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Technical Program for Friday November 30, 2012

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Co-Chair: Mizuuchi, Ikuo	Tokyo Univ. of Agriculture and Tech.
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Noda, Tomoyuki (ATR Computational Neuroscience Lab.), Sugimoto, Norikazu (ATR Computational Neuroscience Lab.), Furukawa, Junichiro (Advanced Telecommunications Research Institute International (ATR)), Sato, Masa-aki (ATR Neural Information Analysis Lab.), Hyon, Sang-Ho (Ritsumeikan Univ.), Morimoto, Jun (ATR Computational Neuroscience Lab.)

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Co-Chair: Harada, Kensuke	National Inst. of AIST
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Bouyarmane, Karim (ATR), Kheddar, Abderrahmane (CNRS-AIST JRL (Joint Robotics Lab. UMI3218/CRT))	
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Asano, Fumihiko (Japan Advanced Inst. of Science and Tech.)

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Janvier, Maxime (INRIA Rhône-Alpes), Alameda-Pineda, Xavier (INRIA Grenoble Rhône-Alpes, Univ. Joseph Fourier), Horaud, Radu (INRIA Grenoble Rhone-Alpes), Girin, Laurent (Grenoble Inst. of Tech.)

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SOMMER, Nicolas (Ec. Pol. federale de Lausanne (EPFL),LASAlaboratory), Billard, Aude (EPFL)

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Matos, Vítor (Univ. of Minho), Santos, Cristina (Univ. of Minho)

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Ali, Fariz (Ph.D. Candidate, Dept. of Electrical and Computer Engineering, F), Motoi, Naoki (Yokohama National Univ.), Kawamura, Atsuo (Yokohama National Univ.)	
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Aftab, Zohaib (Univ. Lyon 1, INRIA Rhone-Alpes), Robert, Thomas (Univ. de Lyon - IFSTTAR), Wieber, Pierre-Brice (INRIA Rhône-Alpes)	
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Englsberger, Johannes (DLR (German Aerospace Center)), Ott, Christian (German Aerospace Center (DLR))	
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Buschmann, Thomas (Tech. Univ. Muenchen), Wittmann, Robert (Tech. Univ. München), Schwienbacher, Markus (Tech. Univ. Muenchen), Ulbrich, Heinz (Tech. Univ. Muenchen)	
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(Bielefeld Univ.)

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Büscher, Gereon (Univ. Bielefeld), Kõiva, Risto (Bielefeld Univ.), Schürmann, Carsten (Univ. Bielefeld), Haschke, Robert (Bielefeld Univ.), Ritter, Helge Joachim (Bielefeld Univ.)

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Elbrechter, Christof (Bielefeld Univ.), Haschke, Robert (Bielefeld Univ.), Ritter, Helge Joachim (Bielefeld Univ.)

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Asaoka, Tadashi (Tokyo Univ. of Agriculture and Tech.), Kawamura, Masaki (Tokyo Univ. of Agriculture and Tech.), KUMAKURA, Shouhei (Tokyo Univ. of Agriculture and Tech.), Mizuuchi, Ikuo (Tokyo Univ. of Agriculture and Tech.)

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Berret, Bastien (Italian Inst. of Tech.), Sandini, Giulio (Italian Inst. of Tech.), Nori, Francesco (ISTITUTO ITALIANO DI TECNOLOGIA)

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Jäkel, Rainer (Karlsruhe Inst. of Tech.), Xie, Yi (Karlsruhe Inst. of Tech.), Meißner, Pascal (FZI - Res. Center for Information Tech.), Dillmann, Rüdiger (KIT Karlsruhe Inst. for Tech.)

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baddoura, ritta (Univ. of Montpellier), Venture, Gentiane (Tokyo Univ. of Agriculture and Tech.), matsukata, ryo (Tokyo Univ. of Agriculture and Tech.)

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[Social Acceptance of Humanoid Robots in Japan: A Survey for Development of the Frankenstein Syndrome Questionnaire](#), pp. 242-247.

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Smith, Claes Christian (KTH Royal Inst. of Tech.), Karayiannidis, Yiannis (KTH Royal Institute of

Tech.)

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Schröder, Matthias (Bielefeld Univ.), Elbrechter, Christof (Bielefeld Univ.), Maycock, Jonathan (Bielefeld Univ.), Haschke, Robert (Bielefeld Univ.), Botsch, Mario (Bielefeld Univ.), Ritter, Helge Joachim (Bielefeld Univ.)

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Toh, Yue Peng (Carnegie Mellon Univ.), Huang, Shan (Carnegie Mellon Univ.), Lin, Joy (Carnegie Mellon Univ.), Bajzek, Maria (Carnegie Mellon Univ.), Zeglin, Garth J (Carnegie Mellon Univ.), Pollard, Nancy S (Carnegie Mellon Univ.)

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Chen, Xuechao (Beijing Insititute of Tech.), Huang, Qiang (Beijing Inst. of Tech.), YU, Zhangguo (Beijing Inst. of Tech.), Li, Jing (Beijing Insititute of Tech.), Ma, Gan (Beijing Inst. of Tech.), Zhang, Si (beijing Inst. of Tech.), Li, Yue (Beijing Inst. of Tech.)

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Dong, Haiwei (New York Univ.), Mavridis, Nikolaos (Interactive Robots and Media Lab.)

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Leon, Beatriz (Univ. Jaume I), Felip, Javier (Univ. Jaume I), Marti, Higinio (Univ. Jaume I), Morales, Antonio (Univ. Jaume I)

FrP3T1

Hall

Architecture for Cognition and Action (Regular)

Chair: Cheng, Gordon

Tech. Univ. Munich

Co-Chair: Ogata, Tetsuya

Waseda Univ.

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[Gain-Field Modulation Mechanism in Multimodal Networks for Spatial Perception](#), pp. 297-302.

Pitti, Alexandre (Univ. of Cergy Pontoise), Blanchard, Arnaud (Univ. de Cergy-Pontoise, CNRS, ENSEA), Cardinaux, Matthieu (Lab. ETIS, Univ. de Cergy-Pontoise, CNRS, ENSEA), Gaussier, Philippe (CNRS UMR 8051, ENSEA, Cergy-Pontoise Univ.)

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Trovato, Gabriele (Waseda Univ.), KISHI, Tatsuhiro (Waseda Univ.), Endo, Nobutsuna (Waseda Univ.), Hashimoto, Kenji (Waseda Univ.), Takanishi, Atsuo (Waseda Univ.)

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Pastor, Peter (Univ. of Southern California), Kalakrishnan, Mrinal (Univ. of Southern California),

Righetti, Ludovic (Max-Planck Inst. for Intelligent Systems), Schaal, Stefan (Univ. of Southern California)

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Dantam, Neil (Georgia Inst. of Tech.), Stilman, Mike (Georgia Tech.)

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Calinon, Sylvain (Istituto Italiano di Tecnologia), Li, Zhibin (Istituto Italiano di Tecnologia), Alizadeh, Tohid (Istituto Italiano di Tecnologia), Tsagarakis, Nikolaos (Istituto Italiano di Tecnologia), Caldwell, Darwin G. (Istituto Italiano di Tecnologia)

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Gori, Ilaria (Istituto Italiano di Tecnologia), Fanello, Sean Ryan (Istituto Italiano di Tecnologia), Metta, Giorgio (Istituto Italiano di Tecnologia (IIT)), odone, francesca (Univ. degli Studi di Genova)

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Bouyarmane, Karim (ATR), Vaillant, Joris (CNRS-UM2 LIRMM), Keith, François (Lirmm), Kheddar, Abderrahmane (CNRS-AIST JRL (Joint Robotics Lab. UMI3218/CRT))

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[Affective Gesturing with Music Mood Recognition](#), pp. 343-348.

Grunberg, David (Drexel Univ.), Batula, Alyssa (Drexel Univ.), Schmidt, Erik (Drexel Univ.), Kim, Youngmoo (Drexel Univ.)

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Müller, Judith (Univ. of Bremen), Frese, Udo (Univ. Bremen), Röfer, Thomas (German Res. Center for Artificial Intelligence)

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Duran, Boris (Univ. of Skovde), Sandamirskaya, Yulia (Ruhr-Univ. Bochum)

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Ajoudani, Arash (Istituto Italiano di Tecnologia), Gabbicini, Marco (Univ. di Pisa), Tsagarakis, Nikolaos (Istituto Italiano di Tecnologia), Albu-Schäffer, Alin (DLR - German Aerospace Center), Bicchi, Antonio (Univ. di Pisa)

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[Network](#), pp. 370-375.

Yoshida, Takami (Tokyo Inst. of Tech.), Nakadai, Kazuhiro (Honda Res. Inst. Japan Co., Ltd.)

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Przybylski, Markus (Karlsruhe Inst. of Tech. (KIT)), Waechter, Mirko (Karlsruhe Inst. of Tech. (KIT)),
Asfour, Tamim (Karlsruhe Inst. of Tech. (KIT)), Dillmann, Rüdiger (KIT Karlsruhe Inst. for Tech.)

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Delfin, Josafat (Cinvestav), Mar, Oscar (cimat), Hayet, Jean-Bernard (CIMAT), Castelán, Mario (Res.
Center for Advanced Studies, Campus Saltillo), Arechavaleta, Gustavo (CINVESTAV)

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[LMPC Based Online Generation of More Efficient Walking Motions](#), pp. 390-395.

Herdt, Andrei (DLR Inst. of Robotics and Mechatronics), Perrin, Nicolas Yves (Istituto Italiano di
Tecnologia), Wieber, Pierre-Brice (INRIA Rhône-Alpes)

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Felip, Javier (Univ. Jaume I), Bernabé, Jose Antonio (Univ. Jaume I), Morales, Antonio (Univ. Jaume
I)

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Balletti, Leonardo (centro E.Piaggio, Univ. di Pisa), Rocchi, Alessio (centro E.Piaggio, Univ. di Pisa),
Belo, Felipe (Univ. of Pisa), Catalano, Manuel Giuseppe (Istituto Italiano di Tecnologia), Garabini,
Manolo (Univ. di Pisa), Grioli, Giorgio (Univ. di Pisa), Bicchi, Antonio (Univ. di Pisa)

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IPA), Verl, Alexander (Fraunhofer-Gesellschaft)

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Li, Qiang (Bielefeld Univ.), Haschke, Robert (Bielefeld Univ.), Bolder, Bram (Honda Res. Inst.
Europe), Ritter, Helge Joachim (Bielefeld Univ.)

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Lofaro, Daniel (Drexel Univ.), Sun, Chunyang (Nanyang Tech. Univ.), Oh, Paul Y. (Drexel Univ.)

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Leidner, Daniel (German Aerospace Center (DLR)), Borst, Christoph (German Aerospace Center
(DLR)), Hirzinger, Gerd (German Aerospace Center (DLR))

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Gonzalez, David (KIT Karlsruher Inst. für Tech.), Vollert, Michael (Karlsruhe Inst. of Tech.), Asfour, Tamim (Karlsruhe Inst. of Tech. (KIT)), Dillmann, Rüdiger (KIT Karlsruhe Inst. for Tech.)

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Aoyama, Tadayoshi (Hiroshima Univ.), Sekiyama, Kosuke (Nagoya Univ.), Lu, Zhiguo (Northeastern Univ.), Kobayashi, Taisuke (Nagoya Univ.), Hasegawa, Yasuhisa (Univ. of Tsukuba), Fukuda, Toshio (Nagoya Univ.)

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[Identification of the Inertial Parameters of a Humanoid Robot Using Grounded Sole Link](#), pp. 449-454.

Iwasaki, Toru (Tokyo Univ. of agriculture and Tech.), Venture, Gentiane (Tokyo Univ. of Agriculture and Tech.), Yoshida, Eiichi (National Inst. of AIST)

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Kim, Min-Gyu (Univ. of Tsukuba), Suzuki, Kenji (Univ. of Tsukuba)

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[Real-Time Continuous Collision Detection for Mobile Manipulators – a General Approach](#), pp. 461-468. [Attachment](#)

Täubig, Holger (German Res. Center for Artificial Intelligence), Bäuml, Berthold (German Aerospace Center (DLR)), Frese, Udo (Univ. Bremen)

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Maejima, Akinobu (Waseda Univ.), Kuratate, Takaaki (Tech. Univ. Munich), Pierce, Brennand (Tech. Univ. München), Morishima, Shigeo (Waseda Univ.), Cheng, Gordon (Tech. Univ. Munich)

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[Design and Development of a Tendon-Driven and Axial-Driven Hybrid Humanoid Leg with High-Power Motor Driving System](#), pp. 475-480. [Attachment](#)

Ito, Yoshito (The Univ. of Tokyo), Nakaoka, Takuya (the Univ. of Tokyo), Urata, Junichi (The Univ. of Tokyo), Nakanishi, Yuto (The Univ. of Tokyo), Okada, Kei (The Univ. of Tokyo), Inaba, Masayuki (The Univ. of Tokyo)

17:20-18:20

FrP4T1.25

[The Mechatronic Design of the New Legs of the Icube Robot](#), pp. 481-486.

Parmiggiani, Alberto (Fondazione Istituto Italiano di Tecnologia (IIT)), Metta, Giorgio (Istituto Italiano di Tecnologia (IIT)), Tsagarakis, Nikolaos (Istituto Italiano di Tecnologia)

17:20-18:20

FrP4T1.26

[BLUE: A Bipedal Robot with Variable Stiffness and Damping](#), pp. 487-494. [Attachment](#)

Enoch, Alexander (Univ. of Edinburgh), Sutas, Andrius (Univ. of Edinburgh), Nakaoka, Shin'ichiro (AIST), Vijayakumar, Sethu (Univ. of Edinburgh)

17:20-18:20

FrP4T1.27

[Asymptotically Stable and Deadbeat Gait Generation of Four-Linked Bipedal Walker by Adjustment Control of Heel Strike Posture](#), pp. 495-501.

Harata, Yuji (Hiroshima Univ.), Asano, Fumihiko (Japan Advanced Inst. of Science and Tech.)

17:20-18:20

FrP4T1.28

[Phrvsa: Human-Like Actuator with Non-Linear Springs in Agonist-Antagonist Configuration](#), pp. 502-507.

Fiorio, Luca (Istituto Italiano di Tecnologia), Parmiggiani, Alberto (Fondazione Istituto Italiano di Tecnologia (IIT)), Berret, Bastien (Istituto Italiano di Tecnologia), SANDINI, GIULIO (Istituto Italiano di Tecnologia), Nori, Francesco (ISTITUTO ITALIANO DI TECNOLOGIA)

17:20-18:20

FrP4T1.29

[Active Peripersonal Space for More Intuitive HRI](#), pp. 508-513.

Holthaus, Patrick (Bielefeld Univ.), Wachsmuth, Sven (Bielefeld Univ.)

17:20-18:20

FrP4T1.30

[Usability Benchmarks of the Targets-Drives-Means Robotic Architecture](#), pp. 514-519.

Berenz, Vincent (Univ. of Tsukuba, Japan), Suzuki, Kenji (Univ. of Tsukuba)

17:20-18:20

FrP4T1.31

["Mask-Bot 2i": An Active Customisable Robotic Head with Interchangeable Face](#), pp. 520-525. [Attachment](#)

Pierce, Brennand (Tech. Univ. München), Kuratate, Takaaki (Tech. Univ. Munich), Vogl, Christian (Inst. for Cognitive Systems, TU München), Cheng, Gordon (Tech. Univ. Munich)

17:20-18:20

FrP4T1.32

[Development of a Full Body Multi-Axis Soft Tactile Sensor Suit for Life Sized Humanoid Robot and an Algorithm to Detect Contact States](#), pp. 526-531. [Attachment](#)

Kumagai, Iori (Univ. of Tokyo), Kobayashi, Kazuya (Univ. of Tokyo), Nozawa, Shunichi (The Univ. of Tokyo), Kakiuchi, Yohei (The Univ. of Tokyo), Yoshikai, Tomoaki (The Univ. of Tokyo), Okada, Kei (The Univ. of Tokyo), Inaba, Masayuki (The Univ. of Tokyo)

17:20-18:20

FrP4T1.33

[Towards Multi-User Brain-Robot Interfaces for Humanoid Robot Control](#), pp. 532-537. [Attachment](#)

Finke, Andrea (Bielefeld Univ.), Rudgalwis, Benjamin (Bielefeld Univ.), Jakusch, Holger (Bielefeld Univ.), Ritter, Helge Joachim (Bielefeld Univ.)

17:20-18:20

FrP4T1.34

[Quadratic Programming for Inverse Dynamics with Optimal Distribution of Contact Forces](#), pp. 538-543.

Righetti, Ludovic (Max-Planck Inst. for Intelligent Systems), Schaal, Stefan (Univ. of Southern California)

17:20-18:20

FrP4T1.35

[DForC: A Real-Time Method for Reaching, Tracking and Obstacle Avoidance in Humanoid Robots](#), pp. 544-551. [Attachment](#)

Gori, Ilaria (Istituto Italiano di Tecnologia), Pattacini, Ugo (Istituto Italiano di Tecnologia), Nori, Francesco (Istituto Italiano di Tecnologia), Metta, Giorgio (Istituto Italiano di Tecnologia (IIT)), Sandini, Giulio (Italian Inst. of Tech.)

Technical Program for Saturday December 1, 2012

SaA1T1	Hall
Manipulation and Learning (Regular)	
Chair: Atkeson, Christopher	CMU
Co-Chair: Shibata, Tomohiro	Nara Inst. of Science and Tech.
11:00-11:20	SaA1T1.1
Learning Coupled Dynamical Systems from Human Demonstration for Robotic Eye-Arm-Hand Coordination , pp. 552-559. Attachment	
Lukic, Luka (EPFL), Santos-Victor, José (Inst. Superior Técnico - Lisbon), Billard, Aude (EPFL)	
11:20-11:40	SaA1T1.2
Representation and Generalization of Bi-Manual Skills from Kinesthetic Teaching , pp. 560-567.	
Reinhart, Rene Felix (Bielefeld Univ.), Lemme, Andre (CoR-Lab.), Steil, Jochen J. (Bielefeld Univ.)	
11:40-12:00	SaA1T1.3
Manipulability Analysis , pp. 568-573. Attachment	
Vahrenkamp, Nikolaus (Karlsruhe Inst. of Tech. (KIT)), Asfour, Tamim (Karlsruhe Inst. of Tech. (KIT)), Metta, Giorgio (Istituto Italiano di Tecnologia (IIT)), Sandini, Giulio (Italian Inst. of Tech.), Dillmann, Rüdiger (KIT Karlsruhe Inst. for Tech.)	
12:00-12:20	SaA1T1.4
Improvement of Audio-Visual Score Following in Robot Ensemble with Human Guitarist , pp. 574-579.	

Itohara, Tatsuhiro (Kyoto Univ.), Nakadai, Kazuhiro (Honda Res. Inst. Japan Co., Ltd.), Ogata, Tetsuya (Waseda Univ.), Okuno, Hiroshi G. (Kyoto Univ.)

SaP1T1	Hall
Humanoid Locomotion (Regular)	
Chair: Hosoda, Koh	Osaka Univ.
Co-Chair: Sentis, Luis	The Univ. of Texas at Austin
13:20-13:40	SaP1T1.1
Energy Plane Analysis for Passive Dynamic Walking , pp. 580-585.	
Moon, Jae-Sung (Ulsan National Inst. of Science and Tech.), Spong, Mark (Univ. of Texas at Dallas)	
13:40-14:00	SaP1T1.2
Evaluation of a Stabilizer for Biped Walk with Toe Support Phase , pp. 586-592.	
Kajita, Shuji (National Inst. of AIST), Miura, Kanako (National Inst. of AIST), Morisawa, Mitsuharu (National Inst. of AIST), Kaneko, Kenji (National Inst. of AIST), Kanehiro, Fumio (National Inst. of AIST), Yokoi, Kazuhito (National Inst. of AIST)	
14:00-14:20	SaP1T1.3
Kinematic Optimization and Online Adaptation of Swing Foot Trajectory for Biped Locomotion , pp. 593-599. Attachment	
Kaminaga, Hiroshi (The Univ. of Tokyo), Engelsberger, Johannes (DLR (German Aerospace Center)), Ott, Christian (German Aerospace Center (DLR))	
14:20-14:40	SaP1T1.4
Experiments on Whole-Body Manipulation and Locomotion with Footstep Real-Time Optimization , pp. 600-605. Attachment	
Dang, Duong (LAAS-CNRS), Lamiroux, Florent (CNRS), Laumond, Jean-Paul (LAAS-CNRS)	
14:40-15:00	SaP1T1.5
Analysis of Muscle Coordination in Human Pedaling and Implementation with a Musculoskeletal Robot , pp. 606-611. Attachment	
OKU, Takanori (Osaka Univ.), Inoue, Keita (Graduate school of engineering science of Osaka Univ.), Pham, Hang (Graduate School of Engineering Science, Osaka Univ.), Tominaga, Kenta (Osaka Univ.), Maeda, Daisuke (Osaka Univ.), Uemura, Mitsunori (Osaka Univ.), Hirai, Hiroaki (Graduate School of Engineering Science, Osaka Univ.), Miyazaki, Fumio (Graduate School of Engineering Science, Osaka Univ.)	
SaP2T1	Plaza
Interactive Session III (Interactive)	
15:00-16:00	SaP2T1.1
Reification through Perceptual Grouping , pp. 612-617. Attachment	
Meier, Martin (Bielefeld Univ.), Haschke, Robert (Bielefeld Univ.), Ritter, Helge Joachim (Bielefeld Univ.)	
15:00-16:00	SaP2T1.2
Bayesian Calibration of the Hand-Eye Kinematics of an Anthropomorphic Robot , pp. 618-624.	
Hubert, Uwe (Autonomous Intelligent Systems, Computer Science VI, Univ.), Stueckler, Joerg (Univ. of Bonn), Behnke, Sven (Univ. of Bonn)	

15:00-16:00	SaP2T1.3
<i>Interaction Mesh Based Motion Adaptation for Biped Humanoid Robots</i> , pp. 625-631.	
Nakaoka, Shin'ichiro (AIST), Komura, Taku (Univ. of Edinburgh)	
15:00-16:00	SaP2T1.4
<i>Exploring the Possibility of Mechanical Energy As a Multipurpose Evaluation Function for Learning of Whole Body Dynamic Motions</i> , pp. 632-637. Attachment	
Yumoto, Yuya (Tokyo Univ. of Agriculture and Tech.), Mizuuchi, Ikuo (Tokyo Univ. of Agriculture and Tech.)	
15:00-16:00	SaP2T1.5
<i>Muscle Synergy Analysis of Human Adaptation to a Variable-Stiffness Exoskeleton: Human Walk with a Knee Exoskeleton with Pneumatic Artificial Muscles</i> , pp. 638-644.	
Maeda, Daisuke (Osaka Univ.), Tominaga, Kenta (Osaka Univ.), OKU, Takanori (Osaka Univ.), Pham, Hang (Graduate School of Engineering Science, Osaka Univ.), Saeki, Shin (Osaka Univ.), Uemura, Mitsunori (Osaka Univ.), Hirai, Hiroaki (Graduate School of Engineering Science, Osaka Univ.), Miyazaki, Fumio (Graduate School of Engineering Science, Osaka Univ.)	
15:00-16:00	SaP2T1.6
<i>Interactive Learning Gives the Tempo to an Intrinsically Motivated Robot Learner</i> , pp. 645-652.	
Nguyen, Sao Mai (INRIA), Oudeyer, Pierre-Yves (INRIA)	
15:00-16:00	SaP2T1.7
<i>Exploiting Affordance Symmetries for Task Reproduction Planning</i> , pp. 653-659.	
Claassens, Jonathan (CSIR), Demiris, Yiannis (Imperial Coll. London)	
15:00-16:00	SaP2T1.8
<i>Style Translation Filter to Change Attribute of Motion</i> , pp. 660-665.	
Yamaguchi, Akihiko (Nara Inst. of Science and Tech.), Sato, Shiori (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.)	
15:00-16:00	SaP2T1.9
<i>Hierarchical Estimation of Multiple Objects from Proximity Relationships Arising from Tool Manipulation</i> , pp. 666-673.	
Nagahama, Kotaro (The Univ. of Tokyo), Yamazaki, Kimitoshi (Shinshu Univ.), Okada, Kei (The Univ. of Tokyo), Inaba, Masayuki (The Univ. of Tokyo)	
15:00-16:00	SaP2T1.10
<i>Anytime Search-Based Footstep Planning with Suboptimality Bounds</i> , pp. 674-679.	
Hornung, Armin (Univ. of Freiburg), Dornbush, Andrew (Carnegie Mellon Univ.), Likhachev, Maxim (Carnegie Mellon Univ.), Bennewitz, Maren (Univ. of Freiburg)	
15:00-16:00	SaP2T1.11
<i>Point Cloud Completion Using Extrusions</i> , pp. 680-685.	
Kroemer, Oliver (TU Darmstadt), Ben Amor, Heni (Tech. Univ. Darmstadt), Ewerton, Marco (Tech. Univ. Darmstadt), Peters, Jan (Tech. Univ. Darmstadt)	
15:00-16:00	SaP2T1.12
<i>An Efficient Grasp Planning Algorithm Based on Decomposition of Grasp Regions</i> , pp. 686-691.	
Xue, Zhixing (FZI), Xia, Shuang (FZI), Dillman, Rudiger (FZI)	
15:00-16:00	SaP2T1.13

[Real-Time Navigation in 3D Environments Based on Depth Camera Data](#), pp. 692-697.

Maier, Daniel (Univ. of Freiburg), Hornung, Armin (Univ. of Freiburg), Bennewitz, Maren (Univ. of Freiburg)

15:00-16:00

SaP2T1.14

[Interactive Symbol Generation of Task Planning for Daily Assistive Robot](#), pp. 698-703.
[Attachment](#)

Mikita, Hiroyuki (The Univ. of Tokyo), Azuma, Haseru (The Univ. of Tokyo), Kakiuchi, Yohei (The Univ. of Tokyo), Okada, Kei (The Univ. of Tokyo), Inaba, Masayuki (The Univ. of Tokyo)

15:00-16:00

SaP2T1.15

[Visual-Inertial Ego-Motion Estimation for Humanoid Platforms](#), pp. 704-711. [Attachment](#)

Tsotsos, Konstantine (Univ. of California, Los Angeles), Pretto, Alberto (Univ. of Padua), Soatto, Stefano (Univ. of California, Los Angeles)

15:00-16:00

SaP2T1.16

[On-Line Learning of Temporal State Models for Flexible Objects](#), pp. 712-718.

Bergström, Niklas (KTH, Royal Inst. of Tech.), Ek, Carl Henrik (Royal Inst. of Tech.), Kragic, Danica (KTH), Yamakawa, Yuji (Univ. of Tokyo), Senoo, Taku (Univ. of Tokyo), Ishikawa, Masatoshi (Univ. of Tokyo)

15:00-16:00

SaP2T1.17

[Robust Grasping Mechanism for an Under-Actuated Anthropomorphic Hand under Object Position Uncertainty](#), pp. 719-725. [Attachment](#)

Su, Yanyu (Harbin Inst. of Tech.), Wu, Yan (Imperial Coll. London), Lee, Kyuhwa (Imperial Coll. of Science, Tech. and Medicine), Du, Zhijiang (harbin Inst. of Tech.), Demiris, Yiannis (Imperial Coll. London)

15:00-16:00

SaP2T1.18

[A Three Dimensional Foot Placement Planner for Locomotion in Very Rough Terrains](#), pp. 726-733. [Attachment](#)

Zhao, Ye (Univ. of Texas, Austin), Sentis, Luis (The Univ. of Texas at Austin)

15:00-16:00

SaP2T1.19

[Balance Control Based on Capture Point Error Compensation for Biped Walking on Uneven Terrain](#), pp. 734-740. [Attachment](#)

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

15:00-16:00

SaP2T1.20

[Reflexive Step-Out Control Superposed on Standing Stabilization of Biped Robots](#), pp. 741-746.

Sugihara, Tomomichi (Graduate School of Engineering, Osaka Univ.)

15:00-16:00

SaP2T1.21

[Linear Prediction Based Uniform State Sampling for Sampling Based Motion Planning Systems](#), pp. 747-754. [Attachment](#)

Kim, Chyon Hae (Honda Res. Inst. Japan Co.,Ltd.), Sugawara, Shimon (Waseda Univ.), Sugano, Shigeki (Waseda Univ.)

15:00-16:00

SaP2T1.22

[Efficient Path Planning of Humanoid Robots with Automatic Conformation of Body Representation to the Complexity of Environments](#), pp. 755-760.

Shimizu, Yasushi (Graduate School of Engineering, Osaka Univ.), Sugihara, Tomomichi (Graduate School of Engineering, Osaka Univ.)

15:00-16:00 SaP2T1.23

[Active Stabilization of a Humanoid Robot for Real-Time Imitation of a Human Operator](#), pp. 761-766. [Attachment](#)

Yi, Seung-Joon (Univ. of Pennsylvania), McGill, Stephen (Univ. of Pennsylvania), Zhang, Byoung-Tak (Seoul National Univ.), Hong, Dennis (Virginia Tech.), Lee, Daniel D. (Univ. of Pennsylvania)

15:00-16:00 SaP2T1.24

[Visualization and Identification of Macroscopic Dynamics of a Human Motor Control Based on the Motion Measurement](#), pp. 767-772.

Kaneta, Daishi (Osaka Univ.), Murai, Nobuyuki (Osaka Univ.), Sugihara, Tomomichi (Graduate School of Engineering, Osaka Univ.)

15:00-16:00 SaP2T1.25

[Analysis of Human Grasping under Task Anticipation Using a Tactile Book](#), pp. 773-778.

Schürmann, Carsten (Univ. Bielefeld), Kõiva, Risto (Bielefeld Univ.), Haschke, Robert (Bielefeld Univ.), Ritter, Helge Joachim (Bielefeld Univ.)

15:00-16:00 SaP2T1.26

[Dynamic Modeling of Elastic Tendon Actuators with Tendon Slackening](#), pp. 779-784.

Lens, Thomas (Tech. Univ. Darmstadt), Kirchoff, Jérôme (Tech. Univ. Darmstadt), von Stryk, Oskar (Tech. Univ. Darmstadt)

15:00-16:00 SaP2T1.27

[Deterministic Motion Planning for Redundant Robots Along End-Effector Paths](#), pp. 785-790. [Attachment](#)

Huaman, Ana (Georgia Inst. of Tech.), Stilman, Mike (Georgia Tech.)

15:00-16:00 SaP2T1.28

[On the Representation of Anthropomorphic Robot Hands: Shape versus Function](#), pp. 791-798.

de Souza, Ravin (Inst. Superior Técnico), Bernardino, Alexandre (Inst. Superior Técnico - Inst.), Santos-Victor, José (Inst. Superior Técnico - Lisbon), Billard, Aude (EPFL)

15:00-16:00 SaP2T1.29

[Designing of Android Head System by Applying Facial Muscle Mechanism of Humans](#), pp. 799-804.

Ahn, Ho Seok (Adv. Telecomm. Res. Inst.), Lee, Dong-Wook (Korea Inst. of Industrial Tech.), Choi, DW (Korea Inst. of Industrial Tech.), Lee, DY (Korea Inst. of Industrial Tech.), Hur, MH (Korea Inst. of Industrial Tech.), Lee, Hogil (Korea Inst. of Industrial Tech.)

15:00-16:00 SaP2T1.30

[The Sensor-Controller Network of the Humanoid Robot LOLA](#), pp. 805-810.

Favot, Valerio (Tech. Univ. München), Buschmann, Thomas (Tech. Univ. Muenchen), Schwienbacher, Markus (Tech. Univ. Muenchen), Ewald, Alexander (Tech. Univ. Muenchen), Ulbrich, Heinz (Tech. Univ. Muenchen)

15:00-16:00 SaP2T1.31

[Design and Development of a Compressor-Embedded Pneumatic-Driven Musculoskeletal Humanoid](#), pp. 811-816.

Mizuuchi, Ikuo (Tokyo Univ. of Agriculture and Tech.), Kawamura, Masaki (Tokyo Univ. of Agriculture and Tech.), Asaoka, Tadashi (Tokyo Univ. of Agriculture and Tech.), KUMAKURA, Shouhei (Tokyo Univ. of Agriculture and Tech.)

15:00-16:00 SaP2T1.32

[Rapid Prototyping Toolchain for Humanoid Robotics Applications](#), pp. 817-822.

Choudhury, Safwan (Univ. of Waterloo), Wight, Derek (Quanser Inc), Kulic, Dana (Univ. of Waterloo)

15:00-16:00 SaP2T1.33

[Jumping Motion Experiments on a NAO Robot with Elastic Devices](#), pp. 823-828.

Hondo, Takatoshi (Tokyo Univ. of Agriculture and Tech.), Kinase, Yuta (Tokyo Univ. of Agriculture and Tech.), Mizuuchi, Ikuo (Tokyo Univ. of Agriculture and Tech.)

15:00-16:00 SaP2T1.34

[Walking on Non-Planar Surfaces Using an Inverse Dynamic Stack of Tasks](#), pp. 829-834.

Ramos, Oscar E. (LAAS-CNRS, Univ. of Toulouse III), Mansard, Nicolas (CNRS), Stasse, Olivier (CNRS), Soueres, Philippe (LAAS-CNRS)

15:00-16:00 SaP2T1.35

[Motion Control Based on Modification of the Jacobian Map between the Muscle Space and Work Space with Musculoskeletal Humanoid](#), pp. 835-840. [Attachment](#)

Motegi, Yotaro (The Univ. of Tokyo), Shirai, Takuma (Tokyo Univ.), Izawa, Tamon (The Univ. of Tokyo), Kurotobi, Tomoko (Tokyo Univ.), Urata, Junichi (The Univ. of Tokyo), Nakanishi, Yuto (The Univ. of Tokyo), Okada, Kei (The Univ. of Tokyo), Inaba, Masayuki (The Univ. of Tokyo)

SaP3T1 Hall

Contact Perception for Actions (Regular)

Chair: Metta, Giorgio Istituto Italiano di Tecnologia (IIT)

Co-Chair: Venture, Gentiane Tokyo Univ. of Agriculture and Tech.

16:00-16:20 SaP3T1.1

[Retrieving Contact Points without Environment Knowledge](#), pp. 841-846. [Attachment](#)

lengagne, sebastien (Karlsruhe Inst. of Tech.), Terlemez, Ömer (Karlsruhe Inst. of Tech.), Laturnus, Sophie Christine (Karlsruher Inst. of Tech.), Asfour, Tamim (Karlsruhe Inst. of Tech. (KIT)), Dillmann, Rüdiger (KIT Karlsruhe Inst. for Tech.)

16:20-16:40 SaP3T1.2

[Integrating Discrete Force Cells into Multi-Modal Artificial Skin](#), pp. 847-852. [Attachment](#)

Mittendorfer, Philipp (Tech. Univ. München), Cheng, Gordon (Tech. Univ. Munich)

16:40-17:00 SaP3T1.3

[Whole-Body Motion Input Method for Bipedal Humanoid Robot with Support Leg Detection](#), pp. 853-858.

Yonekura, Kenta (Univ. of Tsukuba), Nakaoka, Shin'ichiro (AIST), Yokoi, Kazuhito (National Inst. of AIST)

SaP4T1 Hall

Humanoid Skills in Complex World (Regular)

Chair: Kuffner, James Google

Co-Chair: Pollard, Nancy S Carnegie Mellon Univ.

17:20-17:40 SaP4T1.1

[Achievement of 'Mikoshi' with Multiple Humanoid Robots As Coordinated Navigation](#)

[Problem Based on Real-Time 3D Space Recognition in a Dynamic Environment](#), pp. 859-866.

Yoshikai, Tomoaki (The Univ. of Tokyo), Akimoto, Takahiro (Univ. of Tokyo), Kobayashi, Kazuya (Univ. of Tokyo), Tsuji, Junpei (The Univ. of Tokyo), Yaguchi, Hiroaki (The Univ. of Tokyo), Inaba, Masayuki (The Univ. of Tokyo)

17:40-18:00

SaP4T1.2

[A Hierarchical Framework for Realizing Dynamically-Stable Motions of Humanoid Robot in Obstacle-Cluttered Environments](#), pp. 867-874. [Attachment](#)

QIU, Zhaopeng (Atomic Energy Commission), Escande, Adrien (CEA), Micaelli, Alain (Commissariat à l'Energie Atomique), Robert, Thomas (Univ. de Lyon - IFSTTAR)

18:00-18:20

SaP4T1.3

[Playing Catch and Juggling with a Humanoid Robot](#), pp. 875-881. [Attachment](#)

Koerber, Jens (Bielefeld Univ.), Glisson, Matthew (Disney Res.), Mistry, Michael (Univ. of Birmingham)