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Network of Excellence

Information Society Technologies Priority

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Announcement of PhD Award winners (Yr 4)

Due date of deliverable: 30 April 2008

Actual submission date: 2 June 2008

Start date of the project: 1 May 2004

Organisation name of lead contractor for this deliverable: UPC

Duration: 48 months

Revision: First version

Dissemination level: PU

7th Edition of the Georges Giralt PhD Award

Presentation in the Awards Ceremony on 28, March 2008 in Prague-Czech Republic.

The 7th edition of the Georges Giralt PhD Award was addressed to recognize the best Thesis presented in Europe during the year 2006 evaluating not only the Thesis itself, but its relevance measured as their impact in publications, patents or its exploitation, as well as the personal contribution of the candidate.

Since in this edition the number of thesis was big, 27 in front of the usual 10-12 of previous years, and due to the fact that the Jury found 6 very good proposals, three on Core Robotics and the other three, more oriented to Technology Transfer, it was decided to grant two awards, one in each line.

In the awards ceremony the three best submitted Thesis in each modality were presented for nomination and among them the two winners were selected. The three nominees in each modality are, in order of reception of submissions are:

Core Robotic Thesis:

Author: **Samir Bouabdallah,**

Title: ***Design and control of quadrotors with application to autonomous flying***

Advisor: **Roland Siegwart,** EPFL, Switzerland

For its contribution to modeling, design and control of miniature flying robots.

The thesis introduces a mathematical model for simulation and control of micro quadrotors, and establishes a methodology which is then applied to the design of flying platforms.

Author: **Andreas Nuechter,**

Title: ***Semantic three dimensional maps for autonomous mobile robots***

Advisor: **Joachim Hertzberg, Armin B. Cremers,** Rheinische Friedrich-Wilhelms-Universität Bonn, Germany

For its contribution to 3D modeling for mobile robots applications.

The thesis contributes with a 6D algorithm, interpretation of the resulting models, classification of points and extraction of certain types of objects.

Author: **Cyrill Stachniss,**

Title: ***Exploration and Mapping with Mobile Robots***

Advisor: **Wolfram Burgard,** University of Freiburg, Germany

For proposing a robust solution for building high-quality maps with mobile robots.

The Thesis contributes to several aspects of the problem: mapping, localization and path-planning for a team of robots, taking into account world/pose uncertainty, dynamic part of the environment plus semantic world information to achieve more robust and efficient navigation

*The winner of the Core Robotics Theses: **Cyrill Stachniss***

Technology transfer Thesis:

Author: **Vincent Duindam,**

Title: ***Port-Based modeling and control for efficient bipedal walking***

Advisor: **S. Stramigioli, J. van Amerongen,** The Netherlands

For its theoretical work on biped robots, with control development and real implementation

The Thesis contributes to the modeling of general multi-body systems and the efficient dynamic control of walking robots.

Author: **Eduardo Rocón,**

Title: ***Active reduction of pathological tremor of superior limbs by means of robotic exoskeletons***

Advisor: **José L. Pons and Antonio Barrientos,** Instituto de Automática Industrial, Madrid, Spain

For its contribution to rehabilitation robotics.

The thesis proposes a methodology for reducing temblor. The work involves scientific study of the needs of a robotics orthosis, its design, development and evaluation

Author: **Matthijs T. J. Spaan,**

Title: ***Approximate planning under uncertainty in partially observable environments***

Advisor: **Frans Groen and Nikos Vlassis,** Universiteit van Amsterdam, The Netherlands

For its contribution to planning under uncertainty

The thesis proposes a novel algorithm for an enormously complex problem, describes the planning working with multiple agents and deals with rigor through the testing.

*The winner of the Technology transfer Theses: **Eduardo Rocón***

The Award consists of a Diploma for the three nominees and a prize of 2500 € for each of the two winners.

The winners are invited to publish the thesis in the Springer- STAR Series, while the nominees are invited to submit their work for their potential publication in the same series.