The 28th IEEE International Conference on Robot & Human Interactive Communication

Ro-Man 2019

14 – 18 Oct, 2019
Le Meridien, Windsor Place, New Delhi, India

Technical Program Schedule

15 Oct 2019 (Day 1)

8:30AM **Inauguration**

9:00-10:00 **Plenary Talk I On Human-Robot Joint Action by Rachid Alami, Laboratory for Analysis and Architecture of Systems (LAAS) - CNRS, FR**

Chair : Amit Kumar Pandey

10:00-10:30 **Tea Break**

10:30-12:00 **Parallel Session 1**

Cognitive Interaction Design **Regular Session 1**	Human Robot interaction **Regular Session 2**	Social Robots – I **Regular Session 3**	Tele-operation and Autonomous Robots **Regular Session 4**	Transparency and trust in Human Robot interaction **Special Session 1**

12:00-13:00 **Lunch Break**

13:00-14:30 **Parallel Session 2**

Robots in Education **Regular Session 5**	Human Centred Robot Design **Regular Session 6**	Social Robots – II **Regular Session 7**	Situation awareness and Spatial Cognition **Regular Session 8**	Social and Affective Robots **Special Session 2**

14:30-15:00 **Tea Break**

15:00-16:30 **Parallel Session 3**

Cognitive Skills and Metal Models **Regular Session 9**	HRI and Collaboration in Manufacturing Environment **Regular Session 10**	Social Robots – III **Regular Session 11**	Visual Perception and Autonomous Robots **Regular Session 12**	Social Human Robot Interaction of service Robots **Special Session 3**

16:30-17:30 Plenary Talk II Autonomous Driving: Simulation and Navigation by Dinesh Manocha, Department of Computer Science and Electrical & Computer Engineering, University of Maryland at College Park

Chair : Laxmidhar Behera

16 Oct 2019 (Day 2)

9:00-10:00 Plenary Talk III Intelligent Robotics for Quality Living for All by Marcelo H Ang Jr, National University of Singapore

Chair: John-John Cabibihan

10:00-10:30 Tea Break

10:30-12:00 Parallel Session 4

Machine Learning and Adaptation **Regular Session 13**	Imitation Learning **Regular Session 14**	Motion Planning Navigation & Control in Human Centred Environment **Regular Session 15**	Visual Perception and Autonomous Robots **Regular Session 16**	Robotics for Rehabilitation **Special Session 4**

12:00-13:00 Lunch Break

13:00-14:30 Parallel Session 5

Human Robot Collaboration and Cooperation **Regular Session 17**	Linguistic Communication and Dialogue **Regular Session 18**	Robot Companions **Regular Session 19**	Therapy and Rehabilitation **Regular Session 20**	Medical Robotics & Intelligent Control Systems in the Indian Context **Special Session 5**

14:30-15:00 Tea Break

15:00-17:00 Poster Session (55 Papers)

17:00-18:00 Panel Discussion on Responsible Robotics and AI for the Real World - Moderator Amit Kumar Pandey

19:00 Onwards Banquet Dinner and Award Ceremony

Special Session 1: Transparency and Trust in Human Robot Interaction
23, 161, 206, 71, 75, 99

Chair : Silvia Rossi, University of Naples Federico II
Co-Chair : Alessandra Rossi, University of Hertfordshire

23- Verbal Explanations for Deep Reinforcement Learning Neural Networks with Attention on Extracted Features

Wang Xinzhi	Tsinghua University,
Yuan Shengcheng	LazyComposer Inc., Beijing
Zhang Hui	Tsinghua University
Sycara Katia	Carnegie Mellon University
Lewis Mike	Univ of Pittsburgh

161 – Coherent and Incoherent Robot Emotional Behavior for Humorous and Engaging Recommendations

Rossi Silvia	University of Naples Federico II
Cimmino Teresa	University of Naples Federico II
Matarese Marco	University of Naples Federico II
Raiano, Mario	University of Naples Federico II

206 – Getting to Know Kaspar: Effects of People's Awareness of a Robot's Capabilities on Their Trust in the Robot

Rossi Alessandra	University of Hertfordshire
Moros Sílvia	University of Hertfordshire
Koay Kheng Lee	University of Hertfordshire
Walters Michael Leonard	University of Hertfordshire
Dautenhahn Kerstin	University of Waterloo

71 – Privacy First: Designing Responsible and Inclusive Social Robot Applications for in the Wild Studies

Tonkin Meg	University of Technology Sydney
Vitale Jonathan	University of Technology Sydney
Herse Sarita	University of Technology Sydney
Raza Syed Ali	University of Technology Sydney
Madhisetty Srinivas	University of Technology Sydney
Kang Le, Vu	University of Technology Sydney
Johnston Benjamin	University of Technology Sydney
Williams Mary-Anne	University of Technology Sydney

75 – Trust Repair in Human-Swarm Teams

Liu, Rui	Kent State University
Cai, Zekun	University of Pittsburgh
Lewis, Mike	Univ of Pittsburgh

Lyons, Joseph AFRL
Sycara, Katia Carnegie Mellon University

99 – You Are Doing so Great! the Effect of a Robots Interaction Style on Self-Efficacy in HRI

Zafari Setareh Vienna University of Technology
Schwaninger Isabel TU Wien
Hirschmanner Matthias TU Wien
Schmidbauer Christina Vienna University of Technology
Weiss Astrid Vienna University of Technology
Koeszegi Sabine Theresia Vienna University of Technology

Special Session 2: Social and Affective Robots
183, 210, 298, 41, 193, 271

Chair : Antonio Sgorbissa, University of Genova
Co-Chair : Lorenzo Cominelli, E. Piaggio Research Center

183 – Designing an Experimental and a Reference Robot to Test and Evaluate the Impact of Cultural Competence in Socially Assistive Robotics

Recchiuto Carmine TommasoUniversity of Genova
Papadopoulos Chris, University of Bedfordshire UK
Hill Tetiana, University of Bedfordshire UK
Castro Nina, Advinia Healthcare, UK
Bruno Barbara, University of Genova
Papadopoulos Irena, Middlesex University Higher Education Corporation
Sgorbissa Antonio, University of Genova

210 – Using Socially Expressive Mixed Reality Arms for Enhancing Low-Expressivity Robots

Groechel Thomas, Univeristy of Southern California
Shi Zhonghao, Univeristy of Southern California
Pakkar Roxanna, University of Southern California
Mataric Maja, University of Southern California

298 – Wearable Affective Robot That Detects Human Emotions from Brain Signals by Using Deep Multi-Spectrogram Convolutional Neural Networks (Deep MS-CNN)

Wang Ker-Jiun University of Pittsburgh
ZHENG Caroline YanRoyal College of Art

41 – The Influence of Emotions on Time Perception in a Cognitive System for Social Robotics

Cominelli, Lorenzo E. Piaggio Research Center
Garofalo, Roberto E. Piaggio Research Center
De Rossi, Danilo University of Pisa

193 – A Reinforcement-Learning Approach for Adaptive and Comfortable Assistive Robot Monitoring Behaviors
Raggioli, Luca University of Naples Federico II
Rossi, Silvia University of Naples Federico II

271 – Proposing Human-Robot Trust Assessment through Tracking Physical Apprehension Signals in Close-Proximity Human-Robot Collaboration
Hald, Kasper Aalborg University
Rehm, Matthias Aalborg University
Moeslund, Thomas B. Aalborg University

Special session 3: Social Human Robot Interaction of Service Robots
89, 269, 278, 303, 38, 182

Chair : Ho Seok Ahn, University of Auckland
Co-Chair : Minsu Jang, Electronics & Telecommunications Research Institute

89 – Human Interaction and Improving Knowledge through Collaborative Tour Guide Robots
Velentza, Anna Maria University of Birmingham, University of Macedonia
Heinke, Dietmar University of Birmingham
Wyatt, Jeremy University of Birmingham

269 – Identity, Gender, and Age Recognition Convergence System for Robot Environments
Jang, Jaeyoon ETRI

278 – Hospital Receptionist Robot V2: Design for Enhancing Verbal Interaction with Social Skills
Ahn, Ho Seok University of Auckland
Lim, Jong Yoon University of Auckland
Ahn, Byeong-Kyu Sungkyunkwan University
Johanson, Deborah University of Auckland
Hwang, Eui Jun University of Auckland
Lee, Min Ho University of Auckland
Broadbent, Elizabeth University of Auckland
MacDonald, Bruce University of Auckland

303 – Developing a Questionnaire to Evaluate Customers' Perception in the Smart City Robotic Challenge

Wang, Lun — Sapienza University of Rome
Iocchi, Luca — Sapienza University of Roma
Marrella, Andrea — Sapienza University of Rome
Nardi, Daniele — Sapienza University of Rome

38 – TeachMe: Three-phase learning framework for robotic motion imitation based on interactive teaching and reinforcement learning

Kim, Taewoo — University of Science and Technology
Lee, Joo-Haeng — ETRI

182 – Lindsey the Tour Guide Robot - Usage Patterns in a Museum Long-Term Deployment

Del Duchetto, Francesco — University of Lincoln
Baxter, Paul Edward — University of Lincoln
Hanheide, Marc — University of Lincoln

Special Session 4: Robotics for Rehabilitation
80, 116, 205, 166, 88, 112

Chair : Vineet Vashista, IIT Gandhinagar
Co-Chair : Laura Fiorini, Scuola Superiore Sant'Anna

80 – Preliminary Evaluation of a Closed-Loop Social Robot for Reading Comprehension Testing

Migovich, Miroslava — University of Tennessee
McCarthy, Jillian — University of Tennessee Health Science Center
Wade, Eric — University of Tennessee

116 – Evaluation of Physical Therapy through Analysis of Depth Images

Kramer, Ivanna — University of Koblenz-Landau
Memmesheimer, Raphael — University of Koblenz-Landau
Schmidt, Niko — University of Koblenz-landau
Paulus, Dietrich — University Koblenz-Landau

205 – Optimal Feature Selection for EMG-Based Finger Force Estimation Using LightGBM Model

Ye, Yuhang — South China University of Technology
Liu, Chao — LIRMM (UMR5506), CNRS, France
Zemiti, Nabil — LIRMM (UMR5506), CNRS, France
Yang, Chenguang — University of the West of England

166 – Learning Robot Policies Using a High-Level Abstraction Persona-Behaviour Simulator

Andriella, Antonio IRI, CSIC-UPC
Torras, Carme CSIC – UPC
Alenyà, Guillem CSIC-UPC

88 – Estimating the Effect of Robotic Intervention on Elbow Joint Motion

Ghonasgi, Keya The University of Texas at Austin
De Oliveira, Ana Christine The University of Texas at Austin
Shafer, Anna University of Texas at Austin
Rose, Chad University of Texas at Austin
Deshpande, Ashish University of Texas

112 – Development and Applicability of a Cable-driven Wearable Adaptive Rehabilitation Suit (WeARS)

Iyer, S. Srikesh IIT Gandhinagar
V Joseph, Joel Indian Institute of Technology Gandhinagar
Nakka, S S Sanjeevi Indian Institute of Technology Gandhinagar
Singh, Yogesh Indian Institute of Technology Gandhinagar
Vashista, Vineet Indian Institute of Technology Gandhinagar

Special Session 5: Medical Robotics and Intelligent Control Systems in the Indian Context

276, 301, 273, 295, 227, 235

Chair : Felix Orlando Maria Joseph, Indian Institute of Technology Roorkee

Co-Chair : Pyari Mohan Pradhan, IIT Roorkee

276 – Bondgraph Modelling for the Master-Slave Robotic Teleoperation System

Sarvesh Saini Indian Institute of Technology Roorkee
Pushparaj M. Pathak Indian Institute of Technology Roorkee
Maria Joseph, Felix Orlando Indian Institute of Technology Roorkee

301 – Simultaneously Concentrated PSWF-Based Synchrosqueezing S-Transform and Its Application to R Peak Detection in ECG Signal

Singh, Neha IIT Roorkee
Deora, Puneesh IIT Roorkee
Pradhan, PyariMohan IIT Roorkee

273 – Continuous Higher Order Sliding Mode Control of Bevel-Tip Needle for Percutaneous Interventions

Maria Joseph, Felix Orlando Indian Institute of Technology Roorkee

295 - Development of an Intelligent Cane for Visually Impaired Human Subjects

Maria Joseph, Felix Orlando Indian Institute of Technology Roorkee

227 – Intention Detection and Gait Recognition (IDGR) System for Gait Assessment: A Pilot Study

Singh, Yogesh	Indian Institute of Technology Gandhinagar
Kher, Manan	Institute of Technology, Nirma University
Vashista, Vineet	Indian Institute of Technology Gandhinagar

235 - Transferring Dexterous Surgical Skill Knowledge between Robots for Semi-Autonomous Teleoperation

Md Masudur Rahman,	Purdue University - West Lafayette
Natalia Sanchez-Tamayo,	Purdue University - West Lafayette
Glebys Gonzalez,	Purdue University - West Lafayette
Mridul Agarwal,	Purdue University - West Lafayette
Aggarwal Vaneet,	Purdue University - West Lafayette
Richard Voyles,	Purdue University - West Lafayette
Yexiang Xue,	Purdue University - West Lafayette
Juan Wachs	Purdue University - West Lafayette

Regular Session 1: Cognitive Interaction Design
64, 91, 172, 18, 239, 10

Chair : Laxmidhar Behera, IIT Kanpur
Co-Chair : Andrea Orlandini, National Research Council of Italy

64 – Learning Optimal Parameterized Policy for High Level Strategies in a Game Setting

Prakash, Ravi	Indian Institute of Technology, Kanpur
Vohra, Mohit	Indian Institute of Technology, Kanpur
Behera, Laxmidhar	IIT Kanpur

91 – Learning Context-Sensitive Strategies in Space Fortress

Agarwal, Akshat	Carnegie Mellon University
Hope, Ryan	Carnegie Mellon University
Sycara, Katia	Carnegie Mellon University

172 – Estimating Optimal Placement for a Robot in Social Group Interaction

Pathi, Sai Krishna	Örebro University
Kristofferson, Annica	Mälardalen University

Kiselev, Andrey	Orebro University
Loutfi, Amy	Örebro University

18 – ROS-TiPlEx: How to Make Experts in A.I. Planning and Robotics Talk Together and Be Happy

La Viola, Carlo	ISTC-CNR
Orlandini, Andrea	National Research Council of Italy
Umbrico, Alessandro	National Research Council of Italy
Cesta, Amedeo	CNR -- National Research Council of Italy, ISTC

239 – Robot with an Olfactory Display: Decorating its Movements by Smells

Senbonmatsu, Hikaru	University of Tsukuba
Tanaka, Fumihide	University of Tsukuba

10 – Learning Sequential Human-Robot Interaction Tasks from Demonstrations: The Role of Temporal Reasoning

Carpio Mazariegos, Estuardo Rene	University of New Hampshire
Clark-Turner, Madison	University of New Hampshire
Begum, Momotaz	University of New Hampshire

Regular Session 2: Human robot Interaction

26, 35, 45, 95, 180, 104

Chair : Bipin Indurkhya, Jagiellonian University
Co-Chair : Autumn Edwards, Western Michigan University

26 – Generation of Expressive Motions for a Tabletop Robot Interpolating from Hand-Made Animations

Mier, Gonzalo	Pablo de Olavide University
Caballero, Fernando	Universidad Pablo de Olavide
Nakamura, Keisuke	Honda Research Institute Japan Co., Ltd.
Merino, Luis	Universidad Pablo de Olavide
Gomez, Randy	Honda Research Institute Japan Co., Ltd.

35 – A Common Social Distance Scale for Robots and Humans

Banks, Jaime	Texas Tech University
Edwards, Autumn	Western Michigan University

45 – Transparent Robot Behavior Using Augmented Reality in Close Human-Robot Interaction

Bolano, Gabriele	FZI Forschungszentrum Informatik

Juelg, Christian FZI Forschungszentrum Informatik
Roennau, Arne FZI Forschungszentrum Informatik , Karlsruhe
Dillmann, Rüdiger FZI - Forschungszentrum Informatik - Karlsruhe

95 – Your Robot Is Watching: Using Surface Cues to Evaluate the Trustworthiness of Human Actions
Surendran, Vidullan Pennsylvania State University
Wagner, Alan Richard Penn State University

180 – Spatially Situated End-User Robot Programming in Augmented Reality
Kapinus, Michal Brno University of Technology
Beran, Vitezslav Brno University of Technology
Materna, Zdenek Brno University of Technology
Bambusek, Daniel Brno University of Technology

104 – Human-Robot Interaction through Fingertip Haptic Devices for Cooperative Manipulation Tasks
Musić, Selma Technische Universität München
Prattichizzo, Domenico University of Siena
Hirche, Sandra Technische Universität München

Regular Session 3: Social Robots I

36, 162, 44, 62, 73, 77

Chair : John-John Cabibihan, Qatar University
Co-Chair : Amol Deshmukh, University of Glasgow

36 – Social and Entertainment Gratifications of Videogame Play Comparing Robot, AI, and Human Partners
Bowman, Nick Texas Tech University
Banks, Jaime Texas Tech University

162 – Real-Time Gazed Object Identification with a Variable Point of View Using a Mobile Service Robot
Yuguchi Akishige Nara Institute of Science and Technology
Inoue Tomoaki Nara Institute of Science and Technology
Garcia Ricardez Gustavo Alfonso Nara Institute of Science and Technology
Ding Ming Nara Institute of Science and Technology
Takamatsu Jun Nara Institute of Science and Technology
Ogasawara Tsukasa Nara Institute of Science and Technology

44 – Shakespeare and Robots: Participatory Performance Art for Older Adults

Greer, Julienne	University of Texas at Arlington
Doelling, Kris	University of Texas at Arlington
Xu, Ling	University of Texas at Arlington
Fields, Noelle	University of Texas at Arlington

62 – Recognition of Aggressive Interactions of Children Toward Robotic Toys

Alhaddad, Ahmad Yaser	Qatar University
Cabibihan, John-John	Qatar University
Bonarini, Andrea	Politecnico di Milano

73 – The Power to Persuade: A Study of Social Power in Human-Robot Interaction

Hashemian, Mojgan	INESC-ID
Paiva, Ana	INESC-ID and Instituto Superior Técnico
Mascarenhas, Samuel	INESC-ID / Instituto Superior Técnico, University of Lisbon
Santos, Pedro A.	Instituto Superior Técnico
Prada, Rui	INESC ID, Instituto Superior Técnico, University of Lisbon

77 – Eyes on You: Field Study of Robot Vendor Using Human-Like Eye Component "Akagachi"

Hayashi, Kotaro	Toyohashi University of Technology
Toshimitsu, Yasunori	MIT

Regular Session 4: Tele-operation and Autonomous Robots
31, 60, 78, 94, 212, 55

Chair : Naomi Fitter, Oregon State University
Co-Chair : Tetsushi Ikeda, Hiroshima City University

31 – Haptic Directional Information for Spatial Exploration

Ghosh, Ayan	The University of Sheffield
Penders, Jacques	Sheffield Hallam University
Soranzo, Alessandro	Sheffield Hallam University

60 – User Interface Tradeoffs for Remote Deictic Gesturing

Fitter, Naomi T.	University of Southern California
Joung, Youngseok	University of Southern California
Hu, Zijian	University of Southern California
Demeter, Marton	University of Southern California
Mataric, Maja	University of Southern California

78 – Improving Robot Transparency: An Investigation with Mobile Augmented Reality

Rotsidis, Alexandros	University of Bath

Theodorou, Andreas	University of Bath
Bryson, Joanna	University of Bath
Wortham, Robert Hale	University of Bath

94 – Investigation of the Driver's Seat That Displays Future Vehicle Motion

Yuki Ishii	Hiroshima City University
Ikeda, Tetsushi	Hiroshima City University
Kobayashi, Toru	Hiroshima City University
Kato, Yumiko	St. Marianna University School of Medicine
Utsumi, Akira	ATR Intelligent Robotics and Communication Labs.
Nagasawa, Isamu	SUBARU Co., LTD.
Iwaki, Satoshi	Hiroshima City University

212 – Combining Electromyography and Fiducial Marker Based Tracking for Intuitive Telemanipulation with a Robot Arm Hand System

Dwivedi, Anany	University of Auckland
Gorjup, Gal	University of Auckland
Kwon, Yongje	University of Auckland
Liarokapis, Minas	University of Auckland

55 – Humanoid Co-Workers: How Is It Like to Work with a Robot?

Vishwanath, Ajay	Nanyang Technological University
Singh, Aalind	Institute for Media Innovation
Chua, Yi Han Victoria	Nanyang Technological University
Dauwels, Justin	Nanyang Technological University
Thalmann, Nadia Magnenat	Nanyang Technological University

Regular Session 5: Robots in Education

79, 159, 220, 257, 290, 297

Chair : Ben Robins, University of Hertfordshire
Co-Chair : Wafa Johal, Ecole Polytechnique Fédérale de Lausanne

79 – A Participatory Design Process of a Robotic Tutor of Assistive Sign Language for Children with Autism

Axelsson, Minja	Aalto University
Racca, Mattia	Aalto University
Weir, Daryl	Futurice Oy
Kyrki, Ville	Aalto University

159 – Robot Analytics: What Do Human-Robot Interaction Traces Tell Us about Learning?

Nasir, Jauwairia	Swiss Federal Institute of Technology in Lausanne (EPFL)

Norman, Utku	EPFL
Johal, Wafa	EPFL
Olsen, Jennifer	EPFL
Shahmoradi, Sina	EPFL
Dillenbourg, Pierre	EPFL

220 – Improv with Robots: Creativity, Inspiration, Co-Performance

Rond, Jesse	Oregon State University
Sanchez, Alan	Oregon State University
Berger, Jaden	Oregon State University
Knight, Heather	Oregon State University

257 – CoWriting Kazakh: Transitioning to a New Latin Script Using Social Robots

Kim, Anton	Nazarbayev University
Omarova, Meruyert	Nazarbayev University
Zhaksylyk, Adil	Nazarbayev University
Asselborn, Thibault	EPFL
Johal, Wafa	EPFL
Dillenbourg, Pierre	EPFL
Sandygulova, Anara	Nazarbayev University

290 – Design and Perception of a Social Robot to Promote Hand Washing among Children in a Rural Indian School

Radhakrishnan, Unnikrishnan	Amrita University
Deshmukh, Amol	University of Glasgow
Ramesh, Shanker	AMMACHI Labs, Amrita Vishwa Vidyapeetham
K Babu, Sooraj	AMMACHI Labs, Amrita Vishwa Vidyapeetham
A, Parameswari	AMMACHI labs, Amrita Vishwa Vidyapeetham
Rao R, Bhavani	Amrita Vishwa Vidyapeetham University

297 – The Effect of Interaction and Design Participation on Teenagers' Attitudes towards Social Robots

Björling, Elin	University of Washington
Xu, Wendy M.	University of Washington
Cabrera, Maria Eugenia	University of Washington
Cakmak, Maya	University of Washington

Regular Session 6: Human Centred Robot Design
24, 68, 175, 178, 218, 265

Chair : Kato Shohei, Nagoya Institute of Technology

Co-Chair : Joonhwan Kim, Korea Advanced Institute of Science and Technology(KAIST)

24 – Unconventional Uses of Structural Compliance in Adaptive Hands

Chang, Che-Ming University of Auckland
Gerez, Lucas University of Auckland
Elangovan, Nathan University of Auckland
Zisimatos, Agisilaos National Technical University of Athens
Liarokapis, Minas University of Auckland

68 – Design and Analysis of a Soft Bidirectional Bending Actuator for Human-Robot Interaction Applications

SINGH, KUMAR SURJDEO IIT Madras
Thondiyath, Asokan IIT Madras

175 – Instrumented Shoe Based Foot Clearance and Foot-To-Ground Angle Measurement System for the Gait Analysis

Tiwari, Ashutosh Indian Institute of Technology
Saxena, somya PGI Chandigarh
Joshi, Deepak Indian Institute of Technology

178 – Energy Conscious Over-Actuated Multi-Agent Payload Transport Robot

Tallamraju, Rahul International Institute of Information Technology, Hyderabad
Verma, Pulkit International Institute of Information Technology, Hyderabad
Sripada, Venkatesh Oregon State University, Corvallis, USA
Agrawal, Shrey International Institute of Information Technology, Hyderabad
Karlapalem, Kamalakar IIIT, Hyderabad

218 – Effect of Human Hand Dynamics on Haptic Rendering of Stiff Springs Using Virtual Mass Feedback

Desai, Indrajit Indian Institute of Technology Bombay
Gupta, Abhishek Indian Institute of Technology, Bombay
Chakraborty, Debraj Indian Institute of Technology Bombay

265 – DronePick: Object Picking and Delivery Teleoperation with the Drone Controlled by a Wearable Tactile Display

Ibrahimov, Roman Skolkovo Institute of Technology and Science
Tsykunov, Evgeny Skolkovo Institute of Science and Technology
Shirokun, Vladimir Skolkovo institute of science and technology
Somov, Andrey Skolkovo Institute of Technology and Science
Tsetserukou, Dzmitry Skolkovo Institute of Science and Technology

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Regular Session 7: Social Robots II
87, 108, 113, 128, 134, 135

Chair : Anara Sandygulova, Nazarbayev University, Kazakhstan
Co-Chair : John-John Cabibihan, Qatar University

87 - Design of a Robotic Crib Mobile to Support Studies in the Early Detection of Cerebral Palsy: A Pilot Study

Jamshad, Rabeya — Georgia Institute of Technology
Fry, Katelyn — Georgia Institute of Technology
Chen, Yu-ping — Georgia State University
Howard, Ayanna — Georgia Institute of Technology

108 – AppGAN: Generative Adversarial Networks for Generating Robot Approach Behaviors into Small Groups of People

Yang, Fangkai — KTH Royal Institute of Technology
Peters, Christopher — Royal Institute of Technology

113 – Effective Robot Evacuation Strategies in Emergencies

Nayyar, Mollik — The Pennsylvania State University
Wagner, Alan Richard — The Pennsylvania State University

128 – Surprise! Predicting Infant Visual Attention in a Socially Assistive Robot Contingent Learning Paradigm

Klein, Lauren — University of Southern California
Itti, Laurent — University of Southern California
Smith, Beth — University of Southern California
Rosales, Marcelo R. — University of Southern California
Nikolaidis, Stefanos — University of Southern California
Mataric, Maja — University of Southern California

134 – Learning Socially Appropriate Robot Approaching Behaviour Toward Groups Using Deep Reinforcement Learning

Gao, Yuan — Uppsala University
Yang, Fangkai — KTH Royal Institute of Technology
Frisk, Martin — Uppsala University
Hernandez, Daniel — University of York
Peters, Christopher — Royal Institute of Technology
Castellano, Ginevra — Uppsala University

135 – What Do Children Want from a Social Robot? Toward Gratifications Measures for Child-Robot Interaction

De Jong, Chiara — University of Amsterdam

Kühne, Rinaldo	University of Amsterdam
Peter, Jochen	University of Amsterdam
van Straten, Caroline Lianne	University of Amsterdam
Barco, Alex	University of Amsterdam

Regular Session 8: Situation Awareness and Spatial Cognition

223, 238, 280, 299, 157, 213

Chair : Amit Kumar Pandey, Hanson Robotics
Co-Chair : Louie, Wing-Yue Geoffrey, Oakland University

223 – Desk Organization: Effect of Multimodal Inputs on Spatial Relational Learning

Rowe, Ryan	University of Washington
Singhal, Shivam	University of Washington
Yi, Daqing	University of Washington
Bhattacharjee, Tapomayukh	University of Washington
Srinivasa, Siddhartha	University of Washington

238 – Audio-Visual SLAM towards Human Tracking and Human-Robot Interaction in Indoor Environments

Chau, Aaron	University of Calgary
Sekiguchi, Kouhei	Kyoto University
Nugraha, Aditya Arie	RIKEN AIP
Yoshii, Kazuyoshi	Kyoto University
Funakoshi, Kotaro	Honda Research Inst. Japan Co., Ltd.

280 – Teaching a Robot How to Spatially Arrange Objects: Representation and Recognition Issues

Buoncompagni, Luca	University of Genoa
Mastrogiovanni, Fulvio	University of Genoa

299 – Simple, Inexpensive, Accurate Calibration of 9 Axis Inertial Motion Unit

Das, Shome S	Indian Institute of Science, Bangalore

157 – Towards a Driver Monitoring System for Estimating Driver Situational Awareness

Hijaz, Alaaldin	Oakland University
Louie, Wing-Yue Geoffrey	Oakland University
Mansour, Iyad	Dura Automotive

213 - **Automatic Speech-Gesture Mapping and Engagement Evaluation in Human Robot Interaction**

Bishal Ghosh IIT Ropar
Abhinav Dhall IIT Ropar
Ekta Singla IIT Ropar

Regular Session 9: Cognitive skills and Mental Models

165, 181, 202, 189, 296, 21

Chair : Michael Lewis, Univ of Pittsburgh
Co-Chair : Trenton Schulz, University of Oslo

165 – Ontologenius : A Long-Term Semantic Memory for Robotic Agents

Sarthou, Guillaume LAAS-CNRS
Clodic, Aurélie LAAS - CNRS
Alami, Rachid CNRS

181 – Mind perception and causal attribution for failure in a game with a robot

Miyake, Tomohito Osaka University
Kawai, Yuji Osaka University
Park, Jihoon Osaka University
Shimaya, Jiro Osaka University
Takahashi, Hideyuki Osaka university
Asada, MinoruOsaka University

202 – Designing Child-Robot Interaction with Robotito

Ewelina, Bakała Facultad de Ingeniería, University of the Republic, Montevideo
Visca, Jorge Facultad de Ingeniería, University of the Republic, Montevideo
Tejera López, Gonzalo Daniel University of the Republic, Facultad de Ingeniería
Seré, Andrés Facultad de Ingeniería, University of the Republic, Montevideo
Amorin, Guillermo Facultad de Ingeniería, University of the Republic, Montevideo
Gómez-Sena, Leonel Laboratorio de Neurociencias, Facultad de Ciencias, Universidad

189 – Conflict Mediation in Human-Machine Teaming: Using a Virtual Agent to Support Mission Planning and Debriefing

Haring, Kerstin Sophie University of Denver
Tobias, Jessica United States Air Force Academy
Waligora, Justin United States Air Force Academy
Phillips, Elizabeth Brown University
Tenhundfeld, Nathan University of Alabama in Huntsville
Gale, Lucas University of Southern California

De Visser, Ewart	George Mason University
Jonathan, Gratch	University of Southern California
Tossell, Chad	USAF Academy

296 – Towards Automatic Visual Fault Detection in Highly Expressive Human-Like Animatronic Faces with Soft Skin

Mayet, Ralf	Hanson Robotics
Diprose, James	Hanson Robotics
Pandey, Amit Kumar	Hanson Robotics

21 – Differences of Human Perceptions of a Robot Moving Using Linear or Slow In, Slow Out Velocity Profiles When Performing a Cleaning Task

Schulz, Trenton	University of Oslo
Holthaus, Patrick	University of Hertfordshire
Amirabdollahian, Farshid	University of Hertfordshire
Koay, Kheng Lee	University of Hertfordshire
Torresen, Jim	University of Oslo
Herstad, Jo	University of Oslo

Regular Session 10: HRI and Collaboration in Manufacturing Environment (144, 258, 145, 131, 256, 168)

Chair : Jacques Penders, Sheffield Hallam University
Co-Chair : Vitezslav Beran, Brno University of Technology

144 – Combining Interactive Spatial Augmented Reality with Head-Mounted Display for End-User Collaborative Robot Programming

Bambusek, Daniel	Brno University of Technology, Faculty of Information Technology
Materna, Zdenek	Faculty of Information Technology, Brno University of Technology
Kapinus, Michal	Brno University of Technology, Faculty of Information Technology
Beran, Vitezslav	Brno University of Technology
Smrz, Pavel	Brno University of Technology

258 – Modulating Human Input for Shared Autonomy in Dynamic Environments

Mower, Christopher Edwin	University of Edinburgh
Moura, Joao	Heriot-Watt University
Davies, Aled	Costain Group PLC
Vijayakumar, Sethu	University of Edinburgh

145 – Seamless Manual-To-Autopilot Transition: An Intuitive Programming Approach to Robotic Welding

Eto, Haruhiko Massachusetts Institute of Technology
Asada, Harry Massachusetts Institute of Technology

131 – Teaching Method for Robot's Gripper Posture with a Laser Sensor on a Pan-Tilt Actuator: A Method for Specifying Posture Feature Curves and Posture Feature Point

Ishihata, kenji Hiroshima City University
Sato, Kenjiro Hiroshima City University
Fukui, Yuta Hiroshima City University
Iwaki, Satoshi Hiroshima City University
Ikeda, Tetsushi Hiroshima City University

256 – Model Checking Human-Agent Collectives for Responsible AI

Abeywickrama, Dhaminda University of Southampton
Cirstea, Corina University of Southampton
Ramchurn, Sarvapali University of Southampton

168 – IoT Based Submersible ROV for Pisciculture

Rohit, Mehboob Hasan North South University
Barua, Sailanjan North South University
Akter, Irin North South University
Karim, S M Mujibul North South University
Akter, Sharmin North South University
Elahi, M. M. Lutfe North South University

Regular Session 11: Social Robots III

139, 146, 158, 187, 191, 259

Chair : Venkata Ratnadeep Suri, Indraprastha Institute of Information Technology, Delhi
Co-Chair : Elisabetta Zibetti, CHART-LUTIN

139 – Teaching Pepper Robot to Recognize Emotions of Traumatic Brain Injured Patients Using Deep Neural Networks

Ilyas, Chaudhary Muhammad Aalborg University
Schmuck, Viktor Aalborg University, Denmark
Haque, Mohammad Ahsanul Aalborg University
Nasrollahi, Kamal Aalborg University
Rehm, Matthias Aalborg University

Moeslund, Thomas B. Aalborg University

146 – Mood Estimation As a Social Profile Predictor in an Autonomous, Multi-Session, Emotional Support Robot for Children

Gamborino, Edwinn National Taiwan University
Yueh, Hsiu-Ping National Taiwan University
Lin, Weijane National Taiwan University
Yeh, Su-Ling National Taiwan University
Fu, Li-Chen National Taiwan University

158 – Mapping Robotic Affordances with Pre-Requisite Learning Interventions for Children with Autism Spectrum Disorder

Shukla, Jainendra Indraprastha Institute of Information Technology, Delhi
Suri, Venkata Ratnadeep Indraprastha Institute of Information Technology, Delhi
Garg, Jatin Indraprastha Institute of Information Technology Delhi
Verma, Krit Indraprastha Institute Of Information Technology Delhi
Kansal, Prarthana IIIT Delhi

187 – Health Counseling by Robots: Modalities for Breastfeeding Promotion

Murali, Prasanth Khoury College of Computer Science
O'Leary, Teresa Khoury College of Computer and Information Science
Shamekhi, Ameneh Northeastern University
Bickmore, Timothy Northeastern University

191 – Persuasive ChairBots: A (Mostly) Robot-Recruited Experiment

Agnihotri, Abhijeet Oregon State University
Knight, Heather Oregon State University

259 – Robot-Assisted Therapy for Children with Delayed Speech Development: A Pilot Study

Zhanatkyzy, Aida Nazarbayev University
Turarova, Aizada Nazarbayev University
Telisheva, Zhansaule Nazarbayev University
Abylkasymova, Galiya Republican Children's Rehabilitation Center
Sandygulova, Anara Nazarbayev University

Regular Session 12: Visual Perception and Autonomous Robots

65, 96, 121, 140, 160, 173

Chair : Kotaro Hayashi, Toyohashi University of Technology

Co-Chair : Ahmed Chemori, LIRMM - CNRS

65 – Grasping of Novel Objects for Robotic Pick and Place Applications
Vohra, Mohit Indian Institute of Technology, Kanpur
Prakash, Ravi Indian Institute of Technology, Kanpur
Behera, Laxmidhar Indian Institute of Technology, Kanpur

96 – A Novel Image-based Path Planning Algorithm for Eye-in-Hand Visual Servoing of a Redundant Manipulator in a Human Centered Environment
Raina, Deepak TCS Robotics Innovation Lab
P, Mithun International Institute of Information Technology Hyderabad
Shah, Suril Vijaykumar Indian Institute of Technology Jodhpur
Swagat, Kumar Tata consultancy services

121 – A Novel Geometry-Based Algorithm for Robust Grasping in Extreme Clutter Environment
Kundu, Olyvia TCS Innovation Labs
Swagat, Kumar Tata consultancy services

140 – Fatigue Estimation Using Facial Expression Features and Remote-PPG Signal
Hasegawa, Masaki Toyohashi University of Technology
Hayashi, Kotaro Toyohashi University of Technology
Miura, Jun Toyohashi University of Technology

160 – Model & Feature Agnostic Eye-In-Hand Visual Servoing Using Deep Reinforcement Learning with Prioritized Experience Reply
Singh, Prerna Tata Consultancy Services
Singh, Virender TCS
Dutta, Samrat TCS Research and Innovation
Swagat, Kumar Tata consultancy services

173 – Reasoning on Shared Visual Perspective to Improve Route Directions
Waldhart, Jules LAAS-CNRS
Clodic, Aurélie LAAS - CNRS
Alami, Rachid CNRS

Regular Session 13: Machine Learning and Adaptation

155, 176, 190, 260, 209, 215

Chair : Kamal Gupta, Simon Fraser University
Co-Chair : Baptiste Busch, Ecole Polytechnique Fédérale de Lausanne

155 – HiFI: A Hierarchical Framework for Incremental Learning Using Deep Feature Representation

Raj, Ankita IIT Delhi
Majumder, Anima Tata consultancy services
Swagat, Kumar Tata consultancy services

176 – Reinforcement Learning Motion Planning for an EOG-Centered Robot Assisted Navigation in a Virtual Environment

Garrote, Luís Carlos Institute of Systems and Robotics
Perdiz, João University of Coimbra
Pires, Gabriel University of Coimbra
Nunes, Urbano J. Instituto de Sistemas e Robotica

190 – Identifying Multiple Interaction Events from Tactile Data During Robot-Human Object Transfer

Davari, Mohammad-Javad Simon fraser university
Hegedus, Michael James Simon Fraser University
Gupta, Kamal Simon Fraser University
Mehrandezh, Mehran University of Regina

260 – Accuracy Improvement of Facial Expression Recognition in Speech Acts: Confirmation of the Effectiveness of Information Around a Mouth and GAN-Based Data Augmentation

Song, KyuSeob Korea Advanced Institute of Science and Tech KAIST
Kwon, Dong-Soo KAIST

209 – An Empirical Study of Person Re-Identification with Attributes

Shree, Vikram Cornell University
Chao, Wei-Lun Cornell University
Campbell, Mark Cornell University

215 – Q-Learning Based Navigation of a Quadrotor Using Non-Singular Terminal Sliding Mode Control

Yogi, Subhash Chand Indian Institute of Technology Kanpur
Tripathi, Vibhu Kumar Indian Institute of Technology Kanpur
Kamath, Archit Krishna Indian Institute of Technology Kanpur
Behera, Laxmidhar Indian Institute of Technology Kanpur

Regular Session 14: Imitation Learning

152, 243, 245, 252, 266, 300

Chair : Juan Wachs, Purdue University
Co-Chair : Alessandro Di Nuovo, Sheffield Hallam University

152 – SMAK-Net: Self Supervised Multi-Level Spatial Attention Network for Knowledge Representation towards Imitation Learning

Ramachandruni, Kartik	TCS Innovation Labs
Vankadari, Madhu Babu	TCS
Majumder, Anima	Tata consultancy services
Dutta, Samrat	TCS Research and Innovation
Swagat, Kumar	Tata consultancy services

243 – Extending Policy from One-Shot Learning through Coaching

Balakuntala Srinivasa Murthy, Mythra Varun	Purdue University
Venkatesh, L.N Vishnunandan	Purdue University
Padmakumar Bindu, Jyothsna	Purdue University
Voyles, Richard	Purdue University
Wachs, Juan	Purdue University

245 – DeepMoTIon: Learning to Navigate Like Humans

Hamandi, Mahmoud	INSA Toulouse
D'Arcy, Michael	North-western University
Fazli, Pooyan	San Francisco State University

252 – Learning Active Spine Behaviors for Dynamic and Efficient Locomotion in Quadruped Robots

Bhattacharya, Shounak	Indian Institute of Science
Singla, Abhik	Indian Institute of Science (IISc), Bangalore
Singh, Abhimanyu	BITS Pilani K K Birla Goa Campus
Dholakiya, Dhaivat	Indian Institute of Science
Bhatnagar, Shalabh	Indian Institute of Science, Bangalore
Amrutur, Bharadwaj	Indian Institute of Science
Ghosal, Ashitava	India Institute of Science (IISc)
Nadubettu Yadukumar, Shishir	Indian Institute of Science

266 – Trajectory based Deep Policy Search for Quadrupedal Walking

Nadubettu Yadukumar, Shishir	Indian Institute of Science
Joglekar, Ashish	Indian Institute of Science
Shetty, Suhan	Indian Institute of Science
Dholakiya, Dhaivat	Indian Institute of Science
Singh, Abhimanyu	BITS Pilani K K Birla Goa Campus
Sagi, Aditya Varma	Indian Institute of Science
Bhattacharya, Shounak	Indian Institute of Science

Singla, Abhik	Indian Institute of Science, Bangalore
Bhatnagar, Shalabh	Indian Institute of Science, Bangalore
Ghosal, Ashitava	India Institute of Science (IISc)
Amrutur, Bharadwaj	Indian Institute of Science

300 - Natural Language Interface for Programming Sensory-Enabled Scenarios for Human-Robot Interaction

Buchina, Nina	Eindhoven University of Technology
Sterkenburg, Paula	Free University of Amsterdam
Lourens, Tino	TiViPE
Barakova, Emilia I.	Eindhoven University of Technology

Regular Session 15: Motion Planning, Navigation, and Control in Human Centered Environment

264, 288, 148, 219, 171, 217

Chair : Laxmidhar Behera, IIT Kanpur
Co-Chair : Madhava Krishna, IIIT Hyderabad

264 – PIVO: Probabilistic Inverse Velocity Obstacle for Navigation under Uncertainty

Poonganam, SriSai Naga Jyotish	IIIT Hyderabad
Goel, Yash	IIIT Hyderabad
Avula, Venkata Seetharama	IIIT Hyderabad
Sai Bhargav Kumar	IIIT Hyderabad
Krishna, Madhava	IIIT Hyderabad

288 – Trajectory Advancement during Human-Robot Collaboration

Tirupachuri, Yeshasvi	Italian Institute of Technology
Nava, Gabriele	Italian Institute of Technology
Rapetti, Lorenzo	Italian Institute of Technology
Latella, Claudia	Italian Institute of Technology
Pucci, Daniele	Italian Institute of Technology

148 – Vision-Based Fast-Terminal Sliding Mode Super Twisting Controller for Autonomous Landing of a Quadrotor on a Static Platform

Kamath, Archit Krishna	Indian Institute of Technology, Kanpur
Tripathi, Vibhu Kumar	Indian Institute of Technology, Kanpur
Yogi, Subhash Chand	Indian Institute of Technology, Kanpur
Behera, Laxmidhar	Indian Institute of Technology, Kanpur

219 – Vision-Based Fractional Order Sliding Mode Control for Autonomous Vehicle Tracking by a Quadrotor UAV

Maurya, Heera Lal Indian Institute of Technology, Kanpur
Kamath, Archit Krishna Indian Institute of Technology, Kanpur
Behera, Laxmidhar Indian Institute of Technology, Kanpur
Verma, Nishchal K. Indian Institute of Technology, Kanpur

171 – End-User Programming of Low and High-Level Actions for Robotic Task Planning

Liang, Ying Siu University of Grenoble-Alpes
Pellier, Damien Laboratory of Informatics Grenoble - CNRS
Fiorino, Humbert University Grenoble Alpes laboratory of Informatics Grenoble
Pesty, Sylvie University of Grenoble-Alps

217 – Human Perception of Gait Styles on a Compass Walker in Variable Contexts Via Descriptive versus Emotive Labels

Lambert, Jacey University of Illinois at Urbana-Champaign
Huzaifa, Umer University of Illinois at Urbana-Champaign
Rizvi, Wali University of Illinois at Urbana Champaign
LaViers, Amy University of Illinois at Urbana-Champaign

Regular Session 16: Medical Robotics

30, 58, 123, 267, 179, 102

Chair : Antonio Sgorbissa, University of Genova
Co-Chair : Le Xie, Shanghai Jiao Tong University

30 – Master-Slave Guidewire and Catheter Robotic System for Cardiovascular Intervention

Xiang, Yujia Shanghai Jiao Tong University
Shen, Hao Shanghai Jiao Tong University
Xie, Le Shanghai Jiao Tong University
Wang, Hesheng Shanghai Jiao Tong University

58 – A Brief Review of the Electronics, Control System Architecture, and Human Interface for Commercial Lower Limb Medical Exoskeletons Stabilized by Aid of Crutches

Tabti, Nahla University of Paris Sud
KARDOFAKI, Mohamad UVSQ
Alfayad, Samer LISV,BIA
Chitour, Yacine University of Paris Sud

Ben Ouezdou, Fathi University of Versailles St. Quentin

123 – Development of a Foldable Five-Finger Robotic Hand for Assisting Laparoscopic Surgery

Anzai, Yuki Yokohama National University
Sagara, Yuto Yokohama National University
Kato, Ryu Yokohama National University
Mukai, Masaya Tokai University

267 – Effects of Flexible Surgery Robot on Endoscopic Procedure: Preliminary Bench-Top User Test

Kim, Joonhwan Korea Advanced Institute of Science and Technology(KAIST)
Hwang, Minho Korea Advanced Institute of Science and Technology (KAIST)
Lee, Dong-Ho Korea Advanced Institute of Science and Technology
Kim, Hansoul Korea Advanced Institute of Science and Technology
Ahn, Jeongdo Korea Advanced Institute of Science and Technology
You, Jae Min Korea Advanced Institute of Science and Technology
Baek, DongHoon KAIST
Kwon, Dong-Soo KAIST

179 – Towards Securing the Sclera against Patient Involuntary Head Movement in Robotic Retinal Surgery

Ebrahimi, Ali Johns Hopkins University
Urias, Muller Wilmer Eye Institute
He, Changyan Beihang University
Patel, Niravkumar Johns Hopkins University
Taylor, Russell H. Johns Hopkins University
Gehlbach, Peter Johns Hopkins Medical Institute
Iordachita, Ioan Iulian Johns Hopkins University

102 – Detecting Deception in HRI Using Minimally-Invasive and Noninvasive Techniques

Iacob, David-Octavian ENSTA-ParisTech
Tapus, Adriana ENSTA-ParisTech

Regular Session 17: Human Robot Collaboration and Cooperation
138, 150, 151, 170, 207, 211

Chair : Jens Lambrecht, Technische Universität Berlin
Co-Chair : Pooyan Fazli, San Francisco State University

138 – Can a Humanoid Robot Be Part of the Organizational Workforce? a User Study Leveraging Sentiment Analysis

Mishra, Nidhi	Nanyang Technological University
Ramanathan, Manoj	Nanyang Technological University
Satapathy, Ranjan	Nanyang Technological University
Cambria, Erik	Nanyang Technological University
Thalmann, Nadia Magnenat	Nanyang Technological University

150 – A Multi Modal People Tracker for Real Time Human Robot Interaction

Wengefeld, Tim	Ilmenau University of Technology
Mueller, Steffen	Ilmenau University of Technology
Lewandowski, Benjamin	Ilmenau University of Technology
Gross, Horst-Michael	Ilmenau University of Technology

151 – Human Prediction for the Natural Instruction of Handovers in Human Robot Collaboration

Lambrecht, Jens	Technical University of Berlin
Nimpsch, Sebastian	GESTALT Robotics GmbH

170 – Evaluation of an Industrial Robotic Assistant in an Ecological Environment

Busch, Baptiste	EPFL
Cotugno, Giuseppe	King's College London
Khoramshahi, Mahdi	EPFL
Skaltsas, Grigorios	University of Hertfordshire
Turchi, Dario	Ocado
Urbano, Leonardo	EPFL
Waechter, Mirko	Karlsruhe Institute of Technology (KIT)
Zhou, You	Karlsruhe Institute of Technology (KIT)
Asfour, Tamim	Karlsruhe Institute of Technology (KIT)
Deacon, Graham	OCADO - Robotics Research
Russell, Duncan	Ocado Technology
Billard, Aude	EPFL

207 – Human Trust after Robot Mistakes: Study of the Effects of Different Forms of Robot Communication

Ye, Sean	Georgia Institute of Technology
Neville, Glen	Georgia Institute of Technology
Schrum, Mariah	Georgia Institute of Technology
Gombolay, Matthew	Georgia Institute of Technology
Chernova, Sonia	Georgia Institute of Technology
Howard, Ayanna	Georgia Institute of Technology

211 – Path Planning through Tight Spaces for Payload Transportation Using Multiple Mobile Manipulators

Tallamraju, Rahul	IIIT Hyderabad
Sripada, Venkatesh	Oregon State University, Corvallis, USA
Shah, Suril Vijaykumar	Indian Institute of Technology Jodhpur

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Regular Session 18: Linguistic Communication and Dialogue

16, 40, 86, 97, 186, 25

Chair : Prithwijit Guha, IIT Guwahati
Co-Chair : Franziska Kirstein, Blue Ocean Robotics

16 – Autonomous Generation of Robust and Focused Explanations for Robot Policies

Struckmeier, Oliver	Aalto University
Racca, Mattia	Aalto University
Kyrki, Ville	Aalto University

40 – A Robots Expressive Language Affects Human Strategy and Perceptions in a Competitive Game

Roth, Aaron M.	Carnegie Mellon University
Reig, Samantha	Carnegie Mellon University
Bhatt, Umang	Carnegie Mellon University
Shulgach, Jonathan	Carnegie Mellon University
Amin, Tamara	Independent
Doryab, Afsaneh	Carnegie Mellon University
Fang, Fei	Carnegie Mellon University
Veloso, Manuela	Carnegie Mellon University

86 – Walk the Talk! Exploring (Mis)Alignment of Words and Deeds by Robotic Teammates in a Public Goods Game

Correia, Filipa	INESC-ID and Instituto Superior Técnico
Chandra, Shruti	INESC-ID and Instituto Superior Técnico
Mascarenhas, Samuel	INESC-ID / Instituto Superior Técnico
Charles-Nicolas, Julien	Técnico Lisboa
Gally, Justin Philippe Roger Luc	INSA Lyon
Lopes, Diana	Instituto Superior Técnico
Santos, Fernando P.	Princeton University
Santos, Francisco C.	IST, Universidade de Lisboa, Portugal
Melo, Francisco S.	Instituto Superior Tecnico
Paiva, Ana	INESC-ID and Instituto Superior Técnico

97 – Your instruction may be crisp, but not clear to me!

Pramanick, Pradip	TCS Research & Innovation
Sarkar, Chayan	TCS Research & Innovation

Bhattacharya, Indrajit TCS Research & Innovation

186 – Building Language-Agnostic Grounded Language Learning Systems
Kery, Caroline University of Maryland, Baltimore County
Pillai, Nisha UMBC
Matuszek, Cynthia University of Maryland, Baltimore County
Ferraro, Francis University of Maryland Baltimore County

25 – Let Me Show You Your New Home: Studying the Effect of Proxemic-Awareness of Robots on Users' First Impressions
Petrak, Björn Augsburg University
Weitz, Katharina Augsburg University
Aslan, Ilhan Augsburg University
Andre, Elisabeth Augsburg University

Regular Session 19: Robot Companions

115, 231, 240, 17, 194, 27

Chair : Bipin Indurkhya, Jagiellonian University
Co-Chair : John Michael, Central European University

115 – An Adaptive Robot Teacher Boosts a Human Partner's Learning Performance in Joint Action
Vignolo, Alessia Istituto Italiano di Tecnologia
Powell, Henry University of Glasgow
McEllin, Luke Central European University
Rea, Francesco Istituto Italiano di Tecnologia
Sciutti, Alessandra Italian Institute of Technology
Michael, John Central European University

231 – On the Role of Trust in Child-Robot Interaction
Zguda, Paulina Jagiellonian University
Kolota, Anna Jagiellonian University
Jarosz, Mateusz AGH University of Science and Technology
Sondej, Filip AGH University of Science and Technology
Izui, Takamune Tokyo University of Agriculture and Technology
Dziok, Maria AGH University of Science and Technology
Belowska, Anna AGH University of Science and Technology
Wojciech Jędras AGH University of Science
Venture, Gentiane Tokyo University of Agriculture and Technology
Sniezynski, Bartlomiej AGH University of Science and Technology
Indurkhya, Bipin Jagiellonian University

240 – An Exploratory Study on Proxemics Preferences of Humans in Accordance with Attributes of Service Robots

Samarakoon, Bhagya University of Moratuwa
Muthugala Arachchige Singapore University of Technology and Design
Viraj Jagathpriya Muthugala Singapore University of Technology and Design
Jayasekara, A.G.B.P. University of Moratuwa
Elara, Mohan Rajesh Singapore University of Technology and Design

17 – Augmented Reality as a Medium for Human-Robot Collaborative Tasks

Chacko, Sonia NYU Tandon School of Engineering
Kapila, Vikram NYU Tandon School of Engineering

194 – Designing a Socially Assistive Robot for Long-Term In-Home Use for Children with Autism Spectrum Disorders

Pakkar, Roxanna University of Southern California
Clabaugh, Caitlyn University of Southern California
Lee, Rhianna University of Southern California
Deng, Eric University of Southern California
Mataric, Maja University of Southern California

27 – Proof of Concept of a Projection-Based Safety System for Human-Robot Collaborative Engine Assembly

Hietanen, Antti Eerikki Tampere University of Technology
Changizi, Alireza Tampere University of Technology
Lanz, Minna Tampere University of Technology
Kamarainen, Joni-Kristian Tampere University of Technology
GANGULY, PALLAB Tampere University
Pieters, Roel S. Tampere University
Latokartano, Jyrki Matias Tampere University of Technology

Regular Session 20: Therapy and Rehabilitation

246, 270, 253, 67, 153, 293

Chair : Filippo Cavallo, Scuola Superiore Sant'Anna - Pisa
Co-Chair : Laura Fiorini, BioRobotics Institute, Scuola Superiore Sant'Anna

246 – Linear Parameter-Varying Identification of the EMG–Force Relationship of the Human Arm

PESENTI, Mattia	Politecnico di Milano
ALKHOURY, Ziad	University of Strasbourg
BEDNARCZYK, Maciej	University of Strasbourg
OMRAN, Hassan	University of Strasbourg
Bayle, Bernard	University of Strasbourg

270 – Co-Designing and Field-Testing Adaptable Robots for Triggering Positive Social Interactions for Adolescents with Cerebral Palsy

Mariager, Casper Sloth	Aalborg University
Fischer, Daniel K. B.	Aalborg University
Kristiansen, Jakob	Aalborg University
Rehm, Matthias	Aalborg University

253 – Socially Assistive Robot's Behaviors Using Microservices

Ercolano, Giovanni	University of Naples Federico II
Lambiase, Paolo D.	University of Naples Federico II
Leone, Enrico	University of Naples "Federico II
Raggioli, Luca	University of Naples Federico II
Trepiccione, Davide	University of Naples Federico II
Rossi, Silvia	University of Naples Federico II

67 – A Robot-Mediated Assessment of Tinetti Balance scale for Sarcopenia Evaluation in Frail Elderly

Fiorini, Laura	The BioRobotics Institute, Scuola Superiore Sant'Anna
D'Onofrio, Grazia	Complex Unit of Geriatrics, IRC
Rovini, Erika	Scuola Superiore Sant'Anna, Pisa
Sorrentino, Alessandra	Scuola Superiore Sant'Anna
Coviello, Luigi	Scuola Superiore Sant'Anna
Limosani, Raffaele	Scuola Superiore Sant'Anna
Sancarlo, Daniele	Complex Unit of Geriatrics, IRC
Cavallo, Filippo	Scuola Superiore Sant'Anna – Pisa

153 – Stakeholders Acceptance and Expectations of Robot-Assisted Therapy for Children with Autism Spectrum Disorder

Oliver, Joan	Instituto de Robótica para la Dependencia
Oliván, Rebeca	Instituto de Robótica para la Dependencia
Shukla, Jainendra	Indraprastha Institute of Information Technology, Delhi
Folch, Annabel	Intellectual Disability and Developmental Disorders Research Uni
Martínez-Leal, Rafael	Intellectual Disability and Developmental Disorders Research Uni
Castellà, Mireia	Intellectual Disability and Developmental Disorders Research
UniPuig, Domenec	Rovira i Virgili University

293 – SHEBA: A Low-Cost Assistive Robot for Older Adults in the Developing World

Motahar, Tamanna	North South University
Farden, Fahim	North South University
Sarkar, Dibya Prokash	North South University
Islam, Atiqul	North South University
Cabrera, Maria Eugenia	University of Washington
Cakmak, Maya	University of Washington

Poster Session 16 October 2019 13:30-15:30

55 Papers

Chair: Laxmidhar Behera, IIT Kanpur
Student Coordinators: Archit K Kamath, Subhas Chandra Yogi, Ravi Prakash, Mohit Vohra, Heera Lal Mourya

81 – Learning by Collaborative Teaching : An Engaging Multi-Party CoWriter Activity

El Hamamsy, Laila	EPFL
JOHAL, Wafa	EPFL
asselborn, thibault	EPFL
Nasir, Jauwairia	EPFL
Dillenbourg, Pierre	EPFL

82 – Trajectory Optimization of Continuum Arm Robots

Yadav, Ritesh	BITS Pilani
Rout, Bijay Kumar	Birla Institute of Technology and Science, Pilani, India

1 - Playful Interaction with Humanoid Robots for Social Development in Autistic Children: A Pilot Study

Cervera, Enric	Jaume-I University
del Pobil, Angel P.	Jaume-I University
Cabezudo, Maria-Isabel	Hospital de Manises

309 - Formulating User Requirements for Designing Collaborative Robots

Macovetchi, Ana Maria	Blue Ocean Robotics
Shahabeddini Parizi, Mohammad	Blue Ocean Robotics
Kirstein, Franziska	Blue Ocean Robotics

15 - Dark-Room Exchange: Human Supervision of Decentralized Multi-Robot Systems Using Distributed Ledgers and Network Mapping

Krishnamoorthy, Sai-Prasanth	NYU Tandon School of Engineering
Go, Albert	Massachusetts Institute of Technology
Tiwari, Ashlee	Indian Institute of Technology, Kanpur
Kapila, Vikram	NYU Tandon School of Engineering

29 - Communicating with SanTO the First Catholic Robot

Trovato, Gabriele	Waseda University
Pariasca, Franco	Pontificia Universidad Catolica del Peru
Ramirez, Renzo	Pontificia Universidad Católica del Perú
Cerna, Javier	Pontificia Universidad Catolica del Peru
Reutskiy, Vadim	Innopolis University
Rodriguez, Laureano	Pontificia Universidad Católica del Perú
Cuellar, Francisco	Pontificia Universidad Catolica del Peru

37 - Quantitative Evaluation of Clothing Assistance Using Whole-Body Robotic Simulator of the Elderly

Joshi, Ravi Prakash	Graduate School of Life Science and Systems Engineering, Kyushu
Shibata, Tomohiro	Kyushu institute of technology
Ogata, Kunihiro	National Institute of Advanced Industrial Science and Technology
Matsumoto, Yoshio	AIST

42 - Impression Change on Nonverbal Non-Humanoid Robot by Interaction with Humanoid Robot

Ueno, Azumi	Tokyo University of Agriculture and Technology
Mizuuchi, Ikuo	Tokyo University of Agriculture and Technology
Hayashi, Kotaro	Toyohashi University of Technology

43 - MobiKa - Low-Cost Mobile Robot for Human-Robot Interaction

Graf, Florenz	Fraunhofer IPA
Odabasi, cagatay	Fraunhofer IPA
Jacobs, Theo	Fraunhofer IPA
Graf, Birgit	Fraunhofer IPA
Födisch, Thomas	BruderhausDiakonie

59 - Design and Evaluation of Expressive Turn-Taking Hardware for a Tele-presence Robot

Fitter, Naomi T.	University of Southern California
Joung, Youngseok	University of Southern California
Demeter, Marton	University of Southern California
Hu, Zijian	University of Southern California
Mataric, Maja	University of Southern California

98 – Study of Empathy on Robot Expression Based on Emotion Estimated from Facial Expression and Biological Signals

Sripian, Peeraya	Shibaura Institute of Technology
Kurono, Yuya	Shibaura Institute of Technology
Yoshida, Reiji	Shibaura Institute of Technology
Sugaya, Midori	Shibaura Institute of Technology

76 - Does a Friendly Robot Make You Feel Better?

Ruijten, Peter Eindhoven University of Technology
Cuijpers, Raymond Eindhoven University of Technology

83 - Brand Recognition with Partial Visible Image in the Bottle Random Picking Task Based on Inception V3

ZHU, Chen Waseda University
Matsumaru, Takafumi Waseda University

103 - A Conditional Adversarial Network for Scene Flow Estimation

Thakur, Ravi Kumar Indian Institute of Information Technology Sri City, Chittoor
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105 - Evaluating Imitation of Human Eye Contact and Blinking Behavior using an Android for Human-like Communication

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110- Deep-Pack: A Vision-Based 2D Online Bin Packing Algorithm with Deep Reinforcement Learning

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117 - Collaborative Transportation of Cable-Suspended Payload Using Two Quadcopter with Human in the Loop

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119 - Establishing Human-Robot Trust through Music-Driven Robotic Emotion Prosody and Gesture

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147 - Evaluation of Robots That Signals a Pedestrian Using Face Orientation Based on Moving Trajectory Analysis

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201 - Coupling of Arm Movements during Human-Robot Interaction: The Handover Case
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225 - Synthesizing Unnatural Grasping in Humanoid Robots Using Fuzzy Logic
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232 - Design of an Integrated Gripper with a Suction System for Grasping in Cluttered Environment

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282 - Development of a Teach Pendant for Humanoid Robotics with Cartesian and Joint-Space Control Modalities

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305 - Aggressive Bee: A New Vision for Missile Guidance Applications
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306 - Chasing and Aiming of a Moving Target
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307 - Investigations on Gesture Holding Durations at Speech Interruptions in Dialogue Robots
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308 – Human-Robot Handovers with Signal Temporal Logic Specifications
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310 – Development and Performance Evaluation of Onboard Auto-Pilot System for an Aerial Vehicle
Kumar, Abhinay IIT Jodhpur
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312 – A Body Contact-Driven Pupil Response Pet-Robot for Enhancing Familiarity
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313 – Development of a Finger Rehabilitation System Considering Motion Sense and Vision Based on Mirror Therapy
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314 - Extended Hybrid Code Network for Hospital Receptionist Robot

Hwang, Eui Jun The University of Auckland
Ahn, Byeong-Kyu Sungkyunkwan University
MacDonald, Bruce University of Auckland
Ahn, Ho Seok The University of Auckland, Auckland

315 – Investigating the Understandability and Efficiency of Directional Cues in Robot Navigation

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Cuijpers, Raymond Eindhoven University of Technology
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316 - Multi-Robot Formation Control Using Reinforcement Learning

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317 – A Pilot Study for a Robot-Mediated Listening Comprehension Intervention for Children with ASD

Louie, Wing-Yue Geoffrey Oakland University
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318 – Contextual Non-Verbal Behaviour Generation for Humanoid Robot Using Text Sentiment

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319 - Towards Automatic Synthesis and Instantiation of Proactive Behavior

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Chetouani, Mohamed Sorbonne University
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320 - An Agent Model Introducing Interpersonal Sentiments for Enhancement of Friendliness

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