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# TECHNICAL PROGRAM

## Technical Program for Monday August 28, 2017

|   |            |
|---|------------|
| <b>MWT1</b>   | Ajuda III  |
| <b>Enriching Robots with Ontological-Cognitive Knowledge (E-ROCK)</b> (Workshop or Tutorial Session)  |            |
| 09:00-12:20   | MWT1.1     |
| <i>Enriching Robots with Ontological-Cognitive Knowledge (E-ROCK)*. N/A</i>   |            |
| Borgo, Stefano (National Res. Council)  |            |
| <b>MW1</b>  | Ajuda I    |
| <b>2nd Workshop on Behavior Adaptation, Interaction and Learning for Assistive Robotics (BAILAR 2017)</b> (Workshop or Tutorial Session)  |            |
| 09:00-17:30   | MW1.1      |
| <i>Behavior Adaptation, Interaction and Learning for Assistive Robotics – BAILAR*. N/A</i>  |            |
| Rossi, Silvia (Univ. di Napoli Federico II), Staffa, Mariacarla (Univ. of Naples "Federico II"), Siciliano, Bruno (Univ. Napoli Federico II)  |            |
| <b>MW2</b>  | Belem II   |
| <b>Towards Intelligent Social Robots: Social Cognitive Systems in Smart Environments</b> (Workshop or Tutorial Session)   |            |
| 09:00-17:30   | MW2.1      |
| <i>Towards Intelligent Social Robots: Social Cognitive Systems in Smart Environments*. N/A</i>  |            |
| Aly, Amir (Ritsumeikan Univ.)   |            |
| <b>MW3</b>  | Alter Real |
| <b>EMSHRI 2017: 3rd Workshop on Evaluation Methods Standardization for Human-Robot Interaction</b> (Workshop or Tutorial Session)   |            |
| 09:00-17:30   | MW3.1      |
| <i>EMSHRI 2017: Evaluation Methods Standardization for Human-Robot Interaction*. N/A</i>  |            |
| Jost, Céline (Paris 8 Univ.), Belpaeme, Tony (Plymouth Univ.), Bethel, Cindy L. (Mississippi State Univ.), Chrysostomou, Dimitrios (Aalborg Univ.), Crook, Nigel (Oxford Brookes Univ.), Le-Pévédic, Brigitte (Univ.), Mirnig, Nicole (Univ. of Salzburg), Grandgeorge, Marine (Univ. Rennes 1, UMR 6552, Lab. éthologie Animale & Humaine) |            |
| <b>MW4</b>  | Belem I    |
| <b>Workshop on Social Interaction and Multimodal Expression for Socially Intelligent Robots (WS-SIME)</b> (Workshop or Tutorial Session)  |            |
| 09:00-17:30   | MW4.1      |
| <i>Workshop on Social Interaction and Multimodal Expression for Socially Intelligent Robots (WS SIME)*. N/A</i>   |            |
| Tsiourti, Christiana (Univ. of Geneva), Dias, Jorge (Univ. of Coimbra), Weiss, Astrid (Vienna Univ. of Tech.), Hanke, Sten (AIT Austrian Inst. of Tech. GmbH), Angel-Fernandez, Julian (ACIN Institute of Automation and Control, Vienna Univ. of Tech.), Luis, Santos (Univ. of Coimbra)   |            |
| <b>MW5</b>  | Paso       |
| <b>Workshop on Robot Therapy with Seal Robot, PARO</b> (Workshop or Tutorial Session)   |            |
| 09:00-17:30   | MW5.1      |
| <i>Workshop on Robot Therapy with Seal Robot, PARO*. N/A</i>  |            |
| Wada, Kazuyoshi (Tokyo Metropolitan Univ.), Shibata, Takanori (AIST)  |            |

|  |             |
|--|-------------|
| <b>MW6</b>   | Lusitano II |
| <b>3rd Workshop on Groups in Human-Robot Interaction</b> (Workshop or Tutorial Session)  |             |
| 09:00-17:30  | MW6.1       |
| <i>Groups in Human-Robot Interaction (third Meeting)*. N/A</i>   |             |
| Fraune, Marlena (Indiana Univ.), Eyssel, Friederike (Bielefeld Univ.), Jung, Malte (Cornell Univ.), Sabanovic, Selma (Indiana Univ.) |             |

|  |          |
|--|----------|
| <b>MW7</b>   | Ajuda II |
| <b>Rethinking Robotics for the Robot Companion of the Future: The RoboCom++ Fet-Flagship-Proof-Of-Concept Project</b> (Workshop or Tutorial Session)   |          |
| 09:00-17:30  | MW7.1    |
| <i>Rethinking Robotics for the Robot Companion of the Future: The RoboCom++ Fet-Flagship-Proof-Of-Concept Project*. N/A</i>  |          |
| Dario, Paolo (Scuola Superiore Sant'Anna), Floreano, Dario (Ec. Pol. Federal, Lausanne), Soueres, Philippe (LAAS-CNRS), Mazzolai, Barbara (Istituto Italiano di Tecnologia), Laschi, Cecilia (Scuola Superiore Sant'Anna), Bonsignorio, Fabio Paolo (Heron Robots srl and The Biorobotics Institute Scuola Superiore S. Anna), Mazzoleni, Stefano (Scuola Superiore Sant'Anna) |          |

## Technical Program for Tuesday August 29, 2017

|   |                               |
|---|-------------------------------|
| <b>Tu1A</b>   | Ajuda I                       |
| <b>Cognitive Interaction Design (I)</b> (Special Session)   |                               |
| Chair: Terada, Kazunori   | Gifu Univ                     |
| Co-Chair: Eyssel, Friederike  | Bielefeld Univ                |
| Organizer: Terada, Kazunori   | Gifu Univ                     |
| Organizer: Yamada, Seiji  | National Inst. of Informatics |
| 11:00-11:15   | Tu1A.1                        |
| <i>Designing Robot Faces Suited to Specific Tasks That These Robots Are Good At (I)</i> , pp. 1-5.                          |                               |
| Komatsu, Takanori (Meiji Univ), Masahiro, Kamide (Meiji Univ)   |                               |
| 11:15-11:30   | Tu1A.2                        |
| <i>Video Conference Environment Using Representative Eye-Gaze Motion of Remote Participants (I)</i> , pp. 6-11.             |                               |
| Takeuchi, Yugo (Shizuoka Univ), Takahashi, Genki (NEC Facilities, Ltd. / Shizuoka Univ)                                     |                               |
| 11:30-11:45   | Tu1A.3                        |
| <i>Projection Mapping of Behavioral Expressions Onto Manufactured Figures for Speech Interaction (I)</i> , pp. 12-16.       |                               |
| Ishihara, Yoshihisa (Shinshu Univ), Kobayashi, Kazuki (Shinshu Univ)  |                               |
| 11:45-12:00   | Tu1A.4                        |
| <i>Investigating Effects of Light Animations on Perceptions of a Computer: Preliminary Results (I)</i> , pp. 17-22.         |                               |
| Song, Sichao (The Graduate Univ. for Advanced Studies (SOKENDAI)), Yamada, Seiji (National Inst. of Informatics)            |                               |
| 12:00-12:15   | Tu1A.5                        |
| <i>Entropy-Based Eye-Tracking Analysis When a User Watches a PRVA's Recommendations (I)</i> , pp. 23-28.                    |                               |
| Matsui, Tetsuya (National Inst. of Informatics), Yamada, Seiji (National Inst. of Informatics)                              |                               |
| 12:15-12:30   | Tu1A.6                        |
| <i>A Pilot Study Investigating Self-Disclosure by Elderly Participants in Agent-Mediated Communication (I)</i> , pp. 29-34. |                               |
| Noguchi, Yohei (Univ. of Tsukuba), Tanaka, Fumihide (Univ. of Tsukuba)  |                               |

| <b>Tu1B</b>  | Belem II                        |
|--|---------------------------------|
| <b>Social Robotics (I) (Regular Session)</b>   |                                 |
| Chair: Nomura, Tatsuya   | Ryukoku Univ                    |
| Co-Chair: Trovato, Gabriele  | Waseda Univ                     |
| 11:00-11:15  | Tu1B.1                          |
| <i>Puffy – an Inflatable Robotic Companion for Pre-Schoolers</i> , pp. 35-41.  |                                 |
| Gelsomini, Mirko (Pol. Di Milano, MIT Media Lab), Degiorgi, Marzia (Pol. Di Milano), Garzotto, Franca (Pol. Di Milano), Leonardi, Giulia (Pol. Di Milano), Penati, Simone (Pol. Di Milano), Ramuzat, Noëlie (ENSTA Bretagne), Silvestri, Jacopo (Pol. Di Milano), Clasadonte, Francesco (Pol. Di Milano), Kinoe, Yosuke (Hosei Univ) |                                 |
| 11:15-11:30  | Tu1B.2                          |
| <i>Would You Like to Sample? Robot Engagement in a Shopping Centre</i> , pp. 42-49.  |                                 |
| Tonkin, Meg (Univ. of Tech. Sydney), Vitale, Jonathan (Univ. of Tech. Sydney), Ojha, Suman (Univ. of Tech. Sydney), Williams, Mary-Anne (Univ. of Tech. Sydney), Fuller, Paul (Stockland), Judge, William (Commonwealth Bank), Wang, Xun (Univ. of Tech. Sydney)   |                                 |
| 11:30-11:45  | Tu1B.3                          |
| <i>Semantic-Based Interaction for Teaching Robot Behavior Compositions</i> , pp. 50-55.  |                                 |
| Paléologue, Victor (SoftBank Robotics Europe), Martin, Jocelyn (SoftBank Robotics Europe), Coninx, Alexandre (UPMC), Pandey, Amit Kumar (SoftBank Robotics), Chetouani, Mohamed (Univ. Pierre Et Marie Curie)  |                                 |
| 11:45-12:00  | Tu1B.4                          |
| <i>He Said, She Said, It Said: Effects of Robot Group Membership and Human Authority on People's Willingness to Follow Their Instructions</i> , pp. 56-61.   |                                 |
| Sembroski, Catherine (Indiana Univ), Fraune, Marlena (Indiana Univ), Sabanovic, Selma (Indiana Univ)   |                                 |
| 12:00-12:15  | Tu1B.5                          |
| <i>Effectiveness of Socially Assistive Robotics During Cognitive Stimulation Interventions: Impact on Caregivers</i> , pp. 62-67.  |                                 |
| Shukla, Jainendra (Rovira I Virgili Univ), Barreda-Ángeles, Miguel (Eurecat - Tech. Centre of Catalonia), Oliver, Joan (Inst. De Robótica Para La Dependencia), Puig, Domenec (Rovira I Virgili Univ)  |                                 |
| 12:15-12:30  | Tu1B.6                          |
| <i>Evaluation of Experiments in Social Robotics: Insights from the MOnarCH Project</i> , pp. 68-73.  |                                 |
| Sequeira, Joao (Inst. Superior Técnico - Inst. for Systems and Robotics)   |                                 |
| <b>Tu1C</b>  | Belem I                         |
| <b>Rehabilitation and Assistive Robotics (I) (Regular Session)</b>   |                                 |
| Chair: Iáñez, Eduardo  | Univ. Miguel Hernandez De Elche |
| Co-Chair: Filippeschi, Alessandro  | Scuola Superiore Sant'Anna      |
| 11:00-11:15  | Tu1C.1                          |
| <i>I See You Lying on the Ground - Can I Help You? Fast Fallen Person Detection in 3D with a Mobile Robot</i> , pp. 74-80.   |                                 |
| Lewandowski, Benjamin (Ilmenau Univ. of Tech), Wengefeld, Tim (Ilmenau Univ. of Tech), Schmiedel, Thomas (Ilmenau Univ. of Tech), Gross, Horst-Michael (Ilmenau Univ. of Tech)   |                                 |
| 11:15-11:30  | Tu1C.2                          |
| <i>Sit-To-Stand Assistance System Based on Using EMG to Predict Movement</i> , pp. 81-87.  |                                 |
| Hiyama, Takahiro (Panasonic Corp), Kato, Yusuke (Panasonic Corp), Inoue, Tsuyoshi (Panasonic Corp)   |                                 |

| 11:30-11:45   | Tu1C.3                             |
|---|------------------------------------|
| <i>A Vibrotactile Stimulation System for Improving Postural Control and Knee Joint Proprioception in Lower-Limb Amputees</i> , pp. 88-93.   |                                    |
| Lauretti, Clemente (Univ. Campus Bio-Medico Di Roma), Pinzari, Giulia (Univ. Campus Bio-Medico Di Roma), Ciancio, Anna Lisa (Campus Bio-Medico Univ), DAVALLI, Angelo (INAIL Prosthesis Center), Sacchetti, Rinaldo (INAIL Prosthesis Center), Sterzi, Silvia (Univ. Campus Bio-Medico Di Roma), Guglielmelli, Eugenio (Univ. Campus Bio-Medico), Zollo, Loredana (Univ. Campus Bio-Medico) |                                    |
| 11:45-12:00   | Tu1C.4                             |
| <i>Empirical Mode Decomposition Use in Electroencephalography Signal Analysis for Detection of Starting and Stopping Intentions During Gait Cycle</i> , pp. 94-100.   |                                    |
| Ortiz, Mario (Univ. Miguel Hernández), Iáñez, Eduardo (Univ. Miguel Hernandez De Elche), Rodríguez-Ugarte, Marisol (Miguel Hernandez Univ. of Elche), Azorin, Jose M. (Univ. Miguel Hernandez De Elche)   |                                    |
| 12:00-12:15   | Tu1C.5                             |
| <i>Estimating Double Support in Pathological Gaits Using an HMM-Based Analyzer for an Intelligent Robotic Walker</i> , pp. 101-106.   |                                    |
| Chalvatzaki, Georgia (NATIONAL Tech. Univ. OF ATHENS), Tzafestasi, Xanthi S. (National Tech. Univ. of Athens), Tzafestas, Costas S. (ICCS - Inst. of Communication and Computer Systems), Maragos, Petros (National Tech. Univ. of Athens)  |                                    |
| 12:15-12:30   | Tu1C.6                             |
| <i>Short-Range Gait Pattern Analysis for Potential Applications on Assistive Robotics</i> , pp. 107-112.  |                                    |
| Paulo, João (Univ. OF COIMBRA), Garrote, Luís Carlos (Inst. of Systems and Robotics), Asvadi, Alireza (Inst. of Systems and Robotics), Premezbida, Cristiano (Univ. of Coimbra), Peixoto, Paulo (Univ. of Coimbra)  |                                    |
| <b>Tu1D</b>   | Ajuda III                          |
| <b>Robot Companions (Regular Session)</b>   |                                    |
| Chair: Dominey, Peter Ford  | INSERM Stem Cell & Brain Res. Inst |
| Co-Chair: Crook, Nigel  | Oxford Brookes Univ                |
| 11:00-11:15   | Tu1D.1                             |
| <i>NICO - Neuro-Inspired Companion: A Developmental Humanoid Robot Platform for Multimodal Interaction</i> , pp. 113-120.   |                                    |
| Kerzel, Matthias (Uni Hamburg), Strahl, Erik (Univ. Hamburg), Magg, Sven (Univ. of Hamburg), Navarro-Guerrero, Nicolás (Univ. of Hamburg), Heinrich, Stefan (Univ. Hamburg), Wermter, Stefan (Univ. of Hamburg)   |                                    |
| 11:15-11:30   | Tu1D.2                             |
| <i>Huggable: Impact of Embodiment on Promoting Verbal and Physical Engagement for Young Pediatric Inpatients</i> , pp. 121-126.   |                                    |
| Jeong, Sooyeon (MIT), Breazeal, Cynthia (MIT), Logan, Deirdre (Boston Children's Hospital), Weinstock, Peter (Boston Children's Hospital)   |                                    |
| 11:30-11:45   | Tu1D.3                             |
| <i>Improving Quality of Life with a Narrative Companion</i> , pp. 127-134.  |                                    |
| Dominey, Peter Ford (INSERM Stem Cell & Brain Res. Inst), Paléologue, Victor (SoftBank Robotics Europe), Pandey, Amit Kumar (SoftBank Robotics), Ventre-Dominey, Jocelyne (INSERM)  |                                    |
| 11:45-12:00   | Tu1D.4                             |
| <i>Robotic Companions in Stroke Therapy: A User Study on the Efficacy of Assistive Robotics among 30 Patients in Neurological Rehabilitation</i> , pp. 135-142.   |                                    |

Meyer, Sibylle (SIBIS Inst. for Social Res. Berlin), Fricke, Christa (SIBIS Inst. for Social Res. Berlin)

12:00-12:15 Tu1D.5

*Sociable Driving Agents to Maintain Driver's Attention in Automatic Driving*, pp. 143-149.

Karatas, Nihan (Toyohashi Univ. of Tech), Yoshikawa, Soshi (Toyohashi Univ. of Tech), Tamura, Shintaro (Toyohashi Univ. of Tech), Otaki, Sho (Toyota Motor Corp), Funayama, Ryuji (Toyota Motor Corp), Okada, Michio (Toyohashi Univ. of Tech)

12:15-12:30 Tu1D.6

*Both "Look and Feel" Matter: Essential Factors for Robotic Companionship*, pp. 150-155.

FakhrHosseini, Maryam (Michigan Tech. Univ), Lettinga, Dylan (Michigan Tech. Univ), Vasey, Eric (Michigan Tech. Univ), Zheng, Zhi (Michigan Tech. Univ), Jeon, Myounghoon (Michigan Tech. Univ), Park, Chung Hyuk (George Washington Univ), Howard, Ayanna (Georgia Inst. of Tech)

**Tu1E** Ajuda II  
**Tele-Operated and Autonomous Robots (Regular Session)**

Chair: Adams, Julie Oregon State Univ  
Co-Chair: Kühnlenz, Kolja Coburg Univ. of Applied Sciences and Arts

11:00-11:15 Tu1E.1

*A Teleoperated Control Approach for Anthropomorphic Manipulator Using Magneto-Inertial Sensors*, pp. 156-161.

Noccaro, Alessia (Univ. Campus Bio-Medico Di Roma), Cordella, Francesca (Univ. Campus Biomedico of Rome), Zollo, Loredana (Univ. Campus Bio-Medico), Di Pino, Giovanni (Univ. Campus Bio-Medico Di Roma), Guglielmelli, Eugenio (Univ. Campus Bio-Medico), Formica, Domenico (Univ. Campus Bio-Medico Di Roma)

11:15-11:30 Tu1E.2

*Blame My Telepresence Robot, Joint Effect of Proxemics and Attribution on Interpersonal Attraction*, pp. 162-168.

van Houwelingen-Snippe, Josca (Radboud Univ), Vroon, Jered (Univ. of Twente), Englebienne, Gwenn (Univ. of Twente), Willem Haselager, Pim (Radboud Univ. Nijmegen)

11:30-11:45 Tu1E.3

*Exploring User-Defined Gestures to Control a Group of Four UAVs*, pp. 169-174.

Peshkova, Ekaterina (Alpen-Adria-Univ. Klagenfurt), Hitz, Martin (Alpen-Adria-Univ. Klagenfurt)

11:45-12:00 Tu1E.4

*Exploring Intuitiveness of Metaphor-Based Gestures for UAV Navigation*, pp. 175-182.

Peshkova, Ekaterina (Alpen-Adria-Univ. Klagenfurt), Hitz, Martin (Alpen-Adria-Univ. Klagenfurt), Ahlström, David (Alpen-Adria-Univ. Klagenfurt), Alexandrowicz, Rainer W. (Alpen-Adria-Univ. Klagenfurt), Kopper, Alexander (Alpen-Adria-Univ. Klagenfurt)

12:00-12:15 Tu1E.5

*Study Investigating the Ease of Talking Via a Robot Tele-Operated from Same or Different Rooms*, pp. 183-188.

Shimaya, Jiro (Osaka Univ), Yoshikawa, Yuichiro (Osaka Univ), Ishiguro, Hiroshi (Osaka Univ)

12:15-12:30 Tu1E.6

*Ontology for Autonomous Robotics*, pp. 189-194.

Li, Howard (Univ. of New Brunswick), Gonçalves, Paulo (Inst. Pol. De Castelo Branco), Fiorini, Sandro (Univ. Paris-Est Creteil), Olszewska, Joanna Isabelle (Univ. of Gloucestershire, United Kingdom)

**Tu2A** Ajuda I  
**Cognitive Interaction Design (II) (Special Session)**

Chair: Terada, Kazunori Gifu Univ

Co-Chair: Dias, Jorge Univ. of Coimbra

Organizer: Terada, Kazunori Gifu Univ

Organizer: Yamada, Seiji National Inst. of Informatics

14:00-14:15 Tu2A.1

*Investigating How People Deal with Silence in a Human-Robot Conversation (I)*, pp. 195-200.

Oto, Kiyona (Keio Univ), Feng, Jianmei (Keio Univ), Imai, Michita (Keio Univ)

14:15-14:30 Tu2A.2

*Agent Auto-Generation System : Interact with Your Favorite Things (I)*, pp. 201-206.

Sawada, Shiori (Keio Univ), Sono, Taichi (Keio Univ), Imai, Michita (Keio Univ)

14:30-14:45 Tu2A.3

*A Robot Counseling System -What Kinds of Topics Do We Prefer to Disclose to Robots? (I)*, pp. 207-212.

Uchida, Takahisa (ATR, Osaka Univ), Takahashi, Hideyuki (Osaka Univ), Ban, Midori (Doshisha Univ), Shimaya, Jiro (Osaka Univ), Yoshikawa, Yuichiro (Osaka Univ), Ishiguro, Hiroshi (Osaka Univ)

14:45-15:00 Tu2A.4

*Telepresence Robot with Behavior Synchrony: Merging the Emotions and Behaviors of Users (I)*, pp. 213-218.

Yonezu, Soji (Univ. of Tsukuba), Osawa, Hirotaka (Univ. of Tsukuba)

15:00-15:15 Tu2A.5

*Analysis of Robot Hotel: Reconstruction of Works with Robots (I)*, pp. 219-223.

Osawa, Hirotaka (Univ. of Tsukuba), Ema, Arisa (The Univ. of Tokyo), Hattori, Hiromitsu (Ritsumeikan Univ), Akiya, Naonori (Yamaguchi Univ), Kanzaki, Nobotsugu (Nanzan Univ), Kubo, Akinori (Hitotsubashi Univ), Koyama, Tora (Osaka Univ), Ichise, Ryutarō (National Inst. of Informatics)

**Tu2B** Belem II  
**Social Robotics (II) (Regular Session)**

Chair: Nomura, Tatsuya Ryukoku Univ

Co-Chair: Shiomi, Masahiro ATR

14:00-14:15 Tu2B.1

*Stopping Distance for a Robot Approaching Two Conversating Persons*, pp. 224-229.

Ruijten, Peter (Eindhoven Univ. of Tech), Cuijpers, Raymond (Eindhoven Univ. of Tech)

14:15-14:30 Tu2B.2

*Security and Guidance: Two Roles for a Humanoid Robot in an Interaction Experiment*, pp. 230-235.

Trovato, Gabriele (Waseda Univ), Lopez Manrique, Jose Alexander (Pontificia Univ. Catolica Del Peru), Paredes, Renato (Pontificia Univ. Católica Del Perú), Cuellar, Francisco (Pontificia Univ. Catolica Del Peru)

14:30-14:45 Tu2B.3

*Understanding Social Interactions with Socially Assistive Robotics in Intergenerational Family Groups*, pp. 236-241.

Short, Elaine Schaertl (Univ. of Southern California), Swift-Spong, Katelyn (Univ. of Southern California), Shim, Hyunju (Univ. of Southern California), Wisniewski, Kristi M. (Univ. of Southern California), Zak, Deanah Kim (Univ. of Southern California), Wu, Shinyi (Univ. of Southern California), Zelinski, Elizabeth (Univ. of Southern California), Mataric, Maja (Univ. of Southern California)

14:45-15:00 Tu2B.4

*He Can Read Your Mind: Perceptions of a Character-Guessing Robot*, pp. 242-247.

Henkel, Zachary (Mississippi State Univ), Bethel, Cindy L. (Mississippi State Univ), Kelly, John (Mississippi State Univ), Jones, Alexis (Mississippi State Univ), Stives, Kristen

(Mississippi State Univ), Buchanan, Zach (Mississippi State Univ), Eakin, Deborah (Mississippi State Univ), May, David C. (Mississippi State Univ), Pilkinton, Melinda (Mississippi State Univ)

15:00-15:15 Tu2B.5

*A Robotic Couples Counselor for Promoting Positive Communication*, pp. 248-255.

Utami, Dina (Northeastern Univ), Bickmore, Timothy (Northeastern Univ), Kruger, Louis (Northeastern Univ)

15:15-15:30 Tu2B.6

*The Influence of Individual Social Traits on Robot Learning in a Human-Robot Interaction*, pp. 256-262.

GUEDJOU, Hakim (UPMC Univ), Boucenna, Sofiane (CNRS - Cergy-Pontoise Univ), Xavier, Jean (CHU Pitié-Salpêtrière), COHEN, David (APHP, Department of Child and Adolescent Psychiatry), Chetouani, Mohamed (Univ. Pierre Et Marie Curie)

**Tu2C** Belem I

**Rehabilitation and Assistive Robotics (II)** (Regular Session)

Chair: Chugo, Daisuke Kwansai Gakuin Univ

Co-Chair: Papageorgiou, Xanthi S. National Tech. Univ. of Athens

14:00-14:15 Tu2C.1

*Measuring Multimodal Deformations in Soft Inflatable Actuators Using Embedded Strain Sensors*, pp. 263-270.

Hart, Alexander (Georgia Inst. of Tech), Cahoon, Thomas (Georgia Inst. of Tech), Hammond III, Frank L. (Georgia Inst. of Tech)

14:15-14:30 Tu2C.2

*The Wheelie - a Facial Expression Controlled Wheelchair Using 3D Technology*, pp. 271-276.

Pinheiro, Paulo Gurgel (HOOBOX Robotics), Gurgel Pinheiro, Cláudio (HOOBOX Robotics), Cardozo, Eleri (UNICAMP)

14:30-14:45 Tu2C.3

*Multimodal Sensory Feedback for Virtual Proprioception in Powered Upper-Limb Prostheses*, pp. 277-283.

Lee, Joshua (Georgia Inst. of Tech), Choi, Mi Hyun (Georgia Inst. of Tech), Jung, Ji Hwan (Georgia Inst. of Tech), Hammond III, Frank L. (Georgia Inst. of Tech)

14:45-15:00 Tu2C.4

*What's "up"? - Resolving Interaction Ambiguity through Non-Visual Cues for a Robotic Dressing Assistant*, pp. 284-291.

Chance, Gregory (Univ. of the West of England), Caleb-Solly, Praminda (Univ. of the West of England), Jevtić, Aleksandar (Inst. of Robotics and Industrial Informatics, CSIC-UPC), Dogramadzi, Sanja (Univ. of the West of England)

15:00-15:15 Tu2C.5

*A Taxonomy of Preferences for Physically Assistive Robots*, pp. 292-297.

Canal, Gerard (CSIC-UPC), Alenyà, Guillem (CSIC-UPC), Torras, Carme (Csic - Upc)

15:15-15:30 Tu2C.6

*Development of an Upper Limb Neuroprosthesis to Voluntarily Control Elbow and Hand*, pp. 298-303.

Ogiri, Yosuke (Yokohama National Univ), Yamanoi, Yusuke (Yokohama National Univ), Nishino, Wataru (Yokohama National Univ), Kato, Ryu (Yokohama National Univ), Takagi, Takehiko (Tokai Univ), Yokoi, Hiroshi (The Univ. of Electro-Communications)

**Tu2D** Ajuda II

**Linguistic Communication and Dialogue** (Regular Session)

Chair: Wada, Kazuyoshi Tokyo Metropolitan Univ

Co-Chair: Rosenthal-von der Univ. Duisburg-Essen

Pütten, Astrid Marieke

14:00-14:15 Tu2D.1

*Learning to Understand Questions on the Task History of a Service Robot*, pp. 304-309.

Perera, Vittorio (Carnegie Mellon Univ), Veloso, Manuela (Carnegie Mellon Univ)

14:15-14:30 Tu2D.2

*Reprompts As Error Handling Strategy in Human-Agent-Dialog? User Responses to a System's Display of Non-Understanding*, pp. 310-316.

Opfermann, Christiane Silke (Univ. of Duisburg-Essen), Pitsch, Karola (Univ. of Duisburg-Essen)

14:30-14:45 Tu2D.3

*Context-Aware Selection of Multi-Modal Conversational Fillers in Human-Robot Dialogues*, pp. 317-322.

Gallé, Matthias (Xerox Res. Centre Europe), Kynev, Ekaterina (Xerox Res. Centre Europe), Monet, Nicolas (Xerox Res. Centre Europe), Legras, Christophe (Xerox Res. Centre Europe)

14:45-15:00 Tu2D.4

*Strategies and Mechanisms to Enable Dialogue Agents to Respond Appropriately to Indirect Speech Acts*, pp. 323-328.

Briggs, Gordon (NAVAL Res. Lab), Scheutz, Matthias (Tufts Univ)

15:00-15:15 Tu2D.5

*Dealing with 'Long Turns' Produced by Users of an Assistive System: How Missing Uptake and Reciprocity Lead to Turn Increments*, pp. 329-334.

Cyra, Katharina (Univ. of Duisburg-Essen), Pitsch, Karola (Univ. of Duisburg-Essen)

15:15-15:30 Tu2D.6

*Recommendation Dialogue System through Pragmatic Argumentation*, pp. 335-340.

Cheng, Ching-Ying (NTU), Qian, Xiaobei (National Taiwan Univ), Tseng, Shih-Huan (National Taiwan Univ), Fu, Li-Chen (National Taiwan Univ)

**Tu2E** Ajuda III

**Human-Robot Collaboration and Cooperation (I)** (Regular Session)

Chair: Eyssel, Friederike Bielefeld Univ

Co-Chair: Kuhnert, Barbara Univ. of Freiburg

14:00-14:15 Tu2E.1

*Co-Representation of Human-Generated Actions vs. Machine-Generated Actions: Impact on Our Sense of We-Agency?*, pp. 341-345.

Sahaï, Aïsha (Ens & Onera), Pacherie, Elisabeth (Inst. Jean Nicod, ENS), Grynszpan, Ouriel (Inst. Des Systèmes Intelligents Et De Robotique), Berberian, Bruno (ONERA)

14:15-14:30 Tu2E.2

*Proactive, Incremental Learning of Gesture-Action Associations for Human-Robot Collaboration*, pp. 346-353.

Shukla, Dadhichi (Univ. of Innsbruck), Erkent, Ozgur (Univ. of Innsbruck), Piater, Justus (Univ. of Innsbruck)

14:30-14:45 Tu2E.3

*Legible Action Selection in Human-Robot Collaboration*, pp. 354-359.

Zhu, Huaijiang (Tech. Univ. of Munich), Gabler, Volker (Tech. Univ. München), Wollherr, Dirk (Tech. Univ. München)

14:45-15:00 Tu2E.4

*Adaptation to a Humanoid Robot in a Collaborative Joint Task*, pp. 360-365.

Vannucci, Fabio (Istituto Italiano Di Tecnologia), Sciutti, Alessandra (Istituto Italiano Di Tecnologia), Jacono, Marco

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| (Istituto Italiano Di Tecnologia), Rea, Francesco (Istituto Italiano Di Tecnologia), Sandini, Giulio (Italian Inst. of Tech) |        |
| 15:00-15:15  | Tu2E.5 |
| <i>A Human Workload Assessment Algorithm for Collaborative Human-Machine Teams</i> , pp. 366-371.                            |        |
| Heard, Jamison (Vanderbilt Univ), Harriott, Caroline (Draper), Adams, Julie (Oregon State Univ)                              |        |
| 15:15-15:30  | Tu2E.6 |
| <i>A Robust Multimodal Fusion Framework for Command Interpretation in Human-Robot Cooperation</i> , pp. 372-377.             |        |
| Cacace, Jonathan (Univ. of Naples), Finzi, Alberto (Univ. of Naples), Lippiello, Vincenzo (Univ. of Naples FEDERICO II)      |        |

| <b>Tu3B</b>  |        | Belem II                    |
|--|--------|-----------------------------|
| <b>Social Robotics (III) (Regular Session)</b>   |        |                             |
| Chair: Chetouani, Mohamed  |        | Univ. Pierre Et Marie Curie |
| Co-Chair: Crick, Christopher   |        | Oklahoma State Univ         |
| 16:00-16:15  | Tu3B.1 |                             |
| <i>Adapting a Robot's Linguistic Style Based on Socially-Aware Reinforcement Learning</i> , pp. 378-384.   |        |                             |
| Ritschel, Hannes (Augsburg Univ), Baur, Tobias (Augsburg Univ), Andre, Elisabeth (Augsburg Univ)   |        |                             |
| 16:15-16:30  | Tu3B.2 |                             |
| <i>Robot Moderation of a Collaborative Game: Towards Socially Assistive Robotics in Group Interactions</i> , pp. 385-390.  |        |                             |
| Short, Elaine Schaertl (Univ. of Southern California), Mataric, Maja (Univ. of Southern California)  |        |                             |
| 16:30-16:45  | Tu3B.3 |                             |
| <i>Semantic Structure for Robotic Teaching and Learning</i> , pp. 391-396.   |        |                             |
| Roy, Sayanti (Oklahoma State Univ), Kieson, Emily (Oklahoma State Univ), Abramson, Charles (Oklahoma State Univ), Crick, Christopher (Oklahoma State Univ)                         |        |                             |
| 16:45-17:00  | Tu3B.4 |                             |
| <i>The Authority of Appearance: How Robot Features Influence Trait Inferences and Evaluative Responses</i> , pp. 397-404.  |        |                             |
| Benitez, Jonathan (Disney Res), Wyman, Alisa (Disney Res), Carpinella, Colleen (Disney Res), Stroessner, Steven (Disney Res)   |        |                             |
| 17:00-17:15  | Tu3B.5 |                             |
| <i>Socially-Aware Navigation Planner Using Models of Human-Human Interaction</i> , pp. 405-410.  |        |                             |
| Sebastian, Meera (Univ. of Nevada, Reno), Banisetty, Santosh Balajee (Univ. of Nevada, Reno), Feil-Seifer, David (Univ. of Nevada, Reno)   |        |                             |
| 17:15-17:30  | Tu3B.6 |                             |
| <i>Pardon the Rude Robot: Social Cues Diminish Reactance to High Controlling Language</i> , pp. 411-417.   |        |                             |
| Ghazali, Aimi Shazwani (Eindhoven Univ. of Tech), Ham, Jaap (Eindhoven Univ. of Tech), Barakova, Emilia I. (Eindhoven Univ. of Tech), Markopoulos, Panos (Eindhoven Univ. of Tech) |        |                             |

| <b>Tu3C</b>   |        | Ajuda II        |
|---|--------|-----------------|
| <b>Non-Verbal Cues and Expressiveness (Regular Session)</b>   |        |                 |
| Chair: Kuno, Yoshinori  |        | Saitama Univ    |
| Co-Chair: Kawamura, Kazuhiko  |        | Vanderbilt Univ |
| 16:00-16:15   | Tu3C.1 |                 |
| <i>A Hug from a Robot Encourages Prosocial Behavior</i> , pp. 418-423.  |        |                 |
| Shiomi, Masahiro (ATR), Nakata, Aya (NAIST), Kanbara, Masayuki (Nara Inst. of Science and Tech), Hagita, Norihiro |        |                 |

| <b>(ATR)</b>  |        |  |
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| 16:15-16:30   | Tu3C.2 |  |
| <i>Enriching Robot's Actions with Affective Movements</i> , pp. 424-429.  |        |  |
| Angel-Fernandez, Julian M. (Vienna Univ. of Tech), Bonarini, Andrea (Pol. Di Milano)  |        |  |
| 16:30-16:45   | Tu3C.3 |  |
| <i>Gesture Mimicry in Social Human-Robot Interaction</i> , pp. 430-436.   |        |  |
| Stolzenwald, Schachar Janis Immanuel (Univ. of Bristol), Bremner, Paul (Univ. of the West of England)   |        |  |
| 16:45-17:00   | Tu3C.4 |  |
| <i>A Speech-Driven Pupil Response Robot Synchronized with Burst-Pause of Utterance</i> , pp. 437-442.   |        |  |
| Sejima, Yoshihiro (Okayama Prefectural Univ), Egawa, Shoichi (Okayama Prefectural Univ), Maeda, Ryosuke (Okayama Prefectural Univ), Sato, Yoichiro (Okayama Prefectural Univ), Watanabe, Tomio (Okayama Prefectural Univ) |        |  |
| 17:00-17:15   | Tu3C.5 |  |
| <i>I Get It Already! the Influence of ChairBot Motion Gestures on Bystander Response</i> , pp. 443-448.   |        |  |
| Knight, Heather (Carnegie Mellon Univ), Lee, Timothy (Stanford Univ), Brittany, Hallawell (Stanford Univ), Ju, Wendy (Stanford Univ)  |        |  |
| 17:15-17:30   | Tu3C.6 |  |
| <i>Robots Educate in Style: The Effect of Context and Non-Verbal Behaviour on Children's Perceptions of Warmth and Competence</i> , pp. 449-455.  |        |  |
| Peters, Rifca (Delft Univ. of Tech), broekens, joost (TU Delft), Neerinx, Mark (TNO)  |        |  |

| <b>Tu3D</b>   |        | Belem I                         |
|---|--------|---------------------------------|
| <b>Medical Robotics (Regular Session)</b>   |        |                                 |
| Chair: Vanderborgh, Bram  |        | Vrije Univ. Brussel             |
| Co-Chair: Formica, Domenico   |        | Univ. Campus Bio-Medico Di Roma |
| 16:00-16:15   | Tu3D.1 |                                 |
| <i>Stiffness Perception During Pinching and Dissection with Teleoperated Haptic Forceps</i> , pp. 456-463.  |        |                                 |
| Ng, Canaan (Univ. of Calgary), Zareinia, Kourosh (Univ. of Calgary), Sun, Qiao (Univ. of Calgary), Kuchenbecker, Katherine J. (Univ. of Pennsylvania)   |        |                                 |
| 16:15-16:30   | Tu3D.2 |                                 |
| <i>Exploring the Effectiveness of Using Temporal Order Information for the Early-Recognition of Suture Surgery's Six Steps Based on Video Image Analyses of Surgeons' Hand Actions</i> , pp. 464-469.   |        |                                 |
| Tsubota, Miwa (Waseda Univ), Li, Ye (Waseda Univ), Ohya, Jun (Waseda Univ)  |        |                                 |
| 16:30-16:45   | Tu3D.3 |                                 |
| <i>Development of a Two DOF Needle Driver for CT-Guided Needle Insertion-Type Interventional Robotic System</i> , pp. 470-475.  |        |                                 |
| Kim, Ki-Young (Korea Inst. of Machinery and Materials), Woo, Hyun Soo (KIMM), Cho, Jang Ho (Korea Inst. of Machinery & Materials), Lee, Yongkoo (Korea Inst. of Machinery and Materials)                |        |                                 |
| 16:45-17:00   | Tu3D.4 |                                 |
| <i>Teleoperated Multimodal Robotic Interface for Telemedicine: A Case Study on Remote Auscultation</i> , pp. 476-482.   |        |                                 |
| Falleni, Sara (Scuola Superiore Sant'Anna), Filippeschi, Alessandro (Scuola Superiore Sant'Anna), Ruffaldi, Emanuele (Scuola Superiore Sant'Anna), Avizzano, Carlo Alberto (Scuola Superiore Sant'Anna) |        |                                 |

17:00-17:15 Tu3D.5  
*Integrating the Users in the Design of a Robot for Making Comprehensive Geriatric Assessments (CGA) to Elderly People in Care Centers*, pp. 483-488.

Lan Hing Ting, Karine (Troyes Univ. of Tech), Voilmy, Dimitri (Troyes Univ. of Tech), Iglesias, Ana (Univ. Carlos III De Madrid), Pulido Pascual, José Carlos (Univ. Carlos III De Madrid), García, Javier (Univ. Carlos III De Madrid), Romero-Garces, Adrian (Univ. of Malaga), Bandera Rubio, Juan Pedro (Univ. of Malaga), Marfil, Rebeca (Univ. of Malaga), Dueñas Ruiz, Álvaro (Hospital Univ. Virgen Del Rocío)

17:15-17:30 Tu3D.6  
*Interactive Balance Rehabilitation Tool with Wearable Skin Stretch Device*, pp. 489-494.

Pan, Yi-Tsen (Texas A&M Univ), Hur, Pilwon (Texas A&M Univ)

**Tu3E** Ajuda III  
**Human-Robot Collaboration and Cooperation (II) (Regular Session)**

Chair: Melhuish, Chris BRL  
 Co-Chair: Law, Edith Univ. of Waterloo

16:00-16:15 Tu3E.1  
*Contact Detection and Physical Interaction on Low Cost Personal Robots*, pp. 495-501.

Flacco, Fabrizio (CNRS), Kheddar, Abderrahmane (CNRS-AIST JRL (Joint Robotics Lab. UMI3218/CRT)

16:15-16:30 Tu3E.2  
*Contextual Awareness: Understanding Monologic Natural Language Instructions for Autonomous Robots*, pp. 502-509.

Arkin, Jacob (Univ. of Rochester), Walter, Matthew (Toyota Tech. Inst. at Chicago), Boteanu, Adrian (Cornell Univ), Napoli, Michael (Univ. of Rochester), Biggie, Harel (Univ. of Rochester), Kress-Gazit, Hadas (Cornell Univ), Howard, Thomas (Univ. of Rochester)

16:30-16:45 Tu3E.3  
*Towards Robot-Human Reliable Hand-Over: Continuous Detection of Object Perturbation Force Direction*, pp. 510-515.

Gómez Eguíluz, Augusto (Univ. of Ulster), Rano, Inaki (Ulster Univ), Coleman, Sonya (Univ. of Ulster), McGinnity, Martin (Univ. of Ulster)

16:45-17:00 Tu3E.4  
*Towards Understanding User Preferences in Robot-Human Handovers: How Do We Decide?*, pp. 516-521.

Martinson, Eric (Toyota InfoTechnology Center, USA), Huaman, Ana (Georgia Inst. of Tech)

17:00-17:15 Tu3E.5  
*Where Are the Robots? In-Feed Embedded Techniques for Visualizing Robot Team Member Locations*, pp. 522-527.

Seo, Stela Hanbyeol (Univ. of Manitoba), Young, James Everett (Univ. of Manitoba), Irani, Pourang (Univ. of Manitoba)

17:15-17:30 Tu3E.6  
*Predicting Trust in Human Control of Swarms Via Inverse Reinforcement Learning*, pp. 528-533.

Nam, Changjoo (Carnegie Mellon Univ), Walker, Phillip (Univ. of Pittsburgh), Lewis, Michael (Univ. of Pittsburgh), Sycara, Katia (Carnegie Mellon Univ)

**Tu4A** Ajuda I  
**Cultural Factors in Human-Robot Interactions (Special Session)**

Chair: Sgorbissa, Antonio Univ. of Genova  
 Co-Chair: Chong, Nak Young Japan Advanced Inst. of Sci. and Tech

Organizer: Sgorbissa, Antonio Univ. of Genova

Organizer: Chong, Nak Young Japan Advanced Inst. of Sci. and Tech

Organizer: Pandey, Amit Kumar SoftBank Robotics

Organizer: Saffiotti, Alessandro Orebro Univ

16:00-16:15 Tu4A.1  
*Cultural Differences in Social Acceptance of Robots (I)*, pp. 534-538.

Nomura, Tatsuya (Ryukoku Univ)

16:15-16:30 Tu4A.2  
*Ethical Considerations of Gendering Very Humanlike Androids from an Interdisciplinary Perspective (I)*, pp. 539-546.

Knox, Elena (Waseda Univ), Watanabe, Katsumi (Waseda Univ)

16:30-16:45 Tu4A.3  
*Encoding Cultures in Robot Emotion Representation (I)*, pp. 547-552.

Dang, Thi Le Quyen (Japan Advanced Inst. of Science and Tech), Tuyen, Nguyen Tan Viet (Japan Advanced Inst. of Science and Tech), Jeong, Sungmoon (Japan Advanced Inst. of Sci. and Tech), Chong, Nak Young (Japan Advanced Inst. of Sci. and Tech)

16:45-17:00 Tu4A.4  
*Paving the Way for Culturally Competent Robots: A Position Paper (I)*, pp. 553-560.

Bruno, Barbara (Univ. of Genova), Chong, Nak Young (Japan Advanced Inst. of Sci. and Tech), Kamide, Hiroko (Nagoya Univ), Kanoria, Sanjeev (Advinia Health Care Limited LTD), Lee, Jaeryoung (Chubu Univ), Lim, Yuto (Japan Advanced Inst. of Science and Tech), Pandey, Amit Kumar (SoftBank Robotics), Papadopoulos, Chris (Univ. of Bedfordshire), Papadopoulos, Irena (Middlesex Univ. Higher Education Corp), Pecora, Federico (Örebro Univ), Saffiotti, Alessandro (Orebro Univ), Sgorbissa, Antonio (Univ. of Genova)

17:00-17:15 Tu4A.5  
*Mind Attribution to Androids: A Comparative Study with Italian and Japanese Adolescents (I)*, pp. 561-566.

Trovato, Gabriele (Waseda Univ), Eyssel, Friederike (Bielefeld Univ)

17:15-17:30 Tu4A.6  
*Face Image-Based Age and Gender Estimation with Consideration of Ethnic Difference (I)*, pp. 567-572.

SHIN, MINCHUL (KAIST), Seo, JuHwan (KAIST(Korea Advanced Inst. of Science and Tech), Kwon, Dong-Soo (KAIST)

17:30-17:45 Tu4A.7  
*Cross-Cultural Differences for Adaptive Strategies of Robots in Public Spaces (I)*, pp. 573-578.

Mussakhojayeva, Saida (Nazarbayev Univ), Sandygulova, Anara (Nazarbayev Univ)

## Technical Program for Wednesday August 30, 2017

**We1A** Belem II  
**Human-Robot Interaction (I) (Regular Session)**

Chair: Sycara, Katia Carnegie Mellon Univ  
 Co-Chair: Peshkova, Ekaterina Alpen-Adria-Univ. Klagenfurt

09:00-09:15 We1A.1  
*Investigating the Influence of Embodiment on Facial Mimicry in HRI Using Computer Vision-Based Measures*, pp. 579-586.



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| Paetzel, Maike (Uppsala Univ), VARNI, Giovanna (Isir - Upmc Cnrs), Hupont, Isabelle (Pierre Et Marie Curie Univ), Chetouani, Mohamed (Univ. Pierre Et Marie Curie), Peters, Christopher (Royal Inst. of Tech), Castellano, Ginevra (Uppsala Univ)                       |        |
| 09:15-09:30   | We1A.2 |
| <i>Natural Head Movement for HRI with a Muscular-Skeletal Head and Neck Robot</i> , pp. 587-592.  |        |
| Barker, Steve (Oxford Brookes Univ), Izadi, Hooshang (Oxford Brookes Univ), Crook, Nigel (Oxford Brookes Univ), Hayatleh, Khaled (Oxford Brookes Univ), Rolf, Matthias (Oxford Brookes Univ), Hughes, Philip (Oxford Brookes Univ), Fellows, Neil (Oxford Brookes Univ) |        |
| 09:30-09:45   | We1A.3 |
| <i>Hybrid Chat and Task Dialogue for More Engaging HRI Using Reinforcement Learning</i> , pp. 593-598.  |        |
| Papaioannou, Ioannis (Heriot-Watt Univ), Dondrup, Christian (Heriot-Watt Univ), Novikova, Jekaterina (Heriot-Watt Univ), Lemon, Oliver (Heriot-Watt Univ)   |        |
| 09:45-10:00   | We1A.4 |
| <i>Episodic Memory Formulation and Its Application in Long-Term HRI</i> , pp. 599-606.  |        |
| Sigalas, Markos (Foundation for Res. and Tech. - Hellas), Maniadakis, Michail (Foundation for Res. and Tech. -- Hellas (FORTH)), Trahanias, Panos (Foundation for Res. and Tech. -- Hellas (FORTH))   |        |
| 10:00-10:15   | We1A.5 |
| <i>A Wizard-Of-Oz Study of Curiosity in Human-Robot Interaction</i> , pp. 607-614.  |        |
| Law, Edith (Univ. of Waterloo), Cai, Vicky (Univ. of Waterloo), Liu, Qi Feng (Univ. of Waterloo), Sasy, Sajin (Univ. of Waterloo), Goh, Joslin (Univ. of Waterloo), Blidaru, Alex (Univ. of Waterloo), Kulic, Dana (Univ. of Waterloo)                                  |        |
| 10:15-10:30   | We1A.6 |
| <i>Love at First Sight: Mere Exposure to Robot Appearance Leaves Impressions Similar to Interactions with Physical Robots</i> , pp. 615-620.  |        |
| FakhrHosseini, Maryam (Michigan Tech. Univ), Barnes, Jaclyn (Michigan Tech. Univ), Hilliger, Samantha (Michigan Tech. Univ), Jeon, Myoungsoon (Michigan Tech. Univ), Park, Chung Hyuk (George Washington Univ), Howard, Ayanna (Georgia Inst. of Tech)                  |        |

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| <b>We1B</b>  | Ajuda II                 |
| <b>Motivations and Emotions in Robotics (Regular Session)</b>  |                          |
| Chair: Bonarini, Andrea  | Pol. Di Milano           |
| Co-Chair: Watanabe, Tomio  | Okayama Prefectural Univ |
| 09:00-09:15  | We1B.1                   |
| <i>Impression's Predictive Models for Animated Robot</i> , pp. 621-626.  |                          |
| Izui, Takamune (Tokyo Univ. of Agriculture and Tech), Venture, Gentiane (Tokyo Univ. of Agriculture and Tech)  |                          |
| 09:15-09:30  | We1B.2                   |
| <i>Investigating the Real World Impact of Emotion Portrayal through Robot Voice and Motion</i> , pp. 627-634.  |                          |
| Winkle, Katie (Univ. of the West England), Bremner, Paul (Univ. of the West England)   |                          |
| 09:30-09:45  | We1B.3                   |
| <i>A Framework for a Robot's Emotions Engine</i> , pp. 635-640.  |                          |
| SALEM, Ben (School of Engineering,)  |                          |
| 09:45-10:00  | We1B.4                   |
| <i>A Robot at Home – How Affect, Technology Commitment, and Personality Traits Influence User Experience in an Intelligent Robotics Apartment</i> , pp. 641-646. |                          |
| Bernotat, Jasmin (CITEC, Bielefeld Univ), Eyssel, Friederike (Bielefeld Univ)  |                          |

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| 10:00-10:15   | We1B.5 |
| <i>Study of Emotion Rendering Design for Humanoid Robots Compiled with Real-Time Music Mood Perception</i> , pp. 647-652. |        |
| Cheng, Stone (National Chiao Tung Univ)   |        |

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| 10:15-10:30  | We1B.6 |
| <i>Emotion Classification Using Linear Predictive Features on Wavelet-Decomposed EEG Data</i> , pp. 653-657.     |        |
| Kraljević, Luka (FESB Univ. of Split), Russo, Mladen (FESB Univ. of Split), Sikora, Marjan (FESB Univ. of Split) |        |

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| <b>We1C</b>                                  | Ajuda III  |
| <b>Robots in Education (Regular Session)</b> |  |
| Chair: Kwon, Dong-Soo                        | KAIST  |
| Co-Chair: Paiva, Ana                         | INESC-ID and Inst. Superior Técnico, Tech. of Lisbon |

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| 09:00-09:15  | We1C.1 |
| <i>Determining the Effect of Programming Language in Educational Robotic Activities</i> , pp. 658-663. |        |
| Angel-Fernandez, Julian M. (Vienna Univ. of Tech), Vincze, Markus (Vienna Univ. of Tech)               |        |

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| 09:15-09:30   | We1C.2 |
| <i>Wizard of Oz vs Autonomous: Children's Perception Changes According to Robot's Operation Condition</i> , pp. 664-669.  |        |
| Tozadore, Daniel Carnieto (Univ. of São Paulo), Pinto, Adam Henrique (Univ. De São Paulo), Romero, Roseli Ap. Francelin (Univ. De Sao Paulo), Trovato, Gabriele (Waseda Univ) |        |

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| 09:30-09:45  | We1C.3 |
| <i>Socially Assistive Child-Robot Interaction in Physical Exercise Coaching</i> , pp. 670-675. |        |
| Guneysu Ozgur, Arzu (EPFL), Arnrich, Bert (Bogazici Univ)                                      |        |

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| 09:45-10:00   | We1C.4 |
| <i>Personalised Self-Explanation by Robots: The Role of Goals versus Beliefs in Robot-Action Explanation for Children and Adults</i> , pp. 676-682. |        |
| Kaptein, Frank (TU Delft), broekens, joost (TU Delft), Hindriks, Koen (Delft Univ. of Tech), Neerincx, Mark (TNO)                                   |        |

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| 10:00-10:15  | We1C.5 |
| <i>Designing Telepresence Robots for K-12 Education</i> , pp. 683-688.   |        |
| Cha, Elizabeth (Univ. of Southern California), Chen, Samantha (Univ. of Southern California), Mataric, Maja (Univ. of Southern California) |        |

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| 10:15-10:30   | We1C.6 |
| <i>My Classroom Robot: Exploring Telepresence for K-12 Education in a Virtual Environment</i> , pp. 689-695.  |        |
| Cha, Elizabeth (Univ. of Southern California), Greczek, Jillian (Univ. of Southern California), Song, Ao (Univ. of Southern California), Mataric, Maja (Univ. of Southern California) |        |

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| <b>We1D</b>   | Belem I                      |
| <b>Creating Human-Robot Relationships (I) (Regular Session)</b>   |                              |
| Chair: Okita, Sandra  | Teachers Coll. Columbia Univ |
| Co-Chair: Gonçalves, Paulo  | Inst. Pol. De Castelo Branco |
| 09:00-09:15   | We1D.1                       |
| <i>Communicating Spatial Knowledge in Japanese for Interaction with Autonomous Robots</i> , pp. 696-703.          |                              |
| Cao, Lu (Saitama Univ), Fukuda, Hisato (Saitama Univ), Lam, Antony (Saitama Univ), Kuno, Yoshinori (Saitama Univ) |                              |

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| 09:15-09:30  | We1D.2 |
| <i>Design of a Robot That Is Capable of High Fiving with Humans</i> , pp. 704-711. |        |

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| Okamura, Erina (Univ. of Tsukuba), Tanaka, Fumihide (Univ. of Tsukuba)   |         |
| 09:30-09:45  | We1D.3  |
| <i>Readability of the Gaze and Expressions of a Robot Museum Visitor: Impact of the Low Level Sensory-Motor Control</i> , pp. 712-719.   |         |
| Moualla, Aliaa (CNRS, ENSEA, Cergy Pontoise Univ. ETIS Lab), Karaouzene, Ali (CNRS UMR 8051, ENSEA, Cergy-Pontoise Univ), Boucenna, Sofiane (CNRS - Cergy-Pontoise Univ), Vidal, Denis (IRD (Paris)), Gaussier, Philippe (CNRS UMR 8051, ENSEA, Cergy-Pontoise Univ)   |         |
| 09:45-10:00  | We1D.4  |
| <i>Keep on Dancing: Effects of Expressive Motion Mimicry</i> , pp. 720-727.  |         |
| Simmons, Reid (Carnegie Mellon Univ), Knight, Heather (Carnegie Mellon Univ)   |         |
| 10:00-10:15  | We1D.5  |
| <i>Hey Robot, Why Don't You Talk to Me?</i> , pp. 728-731.   |         |
| Ng, Hwei Geok (Univ. of Hamburg), Anton, Paul (Univ. of Hamburg), Brügger, Marc (Univ. of Hamburg), Churamani, Nikhil (Univ. of Hamburg), Fließwasser, Erik (Univ. of Hamburg), Hummel, Thomas (Univ. of Hamburg), Mayer, Julius (Univ. of Hamburg), Mustafa, Waleed (Univ. of Hamburg), Nguyen, Thi Linh Chi (Univ. of Hamburg), Nguyen, Quan (Univ. of Hamburg), Soli, Marcus (Univ. of Hamburg), Springenberg, Sebastian (Univ. of Hamburg), Griffiths, Sascha (Univ. Hamburg), Heinrich, Stefan (Univ. Hamburg), Navarro-Guerrero, Nicolás (Univ. of Hamburg), Strahl, Erik (Univ. Hamburg), Twiefel, Johannes (Univ. of Hamburg, Department of Informatics, Knowledge Tech), Weber, Cornelius (Knowledge Tech. Group, Univ. of Hamburg), Wermter, Stefan (Univ. of Hamburg) |         |
| 10:15-10:30  | We1D.6  |
| <i>A Communal Perspective on Shared Robots As Social Catalysts</i> , pp. 732-738.  |         |
| Joshi, Swapna (Indiana Univ. Bloomington), Sabanovic, Selma (Indiana Univ)   |         |
| <b>We1E</b>  | Ajuda I |
| <b>Virtual and Augmented Tele-Presence Environments</b> (Regular Session)  |         |
| Chair: Nakadai, Kazuhiro Honda Res. Inst. Japan Co., Ltd   |         |
| Co-Chair: NAKAMURA, Akio Tokyo Denki Univ  |         |
| 09:00-09:15  | We1E.1  |
| <i>A Mixed Reality for Virtual Assembly</i> , pp. 739-744.   |         |
| ZALDIVAR-COLADO, Ulises (Univ. of Versailles, France), GARBAYA, Samir (ENSAM), TAMAYO-SERRANO, Paul (Univ. De Versailles Saint-Quentin-En-Yvelines), Zaldivar-Colado, Xiomara (Univ. of Sinaloa), Blazevic, Pierre (Lab. D'ingénierie Des Systèmes De Versailles)  |         |
| 09:15-09:30  | We1E.2  |
| <i>Automatic Replication of Teleoperator Head Movements and Facial Expressions on a Humanoid Robot</i> , pp. 745-750.  |         |
| Ondras, Jan (Univ. of Cambridge), Celiktutan, Oya (Imperial Coll. London), Sariyanidi, Evangelos (Istanbul Tech. Univ), Gunes, Hatice (Univ. of Cambridge)   |         |
| 09:30-09:45  | We1E.3  |
| <i>Understanding Human-Robot Interaction in Virtual Reality</i> , pp. 751-757.   |         |
| Liu, Oliver Dayun (Univ. of Wisconsin - Madison), Rakita, Daniel (Http: //graphics.cs.wisc.edu/WP/), Mutlu, Bilge (Univ. of Wisconsin-Madison), Gleicher, Michael (Univ. of Wisconsin - Madison)   |         |
| 09:45-10:00  | We1E.4  |
| <i>A Fully Immersive VR-Based Haptic Feedback System for Size Measurement in Inspection Tasks Using 3D Point Clouds</i> , pp. 758-763.   |         |
| Loconsole, Claudio (Pol. Di Bari), Tattoli, Giacomo (Scuola  |         |

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| Superiore Sant'Anna), Bortone, Ilaria (TeCIP Inst. Scuola Superiore Sant'Anna), Tecchia, Franco (Scuola Superiore Sant' Anna), Leonardis, Daniele (Scuola Superiore Sant'Anna - TeCIP Inst), Frisoli, Antonio (TeCIP Inst. Scuola Superiore Sant'Anna) |          |
| 10:00-10:15  | We1E.5   |
| <i>Augmented Reality Dialog Interface for Multimodal Teleoperation</i> , pp. 764-771.  |          |
| Pereira, André (Disney Res), Carter, Elizabeth (The Walt Disney Company), Leite, Iolanda (KTH Royal Inst. of Tech), Mars, John (Disney Res), Lehman, Jill (Disney Res)   |          |
| 10:15-10:30  | We1E.6   |
| <i>Self-Reconfigurable Modular Robot Interface Using Virtual Reality: Arrangement of Furniture Made Out of Roombots Modules</i> , pp. 772-778.   |          |
| Nigolian, Valentin Zenon (EPFL), Mutlu, Mehmet (École Pol. Fédérale De Lausanne (EPFL)), Hauser, Simon (Biorob, EPFL), Bernardino, Alexandre (IST - Técnico Lisboa), Ijspeert, Auke (EPFL)   |          |
| <b>We2A</b>  | Belem II |
| <b>Human-Robot Interaction (II)</b> (Regular Session)  |          |
| Chair: Chong, Nak Young Japan Advanced Inst. of Sci. and Tech  |          |
| Co-Chair: Barakova, Emilia I. Eindhoven Univ. of Tech  |          |
| 11:00-11:15  | We2A.1   |
| <i>Decision-Theoretic Planning under Uncertainty for Multimodal Human-Robot Interaction</i> , pp. 779-784.   |          |
| Garcia, João A. (Inst. Superior Técnico - Inst. for Systems and Robotics), Lima, Pedro U. (Inst. Superior Técnico - Inst. for Systems and Robotics), Veiga, Tiago (Inst. Superior Técnico - Inst. for Systems and Robotics)                            |          |
| 11:15-11:30  | We2A.2   |
| <i>Crowd Sourcing 'Approach Behavior' Control Parameters for Human-Robot Interaction</i> , pp. 785-790.  |          |
| Ferland, François (ENSTA ParisTech), Tapus, Adriana (ENSTA-ParisTech)  |          |
| 11:30-11:45  | We2A.3   |
| <i>Learning Users' and Personality-Gender Preferences in Close Human-Robot Interaction</i> , pp. 791-798.  |          |
| Cruz-Maya, Arturo (ENSTA-ParisTech), Tapus, Adriana (ENSTA-ParisTech)  |          |
| 11:45-12:00  | We2A.4   |
| <i>Towards Reaction and Response Time Metrics for Real-World Human-Robot Interaction</i> , pp. 799-804.  |          |
| Adams, Julie (Oregon State Univ), Harriott, Caroline (Draper)  |          |
| 12:00-12:15  | We2A.5   |
| <i>Affective Facial Expressions Recognition for Human-Robot Interaction</i> , pp. 805-810.   |          |
| Faria, Diego (Aston Univ), Vieira, Mário (Inst. of Systems and Robotics, DEEC, Univ. of Coimbra), Faria, Fernanda da Cunha e Castro (Inst. of Systems and Robotics, Univ. of Coimbra), Premebida, Cristiano (Univ. of Coimbra)                         |          |
| 12:15-12:30  | We2A.6   |
| <i>Online Nod Detection in Human-Robot Interaction</i> , pp. 811-817.  |          |
| Wall, Eduard (Bielefeld Univ), Schillingmann, Lars (Bielefeld Univ), Kummert, Franz (Bielefeld Univ)   |          |
| <b>We2B</b>  | Ajuda II |
| <b>Collaboration in Manufacturing Environments</b> (Regular Session)   |          |
| Chair: Loconsole, Claudio Pol. Di Bari   |          |
| Co-Chair: Lorenz, Tamara Univ. of Cincinnati   |          |

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| 11:00-11:15   | We2B.1    |
| <i>Vibrotactile Feedback for Aiding Robot Kinesthetic Teaching of Manipulation Tasks</i> , pp. 818-823.   |           |
| Ruffaldi, Emanuele (Scuola Superiore Sant'Anna), Di Fava, Alessandro (Scuola Superiore Sant'Anna), Loconsole, Claudio (Pol. Di Bari), Frisoli, Antonio (TeCIP Inst. Scuola Superiore Sant'Anna), Avizzano, Carlo Alberto (Scuola Superiore Sant'Anna) |           |
| 11:15-11:30   | We2B.2    |
| <i>A User Study on Human-Robot-Interactive Recovery for Industrial Assembly Problems</i> , pp. 824-830.   |           |
| Muxfeldt, Arne (Tech. Univ. Braunschweig), Gopinathan, Sugeeth (Univ. of Bielefeld), Coenders, Thilo (Tech. Univ. Braunschweig), Steil, Jochen J. (Tech. Univ. Braunschweig)  |           |
| 11:30-11:45   | We2B.3    |
| <i>A User Study on Personalized Adaptive Stiffness Control Modes for Human-Robot Interaction</i> , pp. 831-837.   |           |
| Gopinathan, Sugeeth (Univ. of Bielefeld), Ötting, Sonja K. (Univ. of Bielefeld), Steil, Jochen J. (Tech. Univ. Braunschweig)  |           |
| 11:45-12:00   | We2B.4    |
| <i>Collision Detection, Localization and Classification for Industrial Robots with Joint Torque Sensors</i> , pp. 838-843.  |           |
| Popov, Dmitry (Innopolis Univ), Mavridis, Nikolaos (Interactive Robots and Media Lab), Klimchik, Alexandr (Innopolis Univ)  |           |
| 12:00-12:15   | We2B.5    |
| <i>Human-Centric Partitioning of the Environment</i> , pp. 844-850.   |           |
| Karaoguz, Hakan (Royal Inst. of Tech. KTH), Bore, Nils (KTH Royal Inst. of Tech), Folkesson, John (KTH), Jensfelt, Patric (KTH - Royal Inst. of Tech)   |           |
| 12:15-12:30   | We2B.6    |
| <i>An Integrated Approach for Industrial Robot Control and Programming Combining Haptic and Non-Haptic Gestures</i> , pp. 851-857.  |           |
| Hügler, Johannes (Fraunhofer IPK), Lambrecht, Jens (Berlin Inst. of Tech), Krüger, Jörg (Fraunhofer Inst. for Production Systems and DesignTechnology)  |           |
| <b>We2C</b>   | Ajuda III |
| <b>Detecting and Understanding Human Activity (I)</b> (Regular Session)   |           |
| Chair: Simmons, Reid Carnegie Mellon Univ   |           |
| Co-Chair: Filipposchi, Alessandro Scuola Superiore Sant'Anna  |           |
| 11:00-11:15   | We2C.1    |
| <i>Multi-Sensor Activity Recognition Using 2DPCA and K-Means Clustering Based on Dual-Measure Distance</i> , pp. 858-863.   |           |
| He, Hong (Shanghai Normal Univ), Huang, Jifeng (Shanghai Normal Univ), Zhang, Wuxiong (SIMIT, Chinese Acad. of Sciences)  |           |
| 11:15-11:30   | We2C.2    |
| <i>Ex-Amp Robot: Expressive Robotic Avatar with Multimodal Emotion Detection to Enhance Communication of Users with Motor Disabilities</i> , pp. 864-870.   |           |
| Kashii, Ai (Keio Univ), Takashio, Kazunori (Keio Univ), Tokuda, Hideyuki (Keio Univ)  |           |
| 11:30-11:45   | We2C.3    |
| <i>Automatic Detection of Human Interactions from RGB-D Data for Social Activity Classification</i> , pp. 871-876.  |           |
| Coppola, claudio (Univ. of Lincoln), Cosar, Serhan (Univ. of Lincoln), Faria, Diego (Aston Univ), Bellotto, Nicola (Univ. of Lincoln)   |           |
| 11:45-12:00   | We2C.4    |
| <i>Two Deep Approaches for ADL Recognition: A Multi-Scale LSTM and a CNN-LSTM with a 3D Matrix Skeleton</i>   |           |

*Representation*, pp. 877-882.

Ercolano, Giovanni (Univ. Degli Studi Di Napoli Federico II), Riccio, Daniel (Univ. Degli Studi Di Napoli Federico II), Rossi, Silvia (Univ. Di Napoli Federico II)

12:00-12:15 We2C.5

*Unsupervised Embrace Pose Recognition Using K-Means Clustering*, pp. 883-890.

Kleawsirikul, Nutnaree (Tokyo Inst. of Tech), Mitake, Hironori (Tokyo Inst. of Tech), Hasegawa, Shoichi (Tokyo Inst. of Tech)

12:15-12:30 We2C.6

*Classification of Gross Upper Limb Movements Using Upper Arm Electromyographic Features*, pp. 891-896.

Thacham Poyil, Azeemsha (Univ. of Hertfordshire), Amirabdollahian, Farshid (The Univ. of Hertfordshire), Steuber, Volker (Univ. of Hertfordshire)

**We2D** Belem I  
**Creating Human-Robot Relationships (II)** (Regular Session)

Chair: Jeon, Myoungsoon Michigan Tech. Univ

Co-Chair: Gunes, Hatice Univ. of Cambridge

11:00-11:15 We2D.1

*Keep on Moving! Exploring Anthropomorphic Effects of Motion During Idle Moments*, pp. 897-902.

asselborn, thibault (EPFL), JOHAL, Wafa (École Pol. Fédérale De Lausanne), Dillenbourg, Pierre (EPFL)

11:15-11:30 We2D.2

*Exploring Engagement with Robots among Persons with Neurodevelopmental Disorders*, pp. 903-909.

Beccalova, Eleonora Aida (Fraternità E Amicizia Cooperativa Sociale-ONLUS), Cerabolini, Roberto (Fraternità E Amicizia Cooperativa Sociale ONLUS), Garzotto, Franca (Pol. Di Milano), Gelsomini, Mirko (Pol. Di Milano, MIT Media Lab), monaco, francesco (Pol. Di Milano), Viola, Leonardo (Pol. Di Milano), Clasadonte, Francesco (Pol. Di Milano), Bonarini, Andrea (Pol. Di Milano), Iannelli, Vito Antonio (Fraternità E Amicizia Cooperativa Sociale Onlus)

11:30-11:45 We2D.3

*Estimation of Child's Personality for Child-Robot Interaction*, pp. 910-915.

Abe, Kasumi (The Univ. of Electro-Communications), Hamada, Yuki (Univ. of Electro - Communications), Nagai, Takayuki (Univ. of Electro-Communications), Shiomi, Masahiro (ATR), Omori, Takashi (Tamagawa Univ)

11:45-12:00 We2D.4

*Expectation Management in Child-Robot Interaction*, pp. 916-921.

Ligthart, Mike (Delft Univ. of Tech), Blanson Henkemans, Olivier Anne (TNO), Hindriks, Koen (Delft Univ. of Tech), Neerinx, Mark (TNO)

12:00-12:15 We2D.5

*The Role of Self-Disclosure in Human-Robot Interaction*, pp. 922-927.

Eyssel, Friederike (Bielefeld Univ), Wullenkord, Ricarda (CITEC, Bielefeld Univ), Nitsch, Verena (Univ. Der Bundeswehr München)

12:15-12:30 We2D.6

*Good Vibrations: How Consequential Sounds Affect Perception of Robotic Arms*, pp. 928-935.

Tennent, Hamish (Cornell Univ), Moore, Dylan (Stanford Univ), Jung, Malte (Cornell Univ), Ju, Wendy (Stanford Univ)

**We2E** Ajuda I  
**Novel Interfaces and Interaction Modalities** (Regular Session)

Chair: Hashimoto, Hiroshi Advanced Inst. of Industrial Tech

Co-Chair: Terada, Hidetsugu Univ. of Yamanashi

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| 11:00-11:15   | We2E.1      |
| <i>Hand in Air Tapping: A Wearable Input Technology to Type Wireless</i> , pp. 936-941.   |             |
| Meli, Leonardo (Univ. of Siena), Barcelli, Davide (Univ. of Siena), Lisini Baldi, Tommaso (Univ. of Siena), Prattichizzo, Domenico (Univ. Di Siena)   |             |
| 11:15-11:30   | We2E.2      |
| <i>How to Teach Your Robot in 5 Minutes: Applying UX Paradigms to Human-Robot-Interaction</i> , pp. 942-949.  |             |
| Kraft, Martin (Fortiss, An-Inst. Tech. Univ. München), Rickert, Markus (Fortiss, An-Inst. Tech. Univ. München)  |             |
| 11:30-11:45   | We2E.3      |
| <i>On the Recognition of Human Hand Touch from Robotic Skin Pressure Measurements Using Convolutional Neural Networks</i> , pp. 950-955.  |             |
| Denei, Simone (Univ. of Genova), Albini, Alessandro (Univ. of Genova), Cannata, Giorgio (Univ. of Genova)   |             |
| 11:45-12:00   | We2E.4      |
| <i>Tortoise and the Hare Robot: Slow and Steady Almost Wins the Race, but Finishes More Safely</i> , pp. 956-961.   |             |
| Rea, Daniel J. (Univ. of Manitoba), Rahmani Hanzaki, Mahdi (Sharif Univ. of Tech), Bruce, Neil (Univ. of Manitoba), Young, James Everett (Univ. of Manitoba)  |             |
| 12:00-12:15   | We2E.5      |
| <i>Monocle: Interactive Detail-In-Context Using Two Pan-And-Tilt Cameras to Improve Teleoperation Effectiveness</i> , pp. 962-967.  |             |
| Seo, Stela Hanbyeol (Univ. of Manitoba), Rea, Daniel J. (Univ. of Manitoba), Wiebe, Joel (Univ. of Manitoba), Young, James Everett (Univ. of Manitoba)  |             |
| 12:15-12:30   | We2E.6      |
| <i>Artificial Neural Networks Based Myoelectric Control System for Automatic Assistance in Hand Rehabilitation</i> , pp. 968-973.   |             |
| AMRANI, MOHAMED ZINE EL ABIDINE (USTHB), Daoudi, Abdelaghani (Usthb), Achour, Nouara (USTHB)  |             |
| <b>WePoster1</b>  | Ajuda I     |
| <b>Poster Session (Poster Session)</b>  |             |
| Chair: Benvenuto, Antonella Univ. Campus Bio-Medico Di Roma   |             |
| Co-Chair: Barreto, João P. Univ. of Coimbra   |             |
| 15:30-16:15   | WePoster1.1 |
| <i>Wearing Your Arm on Your Sleeve: Studying Usage Contexts for a Wearable Robotic Forearm</i> , pp. 974-980.   |             |
| Vatsal, Vighnesh (Cornell Univ), Hoffman, Guy (Cornell Univ)  |             |
| 15:30-16:15   | WePoster1.2 |
| <i>The Role of Security in Human-Robot Shared Environments: A Case Study in ROS-Based Surveillance Robots</i> , pp. 981-986.  |             |
| Portugal, David (Ingeniarius, Ltd), Pereira, Samuel (Ingeniarius, Ltd), Couceiro, Micael (Univ. of Coimbra)   |             |
| 15:30-16:15   | WePoster1.3 |
| <i>Evaluating the Usability and Users' Acceptance of a Kitchen Assistant Robot in Household Environment</i> , pp. 987-992.  |             |
| Pham, Thi Xuan Ngan (Hanover Univ. of Applied Sciences and Arts), Hayashi, Kotaro (Tokyo Univ. of Agriculture and Tech), Becker-Asano, Christian (Robert Bosch GmbH), Lacher, Sebastian (Bosch Corp. Japan), Mizuuchi, Ikuo (Tokyo Univ. of Agriculture and Tech) |             |
| 15:30-16:15   | WePoster1.4 |
| <i>Learning Generalizable Surface Cleaning Actions from Demonstration</i> , pp. 993-999.  |             |
| Elliott, Sarah (Univ. of Washington), Xu, Zhe (Yale Univ),  |             |

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| Cakmak, Maya (Univ. of Washington)  |              |
| 15:30-16:15   | WePoster1.5  |
| <i>Coordinating Flexible Human-Robot Teams by Local World State Observation</i> , pp. 1000-1005.  |              |
| Riedelbauch, Dominik (Univ. Bayreuth), Henrich, Dominik (Univ. of Bayreuth)   |              |
| 15:30-16:15   | WePoster1.6  |
| <i>Design and Evaluation of P300 Visual Brain-Computer Interface Speller in Cyrillic Characters</i> , pp. 1006-1011.  |              |
| ABIBULLAEV, BERDAKH (Nazarbayev Univ), Zhumadilova, Arailym (Nazarbayev Univ), Tokmurzina, Dana (Nazarbayev Univ), Akbay, KUDERBEKOV (Nazarbayev Univ)                        |              |
| 15:30-16:15   | WePoster1.7  |
| <i>Integrating Olfaction in a Robotic Telepresence Loop</i> , pp. 1012-1017.  |              |
| Monroy, Javier (Univ. of Málaga), Melendez-Fernandez, Francisco (Univ. of Malaga), Gongora, Andres (Univ. De Málaga), González-Jiménez, Javier (Univ. of Málaga)              |              |
| 15:30-16:15   | WePoster1.8  |
| <i>Multimodal Communication for Guiding a Person Following Robot</i> , pp. 1018-1023.   |              |
| Sarne-Fleischmann, Vardit (Ben-Gurion Univ. of the Negev), Honig, Shanee (Ben-Gurion Univ. of the Negev), Oron-Gilad, Tal (BGU), Edan, Yael (Ben-Gurion Univ. of the Negev)   |              |
| 15:30-16:15   | WePoster1.9  |
| <i>Deep Recurrent Q-Learning of Behavioral Intervention Delivery by a Robot from Demonstration Data</i> , pp. 1024-1029.  |              |
| Clark-Turner, Madison (Univ. of New Hampshire), Begum, Momotaz (Univ. of New Hampshire)   |              |
| 15:30-16:15   | WePoster1.10 |
| <i>Towards the Use of Consumer-Grade Electromyographic Armbands for Interactive, Artistic Robotics Performances</i> , pp. 1030-1036.  |              |
| Côté-Allard, Ulysse (Univ. Laval), St-Onge, David (Ec. Pol. De Montreal), Giguere, Philippe (Univ. Laval), Laviolette, François (Univ. Laval), Gosselin, Benoit (Univ. Laval) |              |
| 15:30-16:15   | WePoster1.11 |
| <i>Impact of Continuous Eye Contact of a Humanoid Robot on User Experience and Interactions with Professional User Background</i> , pp. 1037-1042.                            |              |
| Kühnlenz, Barbara (Coburg Univ. of Applied Sciences and Arts), Wang, Zhi Qiao (Coburg Univ), Kühnlenz, Kolja (Coburg Univ. of Applied Sciences and Arts)                      |              |
| 15:30-16:15   | WePoster1.12 |
| <i>Formation Control Using <math>GQ(\lambda)</math> Reinforcement Learning</i> , pp. 1043-1048.   |              |
| Knopp, Martin (Tech. Univ. München), Aykın, Can (Tech. Univ. München), Feldmaier, Johannes (Tech. Univ. München), Shen, Hao (Tech. Univ. München)                             |              |
| 15:30-16:15   | WePoster1.13 |
| <i>Reducing the Gap between Cognitive and Robotic Systems</i> , pp. 1049-1054.  |              |
| Azevedo, Helio (CTI - Renato Archer and USP - São Carlos), Romero, Roseli Ap. Francelin (Univ. De Sao Paulo), Ribeiro Belo, José Pedro (Univ. of São Paulo)                   |              |
| 15:30-16:15   | WePoster1.14 |
| <i>Developing Child-Robot Interaction Scenarios with a Humanoid Robot to Assist Children with Autism in Developing Visual Perspective Taking Skills</i> , pp. 1055-1060.      |              |
| Wood, Luke Jai (Univ. of Hertfordshire), Dautenhahn, Kerstin (Univ. of Hertfordshire), Robins, Ben (Univ. of Hertfordshire), Zarak, Abolfazl (Univ. of Hertfordshire)         |              |
| 15:30-16:15   | WePoster1.15 |
| <i>The Timing of Multimodal Robot Behaviors During Human-Robot Collaboration</i> , pp. 1061-1066.   |              |

Jensen, Lars Christian (Univ. of Southern Denmark), Fischer, Kerstin (Univ. of Southern Denmark), Suvei, Daniel (Univ. of Southern Denmark), Bodenhausen, Leon (Univ. of Southern Denmark)

15:30-16:15 WePoster1.16  
*H-RRT-C : Haptic Motion Planning with Contact*, pp. 1067-1072.  
 Blin, Nassime Michel (Laas-Cnrs, Lgp-Enit), Taix, Michel (LAAS-CNRS/Univ. Paul Sabatier), Fillatreau, Philippe (ENIT Tarbes), Fourquet, Jean-Yves (ENIT)

15:30-16:15 WePoster1.17  
*Studying Human Haptic Communication in a Realistic Setting - Challenges and Opportunities*, pp. N/A  
 Javaid, Maria (Jacksonville Univ)

15:30-16:15 WePoster1.18  
*Playing the Mirror Game with a Humanoid: Probing the Social Aspects of Switching Interaction Roles*, pp. 1078-1083.  
 Sicat, Shelly (Univ. of Calgary), Chopra, Shreya (Univ. of Calgary), Li, Nico (Univ. of Calgary), Sharlin, Ehud (Univ. of Calgary)

15:30-16:15 WePoster1.19  
*Gait Measurement by a Mobile Humanoid Robot As a Walking Trainer*, pp. 1084-1089.  
 Piezzo, Chiara (Univ. of Tsukuba), Leme, Bruno (Univ. of Tsukuba), Hirokawa, Masakazu (Univ. of Tsukuba), Suzuki, Kenji (Univ. of Tsukuba)

15:30-16:15 WePoster1.20  
*Trajectory Adaptation Method for Fast Walking Control of an Exoskeleton*, pp. 1090-1095.  
 Lee, Sang Hoon (ADD (Agency of Defense Development)), Seo, Changhoon (Agency for Defense Development), Choi, Byunghun (Agency for Defense Development), Kim, Byungun (Agency for Defense Development), Kim, Soohyun (KAIST(Korea Advanced Inst. of Science and Tech))

15:30-16:15 WePoster1.21  
*Above Knee Prosthesis for Ascending/descending Stairs with No External Energy Source*, pp. 1096-1101.  
 Fujino, Ryota (Tokai Univ), Kikuchi, Takayuki (Tokai Univ), Koganezawa, Koichi (Tokai Univ)

15:30-16:15 WePoster1.22  
*The Gap between Human's Attitude towards Robots in General and Human's Expectation of an Ideal Everyday Life Robot*, pp. 1102-1107.  
 Kuhnert, Barbara (Univ. of Freiburg), Ragni, Marco (Univ. of Freiburg), Lindner, Felix (Univ. of Freiburg)

15:30-16:15 WePoster1.23  
*Unintentional Entrainment Effect in a Context of Human Robot Interaction: An Experimental Study*, pp. 1108-1114.  
 Ansermin, Eva (CNRS, ENSEA, Univ. De Cergy Pontoise), Mostafaoui, Ghiles (CNRS, Univ. of CergyPontoise, ENSEA), Sargentini, Xavier (CNRS ENSEA Univ. De Cergy Pontoise), Gaussier, Philippe (CNRS UMR 8051, ENSEA, Cergy-Pontoise Univ)

15:30-16:15 WePoster1.24  
*Gesture Recognition for Humanoid Robot Teleoperation*, pp. 1115-1120.  
 Ajili, Insaf (IBISC)

15:30-16:15 WePoster1.25  
*Evaluation of a Robot Programming Framework for Non-Experts Using Symbolic Planning Representations*, pp. 1121-1126.  
 Liang, Ying Siu (Univ. Grenoble Alpes), Pellier, Damien (Lab. D'informatique De Grenoble - CNRS), Fiorino, Humbert (Univ. of Grenoble-Alps), Pesty, Sylvie (Univ. of Grenoble-Alps)

15:30-16:15 WePoster1.26  
*Evaluation of Deviation Detection and Isolation in Robot*

*Task Execution*, pp. 1127-1132.  
 Orendt, Eric M. (Univ. of Bayreuth), Henrich, Dominik (Univ. of Bayreuth)

15:30-16:15 WePoster1.27  
*Investigation of Joint Action: Eye Blinking Behavior Improving Human-Robot Collaboration*, pp. 1133-1139.  
 Hayashi, Kotaro (Tokyo Univ. of Agriculture and Tech), Mizuuchi, Ikuo (Tokyo Univ. of Agriculture and Tech)

15:30-16:15 WePoster1.28  
*Assessing the Social Criteria for Human-Robot Collaborative Navigation: A Comparison of Human-Aware Navigation Planners*, pp. 1140-1145.  
 Khambhaita, Harmish (Lab. D'analyse Et D'architecture Des Système, Univ), Alami, Rachid (CNRS)

15:30-16:15 WePoster1.29  
*Efficient Programming of Manipulation Tasks by Demonstration and Adaptation*, pp. 1146-1153.  
 Elliott, Sarah (Univ. of Washington), Toris, Russell (Fetch Robotics), Cakmak, Maya (Univ. of Washington)

15:30-16:15 WePoster1.30  
*Exploring Data Augmentation Methods in Reverberant Human-Robot Voice Communication*, pp. 1154-1158.  
 Gomez, Randy (Honda Res. Inst. Japan Co., Ltd), Nakamura, Keisuke (Honda Res. Inst. Japan Co., Ltd)

15:30-16:15 WePoster1.31  
*Development of Easily Wearable Assistive Device with Elastic Exoskeleton for Paralyzed Hand*, pp. 1159-1164.  
 Kawashimo, Josuke (Yokohama National Univ), Yamanoi, Yusuke (Yokohama National Univ), Kato, Ryu (Yokohama National Univ)

15:30-16:15 WePoster1.32  
*Spike Response Threshold Model for Task Allocation in Multi-Agent Systems*, pp. 1165-1168.  
 Lee, Wonki (Yonsei Univ)

15:30-16:15 WePoster1.33  
*A Long Time Ago in a Galaxy Far, Far Away...the Effects of Narration and Appearance on the Perception of Robots*, pp. 1169-1174.  
 Rosenthal-von der Pütten, Astrid Marieke (Univ. Duisburg-Essen), Straßmann, Carolin (Univ. of Duisburg-Essen), Mara, Martina (Ars Electronica Center)

**We3A** Belem I  
**Human-Centered Motion Planning and Navigation (I)** (Regular Session)

Chair: Shibata, Tomohiro Kyushu Inst. of Tech  
 Co-Chair: Crick, Christopher Oklahoma State Univ

16:15-16:30 We3A.1  
*A Framework for Interactive Teaching of Virtual Borders to Mobile Robots*, pp. 1175-1181.  
 Sprute, Dennis (Bielefeld Univ. of Applied Sciences), Rasch, Robin (Bielefeld Univ. of Applied Sciences), Tönnies, Klaus (Otto-Von-Guericke Univ. Magdeburg), König, Matthias (Bielefeld Univ. of Applied Sciences)

16:30-16:45 We3A.2  
*Socially Acceptable Robot Navigation Over Groups of People*, pp. 1182-1187.  
 Vega, Araceli (Univ. of Extremadura), Manso, Luis J. (Univ. of Extremadura), Bustos, Pablo (Univ. De Extremadura), Núñez Trujillo, Pedro (Univ. De Extremadura), Guimarães Macharet, Douglas (Univ. Federal De Minas Gerais)

16:45-17:00 We3A.3  
*Generating 3D Fundamental Map by Large-Scale SLAM and Graph-Based Optimization Focused on Road Center Line*, pp. 1188-1193.

Niijima, Shun (Tokyo Univ. of Science, National Inst. of Advanced Indu), Nitta, Jirou (Tokyo Univ. of Science), Sasaki, Yoko (National Inst. of Advanced Industrial Science and Tech), Mizoguchi, Hiroshi (Tokyo Univ. of Science)

17:00-17:15 We3A.4

*Progressive Stochastic Motion Planning for Human-Robot Interaction*, pp. 1194-1201.

Oguz, Ozgur Salih (Tech. Univ. of Munich), Sari, Omer Can (Tech. Univ. Muenchen), Hoang Dinh, Khoi (Tech. Univ. München), Wollherr, Dirk (Tech. Univ. München)

17:15-17:30 We3A.5

*Climbing Over Large Obstacles with a Humanoid Robot Via Multi-Contact Motion Planning*, pp. 1202-1209.

Kanajar, Pavan (Istituto Italiano Di Tecnologia), Caldwell, Darwin G. (Istituto Italiano Di Tecnologia), Kormushev, Petar (Imperial Coll. London)

**We3B** Ajuda II  
**Human-Assistive Technologies in the "Real World"** (Special Session)

Chair: Chugo, Daisuke Kwansei Gakuin Univ

Co-Chair: Yokota, Sho Toyo Univ

Organizer: Chugo, Daisuke Kwansei Gakuin Univ

Organizer: Yokota, Sho Toyo Univ

Organizer: Makino, Koji Univ. of Yamanashi

Organizer: Hashimoto, Hiroshi Advanced Inst. of Industrial Tech

16:15-16:30 We3B.1

*Development of a Concavo-Convex Non-Woven Cloth to Reduce Shock to Fruit (I)*, pp. 1210-1215.

Makino, Koji (Univ. of Yamanashi), Ishida, Kazuyoshi (Univ. of Yamanashi), Watanabe, Hiromi (Univ. of Yamanashi), SUZUKI, Yutaka (Univ. of Yamanashi), Kotani, Shinji (Univ. of Yamanashi), Terada, Hidetsugu (Univ. of Yamanashi)

16:30-16:45 We3B.2

*Pattern Based Standing Assistance Adapted to Individual Subjects on a Robotic Walker (I)*, pp. 1216-1221.

Chugo, Daisuke (Kwansei Gakuin Univ), Kawazoe, Shohei (Kwansei Gakuin Univ), Yokota, Sho (Toyo Univ), Hashimoto, Hiroshi (Advanced Inst. of Industrial Tech), Katayama, Takahiro (RT.WORKS), Mizuta, Yasuhide (RT.WORKS), Koujina, Atsushi (RT.WORKS)

16:45-17:00 We3B.3

*Proposal of Non-Rotating Joint Drive Type High Output Power Assist Suit for Squat Lifting (I)*, pp. 1222-1227.

Mohri, Shun (Chuo Univ), Inose, Hiroki (Chuo Univ), Arakawa, Hirokazu (Chuo Univ), yokoyama, kazuya (Nabtesco Corp), Yamada, Yasuyuki (Chuo Univ), Kikutani, Isao (Nabtesco Corp), Nakamura, Taro (Chuo Univ)

17:00-17:15 We3B.4

*Liquid Feeding System Using Cooperative Towing by Multiple Drones (I)*, pp. 1228-1233.

Suzuki, Masaya (Toyo Univ), Yokota, Sho (Toyo Univ), Imadu, Atsushi (Osaka City Univ), Matsumoto, Akihiro (Toyo Univ), Chugo, Daisuke (Kwansei Gakuin Univ), Hashimoto, Hiroshi (Advanced Inst. of Industrial Tech)

17:15-17:30 We3B.5

*Basic Study on Appearance-Based Proficiency Evaluation of the Football Inside Kick (I)*, pp. 1234-1239.

Kobayashi, Naomichi (Tokyo Denki Univ), Sato, Shin'ichi (Tokyo Denki Univ), Matsuzaki, Yuta (Tokyo Denki Univ), NAKAMURA, Akio (Tokyo Denki Univ)

**We3C** Ajuda III  
**Social and Affective Robots** (Special Session)

Chair: Lee, Jaeryoung Chubu Univ

Co-Chair: Barakova, Emilia I. Eindhoven Univ. of Tech

Organizer: Lee, Jaeryoung Chubu Univ

Organizer: Rudovic, Ognjen MIT Media Lab

Organizer: Picard, Rosalind MIT Media Lab

16:15-16:30 We3C.1

*User Experience of Conveying Emotions by Touch (I)*, pp. 1240-1247.

Alenljung, Beatrice (Univ. of Skövde), Andreasson, Rebecca (Uppsala Univ), Billing, Erik Alexander (Univ. of Skövde), Lindblom, Jessica (Univ. of Skövde), Lowe, Robert (Univ. of Skövde)

16:30-16:45 We3C.2

*Electrodermal Activity: Explorations in the Psychophysiology of Engagement with Social Robots in Dementia (I)*, pp. 1248-1254.

Perugia, Giulia (Eindhoven Univ. of Tech), Rodríguez-Martín, Daniel (CETpD-UPC), Díaz-Boladeras, Marta (Res. Center for Dependency Care and Autonomous Living, UPC), Català, Andreu (Univ. Pol. De Catalunya), Barakova, Emilia I. (Eindhoven Univ. of Tech), Rauterberg, Matthias (Eindhoven Univ. of Tech)

16:45-17:00 We3C.3

*Method and Improvisation: Theatre Arts Performance Techniques to Further HRI in Social and Affective Robots (I)*, pp. 1255-1260.

Greer, Julienne (Univ. of Texas at Arlington)

17:00-17:15 We3C.4

*A Pre-Investigation for Social Robotics for Older Adults Based on User Expectations (I)*, pp. 1261-1266.

Ho, YiHsin (Tokyo Metropolitan Univ), Sato-Shimokawara, Eri (Tokyo Metropolitan Univ), Yamaguchi, Toru (Tokyo Metropolitan Univ), Tagawa, Norio (Tokyo Metropolitan Univ)

17:15-17:30 We3C.5

*The Effects of the Robot's Information Delivery Types on Users' Perception Toward the Robot (I)*, pp. 1267-1272.

Kang, Dahyun (Ewha Womans Univ), Kim, Min-Gyu (Korea Inst. of Robot and Convergence), Kwak, Sonya Sona (Ewha Womans Univ)

**We3D** Belem II  
**Cloud Technologies: Empowering Robots to Connect Society** (Special Session)

Chair: Luis, Santos Univ. of Coimbra

Co-Chair: Sgorbissa, Antonio Univ. of Genova

Organizer: Samaras, George Univ. of Cyprus

Organizer: Andreou, Panayiotis Univ. of Central Lancashire, Cyprus

Organizer: Luis, Santos Univ. of Coimbra

16:15-16:30 We3D.1

*Learning through Sharing and Distributing Knowledge with Application to Object Recognition and Information Retrieval (I)*, pp. 1273-1278.

Mignon, Alexis (ProbaYes), Le Hy, Ronan (ProbaYes), Bronisz, Alban (ProbaYes), Mekhnacha, Kamel (Probayes), Luis, Santos (Univ. of Coimbra)

16:30-16:45 We3D.2

*BUM: Bayesian User Model for Distributed Social Robots (I)*, pp. 1279-1284.

Martins, Gonçalo S. (Univ. of Coimbra), Luis, Santos (Univ. of Coimbra), Dias, Jorge (Univ. of Coimbra)

16:45-17:00 We3D.3

*Speaking Robots: The Challenges of Acceptance by the Ageing Society (I)*, pp. 1285-1290.

Oliveira, José (Univ. of Coimbra), Martins, Gonçalo S. (Univ. of Coimbra), Jegundo, Ana (Cáritas Diocesana De Coimbra), Dantas, Carina (Cáritas Diocesana De Coimbra), Wings, Cindy (Zuyderland, Sittard-Geleen, Netherlands), Luis, Santos (Univ. of Coimbra), Dias, Jorge (Univ. of Coimbra), Perdigão, Fernando (Univ. of Coimbra)

17:00-17:15 We3D.4

*Interoperability in Cloud Robotics - Developing and Matching Knowledge Information Models for Heterogenous Multi-Robot (I)*, pp. 1291-1296.

Quintas, João (Inst. Pedro Nunes), Menezes, Paulo (Inst. of Systems and Robotics), Dias, Jorge (Univ. of Coimbra)

17:15-17:30 We3D.5

*A Cloud-Based Scene Recognition Framework for In-Home Assistive Robots (I)*, pp. 1297-1304.

Menicatti, Roberto (Univ. Di Genova), Sgorbissa, Antonio (Univ. of Genova)

## Technical Program for Thursday August 31, 2017

**Th1A** Ajuda I  
**Machine Learning and Adaptation** (Regular Session)

Chair: Becker-Asano, Robert Bosch GmbH  
Christian

Co-Chair: Madokoro, Akita Prefectural Univ  
Hirokazu

09:00-09:15 Th1A.1

*Adaptive Time Scaling to Guarantee Temporal Constraints Based on Motion Significance*, pp. 1305-1310.

Cho, Nam Jun (Hanyang Univ), Lee, Sang Hyoung (Korea Inst. of Industrial Tech), Suh, Il Hong (Hanyang Univ), Kim, Hong-Seok (Korea Inst. of Industrial Tech)

09:15-09:30 Th1A.2

*Learning Robot Tactile Sensing of Object for Shape Recognition Using Multi-Fingered Robot Hands*, pp. 1311-1316.

Lee, Wen-Ying (National Taiwan Univ), Huang, Ming-Bao (National Taiwan Univ), Huang, Han-Pang (National Taiwan Univ)

09:30-09:45 Th1A.3

*Non-Parametric Spatial Context Structure Learning for Autonomous Understanding of Human Environments*, pp. 1317-1324.

Thippur, Akshaya (KTH Royal Inst. of Tech), Stork, Johannes Andreas (KTH Royal Inst. of Tech), Jensfelt, Patric (KTH - Royal Inst. of Tech)

09:45-10:00 Th1A.4

*Exploring Embodiment and Dueling Bandit Learning for Preference Adaptation in Human-Robot Interaction*, pp. 1325-1331.

Schneider, Sebastian (Bielefeld Univ), Kummert, Franz (Bielefeld Univ)

10:00-10:15 Th1A.5

*Context Based Semantic Scene Classification and Recognition Used for a Vision-Based Mobile Robot*, pp. 1332-1337.

Madokoro, Hirokazu (Akita Prefectural Univ), Kazuhito, Sato (Akita Prefectural Univ), Nakasho, Kazuhisa (Akita Prefectural Univ), Shimoi, Nobuhiro (Akita Prefectural Univ)

10:15-10:30 Th1A.6

*Impact of Embodied Training on Object Recognition*, pp. 1338-1343.

Narayanan, Priya (Army Res. Lab. (ARL)), Bugajska, Magdalena (Naval Res. Lab.), Lawson, Wallace (US Naval Res. Lab.), Trafton, Greg (Naval Res. Lab)

**Th1B** Belem I  
**Human-Centered Motion Planning and Navigation (II)** (Regular Session)

Chair: Spalanzani, Anne INRIA / Univ. Grenoble Alpes  
Co-Chair: Lobo, Jorge Inst. of Systems and Robotics

09:00-09:15 Th1B.1

*An Intelligent Design Interface for Dancers to Teach Robots*, pp. 1344-1350.

Knight, Heather (Carnegie Mellon Univ), Simmons, Reid (Carnegie Mellon Univ)

09:15-09:30 Th1B.2

*First Steps towards Emotionally Expressive Motion Control for Wheeled Robots*, pp. 1351-1356.

Mueller, Steffen (Ilmenau Univ. of Tech), Trinh, Thanh Quang (Ilmenau Univ. of Tech), Gross, Horst-Michael (Ilmenau Univ. of Tech)

09:30-09:45 Th1B.3

*Evaluating Critical Points in Trajectories*, pp. 1357-1364.

Li, Shen (Carnegie Mellon Univ), Scalise, Rosario (Carnegie Mellon Univ), Admoni, Henny (Carnegie Mellon Univ), Srinivasa, Siddhartha (Carnegie Mellon Univ), Rosenthal, Stephanie (Carnegie Mellon Univ)

09:45-10:00 Th1B.4

*Collision-Free Navigation of Multiple Unicycle Mobile Robots*, pp. 1365-1372.

TANVEER, MUHAMMAD HASSAN (Univ. OF GENOVA), Sgorbissa, Antonio (Univ. of Genova), Recchiuto, Carmine Tommaso (Univ. of Genova)

10:00-10:15 Th1B.5

*Formation Control for Different Maker Drones from a Game Pad*, pp. 1373-1378.

Yaguchi, Yuichi (The Univ. of Aizu), Nitta, Yoshiaki (Univ. of Aizu), Ishizaka, Satoshi (Univ. of Aizu), Tannai, Tomohiro (East-Japan Accounting Center Co. Ltd.), Nakano, Shuzo (East-Japan Accounting Center Co. Ltd.), Mamiya, Takaaki (Univ. of Aizu), Naruse, Keitaro (Univ. of Aizu)

**Th1C** Ajuda II  
**Human Centered Robot Design** (Regular Session)

Chair: Dias, Jorge Univ. of Coimbra  
Co-Chair: Hirokawa, Univ. of Tsukuba  
Masakazu

09:00-09:15 Th1C.1

*MINERIC Toolkit: Measuring Instruments to Evaluate Robustness and Intuitiveness of Robot Programming Concepts*, pp. 1379-1386.

Orendt, Eric M. (Univ. of Bayreuth), Fichtner, Myriel (Univ. of Bayreuth), Henrich, Dominik (Univ. of Bayreuth)

09:15-09:30 Th1C.2

*Neut: Design and Evaluation of Speaker Designation Behaviors for Communication Support Robot to Encourage Conversations*, pp. 1387-1393.

Ohshima, Naoki (Tokyo Denki Univ), Fujimori, Ryo (Tokyo Denki Univ), Tokunaga, Hiroko (Tokyo Denki Univ), Kaneko, Hiroshi (Tokyo Denki Univ), Mukawa, Naoki (Tokyo Denki Univ)

09:30-09:45 Th1C.3

*Flexure Design of a Compliant Modular Hyper-Redundant Manipulator*, pp. 1394-1399.

Chanthasopeephan, Teeranoot (King Mongkut's Univ. of Tech. Thonburi)

09:45-10:00 Th1C.4

*SHIN-TAI: A Method for Controlling Characteristics of a Humanoid Robot's Body Using Artificial Muscles and Fats*, pp. 1400-1405.

Takahashi, Nobuhiro (The Univ. of Electro-Communications), Koike, Hideki (Tokyo Inst. of Tech)

10:00-10:15 Th1C.5

*A New Approach to Improve the Parameter Estimation Accuracy in Robotic Manipulators Using a Multi-Objective Output Error Identification Technique*, pp. 1406-1411.

West, Craig (Lancaster Univ), Montazeri, Allahyar (Lancaster Univ), Stephen, Monk (Lancaster Univ), Duda, Dobromil (Lancaster Univ), Taylor, C. James (Lancaster Univ)

10:15-10:30 Th1C.6

*Development of Multi Joint Gripper and Its Dexterous Grasping*, pp. 1412-1417.

Nomura, Soichiro (Tokai Univ), Tamamoto, Takumi (Tokai Univ), Takeuchi, Keita (Tokai Univ), Koganezawa, Koichi (Tokai Univ)

**Th1D** Belem II  
**Ethical Issues in Human-Robot Interaction** (Regular Session)

Chair: Ben Allouch, Somaya Saxion Univ

Co-Chair: Strait, Megan The Univ. of Texas Rio Grande Valley

09:00-09:15 Th1D.1

*The Public's Perception of Humanlike Robots: Online Social Commentary Reflects an Appearance-Based Uncanny Valley, a General Fear of a "Technology Takeover", and the Unabashed Sexualization of Female-Gendered Robots*, pp. 1418-1423.

Strait, Megan (The Univ. of Texas Rio Grande Valley), Aguillon, Cynthia (The Univ. of Texas Rio Grande Valley), Contreras, Virginia (The Univ. of Texas Rio Grande Valley), Garcia, Noemi (The Univ. of Texas Rio Grande Valley)

09:15-09:30 Th1D.2

*Improving Robot Transparency: Real-Time Visualisation of Robot AI Substantially Improves Understanding in Naive Observers*, pp. 1424-1431.

Wortham, Robert Hale (Univ. of Bath), Theodorou, Andreas (Univ. of Bath), Bryson, Joanna (Univ. of Bath)

09:30-09:45 Th1D.3

*Teammates First: Favoring Ingroup Robots Over Outgroup Humans*, pp. 1432-1437.

Fraune, Marlena (Indiana Univ), Sabanovic, Selma (Indiana Univ), Smith, Eliot (Indiana Univ)

09:45-10:00 Th1D.4

*Do Moral Robots Always Fail? Investigating Human Attitudes towards Ethical Decisions of Automated Systems*, pp. 1438-1444.

Wintersberger, Philipp (Ingolstadt Univ. of Applied Sciences), Frison, Anna Katharina (Univ. of Applied Science Ingolstadt (THI)), Riener, Andreas (Univ. of Applied Sciences Ingolstadt), Thakkar, Shailie (Independent Res)

10:00-10:15 Th1D.5

*Discussions about Lying with an Ethical Reasoning Robot*, pp. 1445-1450.

Lindner, Felix (Univ. of Freiburg), Wächter, Laura (Albert-Ludwigs-Univ. Freiburg), Bentzen, Martin Mose (Tech. Univ. of Denmark)

10:15-10:30 Th1D.6

*A Focus Group Study of Privacy Concerns about Telepresence Robots*, pp. 1451-1458.

Krupp, Margaret (Indiana Univ), Rueben, Matthew (Oregon State Univ), Grimm, Cindy (Oregon State Univ), Smart, William (Oregon State Univ)

**Th1E** Ajuda III

**Detecting and Understanding Human Activity (II)** (Regular Session)

Chair: Faria, Diego Aston Univ

Co-Chair: Rossi, Silvia Univ. Di Napoli Federico II

09:00-09:15 Th1E.1

*Hand Motion Recognition Using a Distance Sensor Array*, pp. 1459-1464.

Cho, Sung-Gwi (Nara Inst. of Science and Tech), Yoshikawa, Masahiro (Osaka Inst. of Tech), Ding, Ming (Nara Inst. of Science and Tech), Takamatsu, Jun (Nara Inst. of Science and Tech), Ogasawara, Tsukasa (Nara Inst. of Science and Tech)

09:15-09:30 Th1E.2

*Representing Motion Information from Event-Based Cameras*, pp. 1465-1470.

Sullivan, Keith (Naval Res. Lab), Lawson, Wallace (US Naval Res. Lab)

09:30-09:45 Th1E.3

*Functional Imitation Task in the Context of Robot-Assisted Autism Spectrum Disorder Diagnostics: Preliminary Investigations*, pp. 1471-1478.

Petric, Frano (Univ. of Zagreb), Miklic, Damjan (Univ. of Zagreb), Cepanec, Maja (Univ. of Zagreb), Cvitanović, Petra (Univ. of Zagreb), Kovacic, Zdenko (Univ. of Zagreb)

09:45-10:00 Th1E.4

*Skin Vibration and Contact Force in Active Perception for Roughness Ratings*, pp. 1479-1484.

Natsume, Makiko (Nagoya Inst. of Tech), Tanaka, Yoshihiro (Nagoya Inst. of Tech), Bergmann Tiest, Wouter (Hogeschool Rotterdam), Kappers, Astrid M.L. (Faculty of Human Movements Sciences, VU Univ. Amsterdam)

10:00-10:15 Th1E.5

*Analysis of Upper Extremity Motion During Trip-Induced Falls*, pp. 1485-1490.

Abdolshah, Saeed (Nagoya Univ), Akiyama, Yasuhiro (Nagoya Univ), Mitsuka, Kento (Nagoya Univ), Yamada, Yoji (Nagoya Univ), Okamoto, Shogo (Nagoya Univ)

10:15-10:30 Th1E.6

*IRON-BAG: Fast Classification of Humans and Objects in 3D NDT-Maps Using Structural Signatures*, pp. 1491-1497.

Schmiedel, Thomas (Ilmenau Univ. of Tech), Gross, Horst-Michael (Ilmenau Univ. of Tech)

## Technical Program for Friday September 1, 2017

**FW2** Lusitano II

**Agent Transparency for Human-Autonomy Teaming Effectiveness** (Workshop or Tutorial Session)

09:00-17:30 FW2.1

*Agent Transparency for Human-Autonomy Teaming Effectiveness\**. N/A

Chen, Jessie (US Army Res. Lab.)

**FW7** Ajuda III

**NISR-TG@RO-MAN2017, Workshop of the Natural Interaction with Social Robots Topic Group of Eurobotics** (Workshop or Tutorial Session)

09:00-17:30 FW7.1

*Workshop of the Natural Interaction with Social Robots Topic Group of Eurobotics\**. N/A

Chetouani, Mohamed (Univ. Pierre et Marie Curie), Charisi, Vicky (Univ. of Twente), Evers, Vanessa (Univ. of Twente)



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| <b>FW8</b>  | Belem I |
| <b>The Mutual Shaping of Human-Robot Interaction</b> (Workshop or Tutorial Session) |         |
| 09:00-17:30   | FW8.1   |

*The Mutual Shaping of Human-Robot Interaction: Towards a Roadmap of (Non)Usage of Human-Robot Interaction\**. N/A

Ben Allouch, Somaya (Saxion Univ.), de Graaf, Maartje (Brown Univ.), Eyssel, Friederike (Bielefeld Univ.), Sabanovic, Selma (Indiana Univ.)

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| <b>FW10</b>  | Ajuda I |
| <b>The Barriers of Social Robotics Take-Up by Society</b> (Workshop or Tutorial Session) |         |
| 09:00-17:30  | FW10.1  |

*The Barriers of Social Robotics Take-Up by Society\**. N/A

Luis, Santos (Univ. of Coimbra), Hanke, Sten (AIT Austrian Inst. of Tech. GmbH)

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| <b>FW3</b>   | Ajuda III |
| <b>CARobots: Automated Driving Systems As Robots on Four Wheels</b> (Workshop or Tutorial Session) |           |
| 09:00-12:20  | FW3.1     |

*CARobots: Automated Driving Systems As Robots on Four Wheels\**. N/A

Riener, Andreas (Univ. of Applied Sciences Ingolstadt), Meschtscherjakov, Alexander (Univ. Salzburg), Mirnig, Alexander (Univ. Salzburg), Giuliani, Manuel (Univ. of Salzburg), Tscheligi, Manfred (Univ. of Salzburg), Jeon, Myounghoon (Michigan Tech. Univ.), Zheng, Zhi (Vanderbilt Univ.), Park, Chung Hyuk (George Washington Univ.)

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| <b>FW5</b>  | Alter Real |
| <b>User Experience and Communication in Interactive Robotic Systems: Ideas, Experiences and Case Studies</b> (Workshop or Tutorial Session) |            |
| 09:00-12:20   | FW5.1      |

*User Experience and Communication in Interactive Robotic Systems: Ideas, Experiences and Case Studies\**. N/A

de la Puente, Paloma (Vienna Univ. of Tech.), Brunete, Alberto (Univ. Pol. de Madrid), Vincze, Markus (Vienna Univ. of Tech.)

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| <b>FW1</b>   | Paso  |
| <b>Autonomous Robot Ontology Workshop (AROW 2017)</b> (Workshop or Tutorial Session) |       |
| 09:00-12:20  | FW1.1 |

*Autonomous Robot Ontology Workshop (AROW 2017)\**. N/A

Gonçalves, Paulo (Inst. Pol. de Castelo Branco), Fiorini, Sandro (Univ. Paris-Est Creteil), Li, Howard (Univ. of New Brunswick), Olszewska, Joanna Isabelle (Univ. of Gloucestershire, United Kingdom), Chibani, Abdelghani (Lissi Lab Paris EST Univ.)

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| <b>FW6</b>   | Belem II |
| <b>Human-Robot Collaboration for an Improved Quality of Work - Scientific Knowledge, Challenges and ISO-Standards</b> (Workshop or Tutorial Session) |          |
| 09:00-12:20  | FW6.1    |

*Human-Robot Collaboration for an Improved Quality of Work\**. N/A

Bdiwi, Mohamad (Fraunhofer Inst. for Machine Tools and Forming Tech. IWU), Delang, Kathleen (Fraunhofer Inst. for machine tools and forming Tech.), Pellegrinelli, Stefania (National Res. Council of Italy, Inst. of Industrial Tech. and Automation), Fritz, Gerald (PROFACTOR GmbH), Orlandini, Andrea (National Res. Council of Italy), KOUSI, NIKI (Lab. for Manufacturing Systems and Automation)

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| <b>FWA3</b>   | Ajuda III |
| <b>FW9 ARMADA'17: Artificial Perception, Machine Learning and Datasets for Human-Robot Interaction</b> (Workshop or Tutorial Session) |           |
| 14:00-17:30   | FWA3.1    |

*ARMADA'17: Artificial Perception, Machine Learning and Datasets for Human-Robot Interaction\**. N/A

Faria, Diego (Aston Univ.), Premebida, Cristiano (Univ. of Coimbra)

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| <b>FWA5</b>  | Alter Real |
| <b>FW4 HRI for Service Robots in RoboCup@Home</b> (Workshop or Tutorial Session) |            |
| 14:00-17:30  | FWA5.1     |

*HRI for Service Robots in RoboCup@Home\**. N/A

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