. Univ. of Iasi
Copot, Cosmin	Tech. Univ. of Iasi
Cervera, Enric	Jaume-I Univ.
Lazar, Corneliu	Tech. Univ. of Iasi
<b>WeB1</b>	X212
<b>Robot Learning and Perception (Oral Session)</b>	
Chair: Kahl, Bjoern	Univ. of Applied Sciences Bonn-Rhein-Sieg
Co-Chair: Gouko, Manabu	Tohoku Gakuin Univ.
13:30-13:45	WeB1.1
<i>Reward-Based Learning of Optimal Cue Integration in Audio and Visual Depth Estimation</i> , pp. 389-395.	
Karaoguz, Cem	Bielefeld Univ.
Weisswange, Thomas H	Frankfurt Inst. for Advanced Studies
Rodemann, Tobias	Honda Res. Inst. Europe
Wrede, Britta	Bielefeld Univ.
Rothkopf, Constantin	Frankfurt Inst. for Advanced Studies
13:45-14:00	WeB1.2
<i>A State Representation Unaffected by Environmental Changes</i> , pp. 396-401.	
Gouko, Manabu	Tohoku Gakuin Univ.
Kobayashi, Yuichi	Tokyo Univ. of Agriculture and Tech.
14:00-14:15	WeB1.3
<i>Statistical Feature Selection Model for Robust 3D Object Recognition</i> , pp. 402-408.	
Jeong, Woongji	SungKyunKwan Univ.
Lee, Sukhan	Sungkyunkwan Univ.

Kim, YongHo	SungKyunKwan Univ.
14:15-14:30	WeB1.4
<i>Towards Iterative Learning of Autonomous Robots Using ILP</i> , pp. 409-414.	
Akhtar, Naveed	Univ. of Applied Sciences Bonn-Rhein-Sieg, Germany.
Füller, Matthias	Univ. of Applied Sciences Bonn-Rhein-Sieg
Kahl, Bjoern	Univ. of Applied Sciences Bonn-Rhein-Sieg
Henne, Timo	Univ. of Applied Science Bonn-Rhein-Sieg

14:30-14:45	WeB1.5
<i>Improving Area Coverage by Reversible Object Pushing</i> , pp. 415-420.	
Gavshin, Yuri	Tallinn Univ. of Tech.
Kruusmaa, Maarja	Tallinn Univ. of Tech.
14:45-15:00	WeB1.6
<i>Using Spatial Relations of Objects in Real World Scenes for Scene Structuring and Scene Understanding</i> , pp. 421-426.	
Kasper, Alexander	KIT Karlsruher Inst. für Tech.
Jäkel, Rainer	Karlsruhe Inst. of Tech.
Dillmann, Rüdiger	KIT Karlsruher Inst. für Tech.

**WeB2** X213  
**Novel Sensing and Actuation Mechanisms (Oral Session)**

Chair: Tan, Xiaobo	Michigan State Univ.
Co-Chair: Pugal, David	Univ. of Nevada Reno

13:30-13:45	WeB2.1
<i>Classification of Rigid and Deformable Objects Using a Novel Tactile Sensor</i> , pp. 427-434.	
Drimus, Alin	Univ. of Southern Denmark
Kootstra, Gert	Royal Inst. of Tech. (KTH), Stockholm
Bilberg, Arne	SDU - Univ. of Southern Denmark
Kragic, Danica	KTH

13:45-14:00	WeB2.2
<i>A Bio-Inspired Multi Degree of Freedom Actuator Based on a Novel Cylindrical Ionic Polymer-Metal Composite Material</i> , pp. 435-440.	
Kim, Seong Jun	Univ. of Nevada, Reno
Pugal, David	Univ. of Nevada Reno
Wong, Johnson	Univ. of Nevada Reno
Kim, Kwang	Univ. of Nevada Reno
Yim, Woosoon	Univ. of Nevada, Las Vegas

14:00-14:15	WeB2.3
<i>3DOF Parallel Type of Ultra Precision Manipulator Using Flexure Hinge Joint</i> , pp. 441-446.	
Choi, Hyeunseok	KITECH
Han, Chang-Soo	Hanyang Univ.
Youngsun, Ryuh	Korea Inst. of Industrial Tech.
Shin, Dongik	Hanyang Univ.
Tak, Tae-yul	Daekhon Corp.

14:15-14:30	WeB2.4
<i>Artificial Lateral Line-Based Localization of a Dipole Source with Unknown Vibration Amplitude and Direction</i> , pp. 447-452.	
Abdulsadda, Ahmad T.	Michigan State Univ.
Tan, Xiaobo	Michigan State Univ.

14:30-14:45	WeB2.5
<i>Spectral Cues to Source Position in Robots with Arbitrary Ear</i>	

<i>Shapes</i> , pp. 453-458.	
Rodemann, Tobias	Honda Res. Inst. Europe
14:45-15:00	WeB2.6
<i>Detection and Prevention of Slip Using Sensors with Different Properties Embedded in Elastic Artificial Skin on the Basis of Previous Experience</i> , pp. 459-464.	
Shirafuji, Shouhei	Osaka Univ.
Hosoda, Koh	Osaka Univ.

**WeC1**  
**Aerial and Medical Robots (Oral Session)**

Chair: Fiorini, Paolo	Univ. of Verona
Co-Chair: Goo, Nam Seo	Konkuk Univ.

15:30-15:45	WeC1.1
<i>Design and Experimental Attitude Control of an Unmanned Tilt-Rotor Aerial Vehicle</i> , pp. 465-470.	
Papachristos, Christos	Univ. of Patras
Alexis, Kostas	Univ. of Patras
Tzes, Anthony	Univ. of Patras

15:45-16:00	WeC1.2
<i>Robust Fuzzy Control for Stabilization of a Quadrotor</i> , pp. 471-475.	
Rabhi, Abdelhamid	MIS-UPJV
Chadli, Mohammed	MIS
Pegard, Claude	Univ. de Picardie Jules Verne

16:00-16:15	WeC1.3
<i>Dependable Visual Servo Control of a Small-Scale Helicopter with a Wireless Camera</i> , pp. 476-481.	
Kubota, Yuki	Hirosaki Univ.
Iwatani, Yasushi	Hirosaki Univ.

16:15-16:30	WeC1.4
<i>[ VOILES ] SAILS ]: A Modular Architecture for a Fast Parallel Development in an International Multidisciplinary Project</i> , pp. 482-488.	
St-Onge, David	Univ. Laval
Reeves, Nicolas	Univ. du Québec à Montréal
Gosselin, Clement	Univ. Laval

16:30-16:45	WeC1.5
<i>Performance Enhancement with Remote Rendering for GPU Based Haptic Simulation</i> , pp. 489-494.	
Zerbato, Davide	Univ. of Verona
Botturi, Debora	Surgica Robotica
Fiorini, Paolo	Univ. of Verona

**WeC2**  
**Field and Industrial Robotics (Oral Session)**

Chair: Velazquez, Ramiro	Univ. Panamericana
Co-Chair: Demeester, Eric	Katholieke Univ. Leuven

15:30-15:45	WeC2.1
<i>Evaluation of a Dust-Resistant Docking Mechanism for Surface Exploration Robots</i> , pp. 495-500.	
Wenzel, Wiebke	DFKI Robotics Innovation Center Bremen
Cordes, Florian	DFKI Robotics Innovation Center Bremen
Dettmann, Alexander	DFKI Robotics Innovation Center Bremen
Wang, Zhuowei	DFKI Robotics Innovation Center Bremen

15:45-16:00	WeC2.2
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*Active, Lifelong Sensor Synchronization: A Kalman Filtering Approach*, pp. 501-506.

Demeester, Eric	Katholieke Univ. Leuven
Philips, Johan	Katholieke Univ. Leuven
Huntemann, Alexander	Katholieke Univ. Leuven
Vander Poorten, Emmanuel B	Katholieke Univ. Leuven
Van Brussel, Hendrik	Katholieke Univ. Leuven

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16:00-16:15 WeC2.3

*Energy Efficient Use of Robotics in the Automobile Industry*, pp. 507-511.

Meike, Davis	Daimler AG
Ribickis, Leonids	Riga Tech. Univ.

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16:15-16:30 WeC2.4

*Winter Tests of a Quad-Bike Rollover Prevention System*, pp. 512-517.

Ronnback, Sven-Erik Johannes	Umeå Univ.
Johansson, Lars	Umea Inst. of Design, Umea Univ. Sweden

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16:30-16:45 WeC2.5

*DeWaLoP - Remote Control for In-Pipe Robot*, pp. 518-523.

Mateos, Luis	Vienna Univ. of Tech.
Vincze, Markus	Vienna Univ. of Tech.

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16:45-17:00 WeC2.6

*A Review of Models and Structures for Wheeled Mobile Robots: Four Case Studies*, pp. 524-529.

Velazquez, Ramiro	Univ. Panamericana
Lay-Ekuakille, Aime	Univ. of Salento



**Technical Program for Thursday June 23, 2011**

<b>ThA1</b>	X212
<b>Bio-Inspired Robots (Oral Session)</b>	
Chair: Laschi, Cecilia	Scuola Superiore Sant'Anna
Co-Chair: Webb, Barbara	Univ. of Edinburgh
10:30-10:45	ThA1.1
<i>Hydrodynamic Optimization of Relative Link Lengths for a Biomimetic Robotic Fish</i> , pp. 530-535.	
Anton, Mart	Tartu Univ.
Listak, Madis	Tallinn Univ. of Tech.
10:45-11:00	ThA1.2
<i>Analysis and Experiments of a Robot Fish with a Waving Caudal Fin with Vertical Phase Differences</i> , pp. 536-540.	
Yun, Dongwon	KIMM, KOREA
Kim, Kyung-Soo	KAIST(Korea Advanced Inst. of Science and Tech.
Kim, Soohyun	KAIST(Korea Advanced Inst. of Science and Tech.
Kyung, Jinho	Korea Inst. of Machinery & Materials (KIMM)
Lee, Sunghye	Korea Inst. of Machinery & Materials (KIMM)
11:00-11:15	ThA1.3
<i>A Hexapod Robot Modeled on the Stick Insect, Carausius Morosus</i> , pp. 541-548.	
Lewinger, William	Case Western Res. Univ.
Reekie, Henry Martin	The Univ. of Edinburgh
Webb, Barbara	Univ. of Edinburgh
11:15-11:30	ThA1.4
<i>Serpentine Robots: A Study of Design Philosophy</i> , pp. 549-555.	
Maity, Atanu	Central Mechanical Engineering Res. Inst.
Majumder, S	CMERI
11:30-11:45	ThA1.5
<i>Crawling and Rolling Gaits for a Coupled-Mobility Snake Robot</i> , pp. 556-562.	
Ford, Gabriel	Drexel Univ.
Primerano, Rich	Drexel Univ.
Kam, Moshe	Drexel Univ.
11:45-12:00	ThA1.6
<i>A Bio-Mimetic Design and Control of a Fish-Like Robot Using Compliant Structures</i> , pp. 563-568.	
El Daou, Hadi	Tallinn Univ. of Tech. Centre of Biorobotics
Salumae, Taavi	Tallinn Univ. of Tech.
Ristolainen, Asko	Tallinn Univ. of Tech.
Toming, Gert	Tallinn Univ. of Tech.
Listak, Madis	Tallinn Univ. of Tech.
Kruusmaa, Maarja	Tallinn Univ. of Tech.
<b>ThA2</b>	X213
<b>Localization and Navigation (Oral Session)</b>	
Chair: Fiorini, Paolo	Univ. of Verona
Co-Chair: Madhavan, Raj	UMD-CP/NIST
10:30-10:45	ThA2.1
<i>Adaptive Localization for Mobile Robots in Urban Environments Using Low-Cost Sensors and Enhanced Topological Map</i> , pp. 569-575.	
Lee, Yu-Cheol	Electronics/Telecomm. Res. Inst.

Christiand, Christiand	ETRI
Yu, Wonpil	ETRI
Cho, Jae Il	ETRI
10:45-11:00	ThA2.2
<i>Parsimonious Loop-Closure Detection Based on Global Image-Descriptors of Panoramic Images</i> , pp. 576-581.	
Gerstmayr-Hillen, Lorenz	Faculty of Tech. Bielefeld Univ.
Schlüter, Oliver	Computer Engineering Group, Bielefeld Univ.
Krzykawski, Martin	Bielefeld Univ.
Moeller, Ralf	Univ. of Bielefeld
11:00-11:15	ThA2.3
<i>Mobile Robot Global Localization with Non-Quantized SIFT Features</i> , pp. 582-587.	
Campos, Francisco Mateus	Lab. and Departamento de Engenharia Mecânica, Inst.
Marnoto de Oliveira	Univ. of Lisbon
Correia, Luís	ISEL - Inst. Superior de Engenharia de Lisboa
Calado, João	
11:15-11:30	ThA2.4
<i>Sonar-Based FastSLAM in an Underwater Environment Using Walls As Features</i> , pp. 588-593.	
Forouher, Dariush Magnus	Univ. of Lübeck
Hartmann, Jan	Univ. of Lübeck
Litza, Marek	Univ. Luebeck, Inst. of Computer Engineering
Maehle, Erik	Univ. Luebeck
11:30-11:45	ThA2.5
<i>Probabilistic Online-Generated Monitoring Models for Mobile Robot Navigation Using Modified Petri Net</i> , pp. 594-599.	
Zouaghi, Leila	Univ. of Heidelberg
Alexopoulos, Alexander	Univ. of Heidelberg
Wagner, Achim	Univ. of Heidelberg
Badreddin, Essameddin	Heidelberg Univ.
11:45-12:00	ThA2.6
<i>Systematic Optimal Design of Overlapped Ultrasonic Sensor Ring for High Performance Obstacle Detection</i> , pp. 600-605.	
Kim, Sungbok	Hankuk Univ. of Foreign Studies
Kim, Hyunbin	Hankuk Univ. of Foreign Studies
<b>ThB1</b>	X212
<b>Underwater Robotics (Oral Session)</b>	
Chair: Allotta, Benedetto	Univ. of Florence
Co-Chair: Indiveri, Giovanni	Univ. of Salento
13:30-13:45	ThB1.1
<i>Towards Flow-Sensing Robots: Situated Analysis for PIV Flow Imaging</i> , pp. 606-612.	
Visentin, Francesco	Univ. of Verona
Fiazza, Maria-Camilla	Univ. of Verona
Akanyeti, Otari	Univ. of Verona
Venturelli, Roberto	Univ. of Verona
Fiorini, Paolo	Univ. of Verona
13:45-14:00	ThB1.2
<i>Variable Stroke Timing of Rubber Fins' Duty Cycle Improves Force</i> , pp. 613-618.	
Collins, Keri Michelle	Univ. of Bath
Brown, Jennifer	Univ. of Bath
Ladd, Ryan R.	Univ. of Bath
Chambers, Lily	Univ. of Bath
Bowyer, Adrian	Bath Univ.

Megill, William	Univ. of Bath
14:00-14:15	ThB1.3
<i>On the Retrieval of Underwater Dispersed Sensors Using Unmanned Vehicles</i> , pp. 619-624.	
Indiveri, Giovanni	Univ. of Salento
Ingrosso, Roberta	Univ. del Salento
Cuccovillo, Michele	Diamec Tech. Italy
14:15-14:30	ThB1.4
<i>New Designs of Fin Type Propulsive Devices of Robotic Fish</i> , pp. 625-630.	
Viba, Janis	Riga Tech. Univ.
Beresnevich, Vitaly	Riga Tech. Univ.
Tsyfansky, Semyon	Riga Tech. Univ.
Kruusmaa, Maarja	Tallinn Univ. of Tech.
Fontaine, Jean-Guy	Italian Inst. of Tech.
Megill, William	Univ. of Bath
14:30-14:45	ThB1.5
<i>Localization Algorithm for a Fleet of Three AUVs by INS, DVL and Range Measurements</i> , pp. 631-636.	
Allotta, Benedetto	Univ. of Florence
Pugi, Luca	Univ. of Florence
Costanzi, Riccardo	Univ. di Firenze
Vettori, Gregorio	Univ. di Firenze

<b>ThB2</b>	X213
<b>Humanoid Robots (Oral Session)</b>	
Chair: Chanthasopeephan, Teeranoot	King Mongkut's Univ. of Tech. Thonburi
Co-Chair: Yoshikai, Tomoaki	The Univ. of Tokyo

13:30-13:45	ThB2.1
<i>Achievement of Trapeze Motion for Humanoid Robots Based on Realtime Ego-Motion / Moving Objects' Motions Recognition Algorithm</i> , pp. 637-644.	
Yoshikai, Tomoaki	The Univ. of Tokyo
Goto, Takefumi	The Univ. of Tokyo
Kobayashi, Kazuya	Univ. of Tokyo
Akimoto, Takahiro	Univ. of Tokyo
Yaguchi, Hiroaki	The Univ. of Tokyo
Inaba, Masayuki	The Univ. of Tokyo

13:45-14:00	ThB2.2
<i>0-Flat Canonical Form Control Scheme for Rabbit's Dynamic Walking Control</i> , pp. 645-652.	
Bououden, Soraya	ENSI de Bourges,
Abdessemed, Foudil	Batna Univ.

14:00-14:15	ThB2.3
<i>Foot Bone Kinematics at Half and Three Quarters Body Weight: A Robotic Cadaveric Simulation of Stance Phase</i> , pp. 653-658.	
Aubin, Patrick	Vilnius Gediminas Tech. Univ.
Whittaker, Eric	VA Puget Sound
Ledoux, William	VA Puget Sound

14:15-14:30	ThB2.4
<i>Integrated Design Optimization of a 5-DOF Assistive Light-Weight Anthropomorphic Arm</i> , pp. 659-664.	
Zhou, Lelai	Aalborg Univ.
Bai, Shaoping	Aalborg Univ.
Hansen, Michael R.	Aalborg Univ.

14:30-14:45	ThB2.5
<i>Multiple-Degree-Of-Freedom Motion Data Transmission Using Audio Signal and Its Application in a Presentation Robot System</i> , pp. 665-670.	

Owa, Shiori	Hiroshima City Univ.
Izumi, Tomohiro	Hiroshima City Univ.
Iwaki, Satoshi	Hiroshima City Univ.
Nakayama, Akira	NTT Cyber Solutions Lab. NTT Corp.
14:45-15:00	ThB2.6
<i>Impact Reduction Mobile Robot (IRR): Design of Compliant Legs</i> , pp. 671-676.	
Chanthasopeephan, Teeranoot	King Mongkut's Univ. of Tech. Thonburi