MoA1: 8:45-10:00 Horace Mann 138  
Robots for Physical Rehabilitation (Regular Session)

Chair: Sho Yokota Toyo Univ.

08:45-08:57 MoA1.1  
A Robotic Coach Architecture for Multi-User Human-Robot Interaction (RAMU) with the Elderly and Cognitively Impaired  
Jing Fan Vanderbilt Univ.  
Linda Beuscher Vanderbilt Univ.  
Paul A. Newhouse Vanderbilt Univ.  
Lorraine C. Mion Vanderbilt Univ.  
Nilanjan Sarkar Vanderbilt Univ.

08:57-09:09 MoA1.2  
Data-Driven Haptic Perception for Robot-Assisted Dressing  
Ariel Kapusta Georgia Inst. of Tech.  
Wenhao Yu Georgia Inst. of Tech.  
Tapomayukh Georgia Inst. of Tech.  
Bhattacharjee Georgia Inst. of Tech.  
Karen Liu Georgia Inst. of Tech.  
Greg Turk Georgia Inst. of Tech.  
Charlie Kemp Georgia Inst. of Tech.

09:09-09:21 MoA1.3  
Design of a Bath Robot System – User Definition and User Requirements Based on International Classification of Functioning, Disability and Health (ICF)  
Jochen Werle Univ. of Heidelberg, Agaplesion Bethanien Hospital  
Klaus Hauer Univ. of Heidelberg, Agaplesion Bethanien Hospital

09:21-09:33 MoA1.4  
Design of an Accompanying Humanoid as a Walking Trainer for the Elderly  
Chiara Piezzo Univ. of Tsukuba  
Kenji Suzuki Univ. of Tsukuba

09:33-09:45 MoA1.5  
Robotic Repositioning of Human Limbs Via Model Predictive Control  
Kevin Chow Georgia Inst. of Tech.  
Charlie Kemp Georgia Inst. of Tech.

09:45-09:57 MoA1.6  
The Ethics of Deploying a Robot – Examples from a Mobile Service Robot at a Care Site for Older Patients  
Tobias Körtner Academy for Research on Aging  
Denise Hebesberger Academy for Research on Aging  
Christoph Gisinger Danube Univ. Krems

MoA2: 8:45-10:00 Horace Mann 150  
Failure and Trust in Human-Robot Interaction (Regular Session)

Chair: Kerstin Fischer Univ. of Southern Denmark

08:45-08:57 MoA2.1  
Analysis of Reactions Towards Failures and Recovery Strategies for Autonomous Robots  
Daniel Brooks UMass Lowell  
Momotaz Begum UMass Lowell  
Holly Yanco UMass Lowell

08:57-09:09 MoA2.2  
Believing in BERT: Using Expressive Communication to Enhance Trust and Counteract Operational Error in Physical Human-Robot Interaction  
Adriana Hamacher UCL  
Nadia Berthouze UCL  
Tony Pipe Univ. of the West of England  
Kerstin Eder Univ. of Bristol

09:09-09:21 MoA2.3  
Errare Humanum Est: Erroneous Robots in Human-Robot Interaction  
Marco Ragni Univ. of Freiburg  
Andrey Rudenko Univ. of Freiburg  
Barbara Kuhnert Univ. of Freiburg  
Kai Oliver Arras Univ. of Freiburg

09:21-09:33 MoA2.4  
Just Follow the Suit! Trust in Human-Robot Interactions During Card Game Playing  

Filipa Correia
Patrícia Alves-Oliveira
Nuno Maia
Tiago Ribeiro
Sofia Petisca
Francisco S. Melo
Ana Paiva
INEC-ID, Univ. of Lisbon

09:33-09:45 MoA2.5
Perceived Role of Physiological Sensors Impacts Trust and Reliance on Robots
Monika Lohani
Charlene Stokes
Marissa McCoy
Christopher Bailey
Aditi Joshi
Susan Rivers
Yale Univ.
Air Force Research Lab
Yale Univ.
Yale Univ.
Yale Univ.
Yale Univ.

09:45-09:57 MoA2.6
Playing the ‘Trust Game’ with Robots: Social Strategies and Experiences
Roberta Cabral Ramos
Daniel J. Rea
Anna Tran
James Everett Young
Ehud Sharlin
Mario Costa Sousa
Univ. of Calgary
Univ. of Manitoba
Univ. of Calgary
Univ. of Manitoba
Univ. of Calgary

MoA3: 8:45-10:00 Milbank Chapel (Zankel 125)
Interaction with Children (Regular Session)
Chair: Iolanda Iacono
Univ. of Siena

08:45-08:57 MoA3.1
Autonomous Disengagement Classification and Repair in Multiparty Child-Robot Interaction
Iolanda Leite
Marissa McCoy
Monika Lohani
Nicole Salomons
Kara McElvaine
Charlene Stokes
Susan Rivers
Brian Scassellati
Disney Research
Yale Univ.
Yale Univ.
Yale Univ.
Yale Center for Emotional Intelligence
Air Force Research Lab
Yale Univ.
Yale Univ.

08:57-09:09 MoA3.2
Child-Robot Spatial Arrangement in a Learning by Teaching Activity
Wafa Johal
Alexis Jacq
Ana Paiva
Pierre Dillenbourg
EPFL
EPFL
INESC-ID, Univ. of Lisbon
EPFL

09:09-09:21 MoA3.3
Children’s Peer Assessment and Self-Disclosure in the Presence of an Educational Robot
Shruti Chandra
Patrícia Alves-Oliveira
Séverin Lemaignan
Pedro Sequeira
Ana Paiva
Pierre Dillenbourg
IST/EPFL
INESC-ID, Univ. of Lisbon
Plymouth Univ.
INESC-ID, IST, Univ. of Lisbon
INESC-ID, Univ. of Lisbon
EPFL

09:21-09:33 MoA3.4
Evaluation Methods for User-Centered Child-Robot Interaction
Vicky Charisi
Daniel Davison
Dennis Reidsma
Vanessa Evers
Univ. of Twente
Univ. of Twente
Univ. of Twente
Univ. of Amsterdam

09:33-09:45 MoA3.5
Improving Human-Human Collaboration between Children with a Social Robot
Sarah Strohkorb
Ethan Fukuto
Natalie Warren
Charles Taylor
Bobby Berry
Brian Scassellati
Yale Univ.
Pomona College
Yale Univ.
Yale Univ.
Yale Univ.
Yale Univ.

09:45-09:57 MoA3.6
Study of Children’s Hugging for Interactive Robot Design
Joohyung Kim
Alexander Alspach
Iolanda Leite
Katsu Yamane
Disney Research
Disney Research
Disney Research
Disney Research

MoB1: 10:30-11:45  Horace Mann 138  
Navigating in Human Environments (Regular Session)

Chair: TBD

10:30-10:42  MoB1.1

Anticipatory Robot Path Planning in Human Environments

Akansel Cosgun  Honda Research Inst.
Emrah Akin Sisbot  Toyota Info Tech. Ctr.
Henrik Iskov Christensen  Georgia Inst. of Tech.

10:42-10:54  MoB1.2

Incorporating Perception Uncertainty in Human-Aware Navigation: A Comparative Study

Zeynab Talebpour  EPFL
Deepak Geetha  Univ. of Amsterdam
Viswanathan
Rodrigo Ventura  Univ. of Lisbon
Alcherio Martinoli  Univ. of Twente
Gwenn Englebienne  EPFL

10:54-11:06  MoB1.3

Performance of a Low-Cost, Human-Inspired Perception Approach for Dense Moving Crowd Navigation

Ishani Chatterjee  Carnegie Mellon Univ.
Aaron Steinfeld  Carnegie Mellon Univ.

11:06-11:18  MoB1.4

Qualitative Constraints for Human-Aware Robot Navigation Using Velocity Costmaps

Christian Dondrup  Heriot-Watt Univ.
Marc Hanheide  Univ. of Lincoln

11:18-11:30  MoB1.5

The Influence of Following Angle on Performance Metrics of a Human-Following Robot

Shanee Honig  Ben-Gurion Univ.
dror katz  Ben-Gurion Univ.
Tal Oron-Gilad  Ben-Gurion Univ.
Yael Edan  Ben-Gurion Univ.

11:30-11:42  MoB1.6

Towards an Integrated and Human-Friendly Path Following and Obstacle Avoidance Behaviour for Robots

Camilla Bassani  Univ. of Genova
Antonello Scalmato  Univ. of Genova
Fulvio Mastrogiovanni  Univ. of Genova
Antonio Sgorbissa  Univ. of Genova

MoB2: 10:30-11:45  Horace Mann 150  
Robotic Mediators (Regular Session)

Chair: Ana Paiva  INESC-ID and Instituto Superior Técnico, Technical Univ. of Lisbon

10:30-10:42  MoB2.1

Can You Feel Me?: How Embodiment Levels of Telepresence Systems Affect Presence

Jung Ju Choi  Ewha Womans Univ.
Sonya Sona Kwak  Ewha Womans Univ.

10:42-10:54  MoB2.2

Designing User Interfaces for Different User Groups: A Three-Way Teleconference System for Doctors, Patients and Assistants Using a Remote Medical Robot

Gerald Stollberger  Univ. of Salzburg
Manuel Giuliani  Univ. of Salzburg
Nicole Mirnig  Univ. of Salzburg
Manfred Tscheligi  Univ. of Salzburg
Krzysztof Arent  Wroclaw Univ. of Tech.
Kreczmer Bogdan  Wroclaw Univ. of Tech.
Filip Grzeszczak  Wroclaw Univ. of Tech.
Dorota Szczesniak-Stanczyk  Medical Univ. of Lublin
Zarczuk Radoslaw  Medical Univ. of Lublin
Andrzej Wysokinski  Medical Univ. of Lublin

10:54-11:06  MoB2.3

Evaluating a Mobile Spontaneous Eye Blink Tracker for Use in Tele-Presence HRI As a Low Bandwidth Social Communicative Cue

Chris Bevan  Univ. of Bath
Danaë Stanton Fraser  Univ. of Bath

11:06-11:18  MoB2.4

Humanoid Robot Avatars: An 'In the Wild' Usability Study

Paul Bremner  Univ. of the West of England
Miriam Koschate  Univ. of Exeter
Mark Levine  Univ. of Exeter
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
<th>Institutions</th>
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</thead>
<tbody>
<tr>
<td>10:30-11:45</td>
<td>MoB3.1</td>
<td>Between Legibility and Contact: The Role of Gaze in Robot Approach</td>
<td>Kerstin Fischer, Lars Christian Jensen, Daniel Suvei, Leon Bodenhagen</td>
<td>Univ. of Southern Denmark, Univ. of Southern Denmark, Univ. of Southern Denmark, Univ. of Southern Denmark</td>
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<tr>
<td>10:42-11:06</td>
<td>MoB3.3</td>
<td>Evaluating Intent-Expressive Robot Arm Motion</td>
<td>Christopher Bodden, Bilge Mutlu, Michael Gleicher</td>
<td>Univ. of Wisconsin–Madison, Univ. of Wisconsin–Madison</td>
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<tr>
<td>11:06-11:18</td>
<td>MoB3.4</td>
<td>Follow Me: Communicating Intentions with a Spherical Robot</td>
<td>Miguel Faria, Andrea Costigliola, Patricia Alves-Oliveira, Ana Paiva</td>
<td>INESC-ID, Univ. of Lisbon, INESC-ID, Univ. of Lisbon, INESC-ID, Univ. of Lisbon</td>
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<tr>
<td>11:18-11:30</td>
<td>MoB3.5</td>
<td>Investigating the Effects of Robotic Motion on Worker’s Behavior in Cooperative Working Environments</td>
<td>Adrian Böckenkamp, Frank Weichert, Gerhard Rinkenauer</td>
<td>TU Dortmund Univ., TU Dortmund Univ., Leibniz Association</td>
</tr>
</tbody>
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**MoC1: 13:00-14:12**  
**SS: Child-Robot Interaction** (Special Session)

**MoC1.1**  
**A Study on the Relationship between Robotic Movement with Animacy and Visual Attention of Young Children**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Institutions</th>
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<tbody>
<tr>
<td>Jaeryoung Lee</td>
<td>Chubu Univ.</td>
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<tr>
<td>Hirofumi Aoki</td>
<td>Nagoya Univ.</td>
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<td>Dimitar Stefanov</td>
<td>Middlesex Univ.</td>
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<tr>
<td>Takahiro Yamamoto</td>
<td>Nagoya Univ.</td>
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<tr>
<td>Goro Obinata</td>
<td>Nagoya Univ.</td>
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</tbody>
</table>
Effects of Framing a Robot As a Social Agent or As a Machine on Children’s Social Behavior

Jacqueline Kory Westlund  
Marayna Martinez  
Maryam Archie  
Madhurima Das  
Cynthia Breazeal

Robotic Behavioral Intervention to Facilitate Eye Contact and Reading Emotions of Children with Autism Spectrum Disorders

Sang-Seok Yun  
Jongsuk Choi  
Sung-Kee Park

Increasing the Efficacy of Rehabilitation Protocols for Children Via a Robotic Playmate Providing Real-Time Corrective Feedback

Sergio García-Vergara  
LaVonda Brown  
Yu-ping Chen  
Ayanna Howard

Should Robots Win or Lose? Robot’s Losing Playing Strategy Positively Affects Child Learning

Kairat Balkibekov  
Serik Meiirbekov  
Nazgul Tazhigaliyeva  
Anara Sandygulova

Using Robots to Interview Children about Bullying: Lessons Learned from an Exploratory Study

Cindy L. Bethel  
Zachary Henkel  
Kristen Stives  
David C. May  
Deborah Eakin  
Melinda Pilkinton  
Alexis Jones  
Megan Stubbs-Richardson

A Thermal Emotion Classifier for Improved Human-Robot Interaction

Laura Boccanfuso  
Quan Wang  
Iolanda Leite  
Beibin Li  
Colette Torres  
Lisa Chen  
Nicole Salomons  
Claire Foster  
Erin Barney  
Yeojin Amy Ahn  
Brian Scassellati  
Frederick Shic

Baseline CNN Structure Analysis for Facial Expression Recognition

Minchul Shin  
Munsang Kim  
Dong-Soo Kwon

Emotional Sharing Behavior for a Social Robot in a Competitive Setting

Sofia Petisca  
João Dias  
Patrícia Alves-Oliveira  
Ana Paiva

Improving the Predictive Performance of SAFEL: A Situation-Aware Fear Learning Model

Caroline Rizzi  
Colin Graeme Johnson  
Patricia A. Vargas
13:48-14:00 MoC2.5
Who Is in Charge? Sense of control and robot anxiety in Human-Robot Interaction
Adeline Chanseau  Univ. of Hertfordshire
Kerstin Dautenhahn  Univ. of Hertfordshire
Kheng Lee Koay  Univ. of Hertfordshire
Maha Salem  Univ. of Hertfordshire

MoC: 13:00-14:00
Ethics, Morality, and Judgment (Regular Session)
Chair: Friederike Eyssel  Univ. of Bielefeld

13:00-13:12 MoC3.1
A Model of a Robot’s Will Based on Higher-Order Desires
Felix Lindner  Univ. of Freiburg

13:12-13:24 MoC3.2
Anticipating Our Future Robotic Society: The Evaluation of Future Robot Applications from a User’s Perspective
Maartje M. A. de Graaf  Univ. of Twente
Somaya Ben Allouch  Saxion Univ.

13:24-13:36 MoC3.3
Human Body Schema Exploration: Analyzing Design Requirements of Robotic Hand and Leg Illusions
Philipp Beckerle  Tech. Univ. Darmstadt
Albert De Beir  Vrije Univ. Brussel
Tim Schürmann  Tech. Univ. Darmstadt
Emilie Caspar  Univ. Libre de Bruxelles

13:36-13:48 MoC3.4
Let’s Be Honest: A Controlled Field Study of Ethical Behavior in the Presence of a Robot
Thidanun Saensuksopa  Carnegie Mellon Univ.
Natalie Michele Salaets  System Planning Corp.
Michael Shomin  Carnegie Mellon Univ.
Tekin Mericli  Carnegie Mellon Univ.
Guy Hoffman  Carnegie Mellon Univ.

13:48-14:00 MoC3.5
Moral Judgments of Human vs. Robot Agents
John Voiklis  Brown Univ.
Boyoung Kim  Brown Univ.
Corey Cusimano  Univ. of Pennsylvania
Bertram Malle  Brown Univ.