

Wednesday May 14, 2014

09:00 Registration

09:30 Introduction to the IARP Conference on bioinspired robotics

- Welcome from Frascati Center (Director Center Dr. G. M. Monti)
 - *The role of IARP in encouraging national and international communities: a stable national Conference for the new incoming researchers (Dr. Claudio Moriconi- ENEA)*
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Morning session

(After each talk there will be 5' time for questions and discussions)

Robotics in the human society

10:00 An innovative program to teach robotics at the primary school

(Dr.D. Scaradozzi – Univ. Politecnica delle Marche).

10:25 The social role of Robotics from the learning scholar activities to the Job opportunities

(Dr. A. Molina – Fondazione Mondo Digitale)

10:50 Cooperation opportunities within the National Robotics Initiative

(Prof. P. Bidaud– ICT Scientific Deputy ONERA French AerospaceLab Professor Université Pierre et Marie Curie- Paris)

11:15 Coffee break

11:35 Research and Experimentation on Autonomous Systems within the Extended Maritime Framework (Prof. A. Bruzzone– CMRE Centre for Maritime Research and Experimentation La Spezia)

Social inspired Robot Behaviours -1

12:00 Levy flight search of moving objects

(Ing. V. Fioriti - ENEA)

12:25 Cognitive Underwater Communications for Swarm Unmanned Vehicle Network

(Dr M. Tabacchiera – Univ, of Rome “Tor Vergata”.)

13:15 Lunch

May 14, 2014 - Afternoon session

(After each talk there will be 5' time for questions and discussions)

Social inspired Robot Behaviours -2

14:15 Large underwater swarm communication: high priority reaching of target areas via a shortest path approach

(Dr. C. Snels - ENEA)

14:40 A bioinspired intentional architecture for situated agents to explore human cognitive abilities

(Dr.A.M. Franchi – Politecnico di Milano)

Biological Body inspired functions - 1

15:05 **Human-Adaptive Control of Compliant Actuators**
(Dr. A. Calanca Univ. of Verona)

15:30 **Bio-Inspired Object Detection and Pose Estimation Algorithms for Underwater Environments**
(Dr F. Kallasi – Univ. of Parma.)

15:55 **Coffee break**

Round Table session

16:10 **Round table topics:**

- The IARP Status Report of the international community
- Robotics for education
- The engagement of ENEA within the national robotics community: the White Book of Robotics and Roboticalitalia initiatives

17:10 **End of first day**

17:30 **Visit to the archeological park “barco borghese” by bus in ENEA**
<http://www.barcoborghese.com/>

19:00 **Aperitif in Villa Vecchia garden**

19:30 **Classic trio concert in Villa Vecchia**

20:15 **Social dinner in Villa Vecchia**
<http://www.villavecchia.it/index.php?lang=it>

Thursday May 15, 2014

Morning session

(After each talk there will be 5' time for questions and discussions)

Biological Body inspired functions - 2

09:00 **PSO-Based Automatic Object Registration for Interactive Augmented Reality**
(Dr.G. Micconi - Univ of Parma)

09:25 **Body motion characterization for human-robot interaction**
(Prof.C. Granata – Centre National de Reference en Santé)

09:50 **Entrainment to natural oscillation modes using adaptive frequency oscillators for limbless locomotion**
(Dr. A. Alessi – Univ. Campus Biomedico Rome)

10:15 **Supporting Presbycusis Drivers in Detection and Localization of Emergency Vehicles: Alarm Sound Signal Processing Algorithms**
(Dr.M. Paoloni - ENEA.)

10:40 **Motion Principles for Designing Biologically Inspired Robots**

(Prof. V. Gradetsky Institute for Problems in Mechanics of the Russian Academy of Sciences)

11:05 Coffee break

11:20 Whole body humanoid motion control: as human do !
(Dr. P. Bideau – ICT Scientific Deputy ONERA French AerospaceLab
Professor Université Pierre et Marie Curie- Paris)

11:45 Structural Dynamic and Propulsion Modelling of a Pulsed-Jet Underwater Soft Robot
(Prof. C. Laschi Dr. F. Renda– Bio Robotics Institute Scuola Superiore S. Anna Pisa)

Social inspired Controls

12:10 Safe Physical Human-Robot Interaction Based on Dynamic Analysis and Use of Residuals
(Dr. C. Roberto Gaz - Univ. of Rome “La Sapienza”)

12:35 KALMAN underwater acoustic 3D localisation in group of Robots
(Dr. S. Taraglio - ENEA)

13:00 Environmentally induced task partitioning in competing bio-robots
(Prof. P. Arena – Univ. of Catania)

13:25 Lunch

May 15, 2014 - Afternoon session

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14:20 Localisation task for underwater swarms with minimum data
(Dr. R. dell'Erba ENEA)

14:45 Complementary redundant sensors for robot localization
(Dr. D. Carnevale – Dipartimento di Ingegneria Civile e Ingegneria Informatica, University of Rome Tor Vergata)

When robots operate in place of men

15:10 The challenge of architectonic survey and restoration of historical sites for service robotics.
(Dr. F. Tedeschi – LARM Univ. di Cassino e Lazio Meridionale.)

15:35 Using of small unmanned aerial vehicle and machine vision algorithms for environmental protection
(Dr. S. Pagnottelli University of Perugia.)

16:00 Coffee break

16:15 Voting for the best presentation and Award

16:30 Conference ending