

EUROS

Palermo, March 16-18

2006

EUROS-06 Organisers:

General Chair: Henrik I Christensen, KTH

Local Chair: Antonio Chella, UNIPA

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Roland Siegwart, EPFL

Hirochika Inoue, AIST

Oussama Khatib, Stanford

Matt Mason, CMU

Sukhan Lee, Korea

Opening ceremony

Rettorato - Palazzo Steri/Chiaramonte

Piazza Marina, 61

Conference

Aula Magna Facoltà di Ingegneria

Viale delle Scienze, Edificio 7

Sponsors:

Regione Siciliana

Comune di Palermo

Università degli Studi di Palermo

Polo Universitario della Provincia di Agrigento

Istituto di Calcolo e Reti ad Alte Prestazioni - CNR

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Unione degli Universitari

The European Robotics Network (EURON) is proud to present the first European Robotics Symposium (EUROS). This symposium is a response to demands for a high quality scientific event to present the best research on robotics across applications and topics.

EUROS 2006 is organized by Dipartimento di Ingegneria Informatica of the University of Palermo.

EUROS will be organised every two years at European locations. EUROS-06 is single track with high quality research presented orally or as posters. The material presented at the meeting is also published in a special volume of the Springer STAR series.

Foto gentilmente concessa dal Museo internazionale delle marionette "Antonio Pasqualino" Palermo



March 15th 2006 -- Arrival

- 17:00 Opening ceremony in the Palazzo Steri/Chiaramonte (Rettorato), Piazza Marina, 61
- 20:00 Cocktail Dinner

March 16th 2006

- 08.45 **Welcome** including
Ulf Dahlsten from CEC - European Robotics
- 09.30 **INVITED PRESENTATION I**
People vs. Robots in Space
C. Nicollier
- 10.15 COFFEE BREAK
- 10.45 **ROBOTICS AND SYSTEMS I**
An Ontology of Robotics Science
J. Hallam, H. Bruyninckx
- 11.20 A Multi-Agent System Architecture for Modular Robotic Mobility Aids
G. Lidoris, M. Buss
- 11.55 LUNCH
- 14.00 **LEARNING**
Incremental Learning of Task Sequences with Information-Theoretic Metrics
M. Pardowitz, R. Zöllner, R. Dillmann
- 14.35 Representation, Recognition and Generation of Actions in the Context of Imitation Learning
H. Dindo and I. Infantino
- 15.10 Reduction of Learning Time for Robots Using Automatic State Abstraction
M. Asadpour, M. N. Ahmadabadi, R. Siegwart
- 15.45 COFFEE BREAK
- 16.15 **AUTONOMY AND FAILURE DETECTION**
Efficient Failure Detection for Mobile Robots Using Mixed-Abstraction Particle Filters
C. Plagemann, W. Burgard, C. Stachniss
- 16.50 Optimization and Fail-Safety Analysis of Antagonistic Actuation for pHRI
G. Boccadamo, R. Schiavi, S. Sen, G. Tonietti, A. Bicchi
- 17.35 Bilateral Control of Different Order Teleoperators
J. M. Azorin, R. Aracil, J. M. Sabater, M. Ferre, N. M. Garcia, C. Perez
- 18.00 End of Science Programme Day 1
- 19.30 Gala Dinner

March 17th 2006

- 09.30 **INVITED PRESENTATION II**
SME Robot: The European Robot Initiative for Strengthening the Competitiveness of SMEs in Manufacturing
M. Hägele and K. Nilsson
- 10.15 COFFEE BREAK
- 10.45 **ROBOTICS AND SYSTEMS II**
How to Construct Dense Objects with SelfReconfigurable Robots
K. Stoy
- 11.20 In Situ Autonomous Biomechanical Characterization
M. Boukallel, M. Girod, S. Régnier
- 11.55 LUNCH
- 14.00 **VISION AND NAVIGATION**
Navigation and Planning in an Unknown Environment Using Vision and a Cognitive Map
N. Cuperlier, M. Quoy, P. Gaussier
- 14.35 Exploiting Distinguishable Image Features in Robotic Mapping
P. Jensfelt, J. Folkesson, D. Kragic, H. Christensen
- 15.10 Image-Based Visual Servoing for Mobile Robots with Catadioptric Camera
G. L. Mariottini, D. Prattichizzo, A. Cerbella
- 15.45 COFFEE BREAK
- 16.15 **LOCALIZATION AND MAPPING**
Multi-knowledge Approach for Mobile Robot Identification of a Changing Environment
Q. Wu, M. McGinnity, G. Prasad, D. Bell, B. Glckin
- 16.50 Robust Monte-Carlo Localization Using Adaptive Likelihood Models
P. Pfaff, W. Burgard, D. Fox
- 17.25 Metric Localization with Scale-Invariant Visual Features Using a Single Camera
M. Bennewitz, C. Stachniss, W. Burgard, S. Behnke
- 18.00 End of EUROS scientific programme

March 18th 2006

- 09.00 Welcome to the EURON Annual Meeting (Yr 2)
- 09.15 EURON Annual Report (*Christensen*)
- 10.00 COFFEE BREAK
- 10.30 Key Area Reports:
Research (*Dillmann & Pobil*)
Education (*Casals & Siegwart*)
Industry (*Hägele & Prassler*)
Dissemination (*Siciliano & Groen*)
- 11.50 Advanced Robotics - 6th call by the CEC
Pekka Karp
- 12.15 LUNCH
- 13.45 Open Forum
- 14.15 Parallel Sessions:
Tech Transfer Award Presentations
RoboEthics Discussion
Vision Based Human-Robot Interaction
Robot Benchmarking
Curricula Development
- 15.45 COFFEE BREAK
- 16.15 Parallel Sessions:
Vision Based Human-Robot Interaction
Robot Benchmarking
Curricula Development
- 17.45 Closing Session:
Announcement of Tech Transfer Award Winner
Announcement of the Giralt PhD Award
- 18.15 Close

March 19th 2006

- Post conference trip to Agrigento
- 08:00 - 10:00 Departure from Palermo
- 10:00 - 12:00 Presentation of the ICT activities of the Agrigento campus including the forthcoming robotics lab for cultural heritage
- 12:00 - 14:00 LUNCH
- 14:00 - 17:00 Visit the Valley of Temples
- 17:00 - 19:00 Departure from Agrigento