

Robotica 2012: concrete presence among us **Conferences**

7th - 9th November 2012 Milan, Italy
Fiera Milano Rho, Pad. 8

The forth edition of Robotica Expo, the only fair in Italy dedicated to humanoid and service robotics, will include a rich program of conferences and events.

Wednesday, 7 November 2012

Hall 8, Asimov Room 11.00 - 13.00

Robotics for society: state of the art and potential

Moderator: Emanuele Colombo (Jack)

Panellists:

Paolo Annunziato (Direttore generale CNR)

Massimo Banzi (Arduino) *

Paolo Borzatta (The European House - Ambrosetti)

Eugenio Gatti (Fondazione Politecnico)

Fabrizio Spada (Rappresentanza Commissione Europea a Milano)

Michele Perini (Fiera Milano S.p.A.)

Giorgio Metta (Istituto Italiano Tecnologia)

Rezia Molfino (SIRI)

Paolo Dario (Scuola Superiore Sant'Anna)

Cristina Tajani (Comune di Milano)

Bruno Bonnell (Syrobo)

Hall 8, Vukobratovic 10.15 - 13.15

Working in hostile environments thanks to robots

Chair: Claudio Moriconi (ENEA)

10.15 - 10.25 Introduction by the Chair

Claudio Moriconi (ENEA)

10.25 - 10.45 Explore earthquake-prone areas with robot Nifti project

Fiora Pirri (Alcor LAB, "Sapienza" Università di Roma)

10.45 - 11.05 ARCA: the development of a flight control system for unmanned airplanes (UAV)

Vincenzo Taraglio (ENEA)

11.05 - 11.25 From games to research and back to games again

Andrea Bonarini (Politecnico di Milano)

11.25 - 11.45 Quadrivio: all terrain robot development

Luca Bascetta (Politecnico di Milano)

11.45 - 12.05 Automation and submarine robotics

David Scaradozzi (Università Politecnica delle Marche)

12.05 - 12.25 Intelligent systems for defence and civil protection

Luca Iocchi (Sapienza Università di Roma)

12.25 - 12.45 Robotic aircraft and safety in the workplace: the experience of AIRobots

Lorenzo Marconi ("Alma Mater Studiorum" Università di Bologna)

12.45 - 13.00 The advantages of using UAV and UGV during fire and rescue missions

Tonino Guerrieri (Corpo Nazionale dei Vigili del Fuoco)

13.00 - 13.15 Questions and conclusion of the session by the Chair

Claudio Moriconi (ENEA)

Hall 8, Asimov Room 14.00 - 16.00

Head and body of iCub

Chair: Giorgio Metta (Istituto Italiano Tecnologia)

14.00 - 14.10 Introduction by the Chair

Giorgio Metta (Istituto Italiano Tecnologia)

14.10 - 14.30 Introduction on iCub

Giorgio Metta (Istituto Italiano Tecnologia)

14.30 - 15.00 Extensions of iCub and Coman robot

Matteo Laffranchi (Istituto Italiano Tecnologia)

15.00 - 15.30 iCub skin and perception skills

Lorenzo Natale (Istituto Italiano di Tecnologia)

15.30 - 15.55 iCub control and interaction

Francesco Nori (Istituto Italiano di Tecnologia)

15.55 - 16.00 Question and conclusion by the Chair

Giorgio Metta (Istituto Italiano Tecnologia)

Hall 8, Vukobratovic 14.30 - 17.30

Techno-ethics and the cyborg issue

Chair: Gianmarco Veruggio (CNR-IEIT)

14.30 - 14.40 Introduction by the Chair

Gianmarco Veruggio (CNR-IEIT)

14.40 - 15.10 Cyborg: "third species " half man, half machine? Or technologically implemented human being?

Jose' M. Galvan (Pontificia Università Santa Croce)

15.10 - 15.40 The state-of-the-art of robotic technical aspects

Silvestro Micera (Scuola Superiore Sant'Anna)

15.40 - 16.10 Legal aspects regarding the cyborg issue: interface between political and social aspects

Elettra Stradella (Università di Pisa)

16.10 - 16.40 Predictability of political, economic and military effects connected to the spreading of cyber-organic systems

Daniela Cerqui (Université de Lausanne)

16.40 - 17.10 Questions and conclusion of the session by the Chair

Gianmarco Veruggio (CNR-IEIT)

Hall 8, Asimov Room 16.00 - 17.30

Research at the "Scuola Superiore Sant'Anna"

Chair: Monica Vatteroni (Scuola Superiore Sant'anna, Pisa)

16.00 - 16.05 Introduction by the Chair

Monica Vatteroni (Scuola Superiore Sant'anna, Pisa)

16.05 - 16.30 Technical overview of the Biorobotics Institute of Scuola Superiore Sant'Anna

Monica Vatteroni (Scuola Superiore Sant'anna, Pisa)

Carmen Cavallotti (Scuola Superiore Sant'Anna, Pisa)

16.30 - 16.55 Robotics in endoscopy and surgery

Monica Vatteroni (Scuola Superiore Sant'anna, Pisa)

16.55 - 17.20 Vision system for endoscopy and surgery

Carmen Cavallotti (Scuola Superiore Sant'Anna, Pisa)

17.20 - 17.30 Question and conclusion by the Chair

Monica Vatteroni (Scuola Superiore Sant'anna, Pisa)

Thursday, 8 November 2012

Hall 8, Asimov Room 10.15 - 15.45

Medical robot and care for the less able

Chair: Rezia Molfino (Università degli Studi di Genova)

Chair: Lorenzo Molinari Tosatti (CNR - ITIA)

10.15 - 10.20 Introduction by the Chair

Rezia Molfino (Università degli Studi di Genova)

Lorenzo Molinari Tosatti (CNR - ITIA)

10.20 - 10.40 Robotics from research to clinical applications: the experience of the CART - Computer Aided Surgery and Radiotherapy laboratory

Piero Cerveri (Politecnico di Milano Dipartimento di Bioingegneria)

Guido Baroni (Politecnico di Milano Dipartimento di Bioingegneria)

10.40 - 11.00 Operating by touching: the new frontiers of tactile feedback

Domenico Prattichizzo (Università degli Studi di Siena -Robotics and Systems Lab)

11.00 - 11.20 Robotic technologies for surgery and minimally invasive therapy: present and future

Arianna Menciassi (Scuola Superiore Sant'Anna)

Gastone Ciuti (Scuola Superiore Sant'Anna)

11.20 - 11.40 The growth of robotic surgery, challenges and progresses in Italy and abroad

Paolo Fiorini (Università degli Studi di Verona)

11.40 - 12.00 The development of robotic modules for urological surgery in collaboration with John Hopkins University

Matteo Zoppi (Università degli Studi di Genova)

Rezia Molfino (Università degli Studi di Genova)

Felix Schaefer (John Hopkins University)

12.00 - 12.20 Cinematic and dynamic models of lower limbs

Vincenzo Parenti Castelli (Alma Mater Studiorum - Università di Bologna)

12.20 - 12.40 Robotics for neurosurgery: the example of the Active project

Federico Vicentini (ITIA - CNR)

12.40 - 13.00 Tactile sensors: possible future scenarios

Salvatore Pirozzi (IEEE - Seconda Università degli Studi di Napoli)

13.00 - 13.15 Questions

13.15 - 14.15 Lunch break

14.15 - 14.20 Re-opening of the session by the Chair

Lorenzo Molinari Tosatti (CNR - ITIA)

14.20 - 14.40 Robotics for neuromotor rehabilitation

Matteo Malosio (CNR - ITIA)

14.40 - 15.00 Robot-assisted neuromotor rehabilitation: clinical point of view

Franco Molteni (Villa Beretta)

15.00 - 15.20 Robot-assisted neuromotor rehabilitation: industrial point of view

Pantaleo Romanelli (AB Medica)

15.20 - 15.45 Questions and conclusion of the session by the Chairs

Lorenzo Molinari Tosatti (CNR - ITIA)

Rezia Molfino (Università degli Studi di Genova)

Hall 8, Vukobratovic 10.30 - 11.30

Three pioneers: Miomir Vukobratovic, Marco Somalvico and Franco Sartorio

Chair: Rezia Molfino (Università degli Studi di Genova)

Chair: Domenico Appendino (PRIMA INDUSTRIE)

10.30 - 10.35 Introduction by the Chair

Rezia Molfino (Università degli Studi di Genova)

Domenico Appendino (PRIMA INDUSTRIE)

10.35 - 10.45 Memories of Miomir Vukobratovic

Rezia Molfino (Università degli Studi di Genova)

10.45 - 10.55 Memories of Marco Somalvico

Andrea Bonarini (Politecnico di Milano)

10.55 - 11.05 Memories of Franco Sartorio

Domenico Appendino (PRIMA INDUSTRIE)

11.05 - 11.15 Robotics in the 1970s and 1980s

Riccardo Cassinis (Università degli Studi di Brescia)

11.15 - 11.30 Questions and conclusion of the session by the Chair

Rezia Molfino (Università degli Studi di Genova)

Hall 8, Vukobratovic 11.30 - 13.30

Robotics and start up: how to prepare a business plan

11.30 - 13.30 Business plan: the fundamental step for a start-up

Marco Bottaro (TTadvisor)

Hall 8, Vukobratovic 14.00 - 14.30

Robotics, a new communication

14.00 - 14.30 Nuzoo Robotics products

Stefano Avenia (Nuzoo Robotics)

Hall 8, Asimov Room 16.00 - 17.20

The experience of an exoskeleton in Italy (EKSO)

Chair: Paolo Milia (Istituto Prosperius Tiberino)

in English

16.00 - 16.10 Introduction by the Chair

Paolo Milia (Istituto Prosperius Tiberino)

16.10 - 16.30 Scientific evidence regarding reversibility (also partial) of damage caused by neurological traumas if treated correctly and experience with exoskeletons

Paolo Milia (Istituto Prosperius Tiberino)

16.30 - 16.50 Engineering characteristics of the Ekso exoskeletons

Russ Angold (Ekso Bionics)

16.50 - 17.10 Possible future scenarios and innovative applications

Ilona Laarman (Ekso Bionics)

17.10 - 17.20 Questions and conclusion of the session by the Chair

Paolo Milia (Istituto Prosperius Tiberino)

Friday, 9 November 2012

Hall 8, Vukobratovic 10.30 - 13.00

Comparing robotics and design

Chair: Nicolo' Casiddu (Università degli studi di Genova, facoltà di architettura - DSA)

10.30 - 10.40 Introduction by the Chair

Nicolo' Casiddu (Università degli studi di Genova, facoltà di architettura - DSA)

10.40 - 10.55 From industrial design to human robot interface

Nicolo' Casiddu (Università degli studi di Genova, facoltà di architettura - DSA)

10.55 - 11.15 A robot for everyone. When Design meets Robotics

Emanuele Micheli (Scuola di Robotica)

11.15 - 11.35 Inter-faces. Anthropomorphic and zoomorphic product and services

Davide Fornari (SUPSI - Laboratorio di cultura visiva)

11.35 - 11.55 Electronic dreams. It is all in the interface

Marco Gaudina (Circle Garage, Genova)

11.55 - 12.15 Digital factory. From 2D to 3D layout

Gioacchino Bonina (Autodesk)

12.15 - 12.35 Social robots - concepts developed by Product Design students at IED Roma

Marika Aakesson (Istituto Europeo del Design, Roma)

12.35 - 13.00 Questions and conclusion of the session by the Chair

Nicolo' Casiddu (Università degli studi di Genova, facoltà di architettura - DSA)

Hall 8, Asimov Room 10.30 - 17.30

Brain Computer Interface and control of robotic mechanisms

Chair: Emanuele Menegatti (Università degli studi di Padova)

Chair: Piero Paolo Battaglini (Università degli studi di Trieste)

10.30 - 10.40 Introduction by the Chair

Emanuele Menegatti (Università degli studi di Padova)

Piero Paolo Battaglini (Università degli studi di Trieste)

10.40 - 11.40 Brain-Machine Hybrid system: a system for investigation of functional mechanism of a brain of a silkworm moth

Daisuke Kurabayashi (Tokyo Institute of Technology)

11.40 - 12.00 Converting nerve impulses into commands for the control of the robotic device

Joanna Jarmolowska (Università degli studi di Trieste)

12.00 - 12.20 Brain computer interface at the Milan Politecnico

Giuseppe Andreoni (Politecnico di Milano)

12.20 - 12.40 Communicating without moving guidance of attention in the development of a Brain Computer Interface

Mauro Marchetti (Università degli studi di Padova)

12.40 - 13.00 BCI integration in a robot

Matteo Matteucci (Politecnico di Milano)

13.00 - 13.05 Re-opening by the Chair

Piero Paolo Battaglini (Università degli studi di Trieste)

13.05 - 13.25 Brain Computer interface as a rehabilitation tool

Piero Paolo Battaglini (Università degli studi di Trieste)

13.25 - 13.45 BCI clinical experiences: P300 BCI in ALS. haptic device-BCI in stroke, tele-presence

Francesco Piccione (Ospedale San Camillo, Venezia)

13.45 - 14.05 Repetitive magnetic stimulation of the brain: basic theories and clinical applications

Letizia Leocani (Centro Magics - Ospedale San Raffaele, Milano)

14.05 - 15.05 CyberRat Project: A brain-chip Interface for high resolution bi-directional communication

Stefano Vassanelli (Università degli studi di Padova)

15.05 - 15.25 Cognitive assessment by BCI and Eye tracker in patients affected by ALS: "e-Brain project"

Laura Carelli (IRCCS Istituto Auxologico Italiano, Milano)

Barbara Poletti (IRCCS Istituto Auxologico Italiano, Milano)

15.25 - 15.45 Home tele-rehabilitation after a stroke

Michela Agostini (Ospedale San Camillo, Venezia)

15.45 - 16.05 Interaction with images and sounds in the BCI applications

Paolo Scoppola (video artista e programmatore)

16.05 - 16.15 Questions and closure of the session by the Chairs

Emanuele Menegatti (Università degli studi di Padova)

Piero Paolo Battaglini (Università degli studi di Trieste)