



15è Congrés Internacional de l'Associació Catalana d'Intel·ligència Artificial

24, 25 i 26 d'octubre de 2012
Universitat d'Alacant

Organitza:

Grupo Robótica y Visión Tridimensional
Universitat d'Alacant



The Catalan Association
for Artificial Intelligence

Xerrades convidades

Dijous, 25 d'Octubre, 9:30 – 10:45

Eduardo Nebot: **Challenges of Automation and Safety in Field Robotics**



Eduardo Nebot is the Executive Director of the Australian Center for Field Robotics, at University of Sydney, Australia. This center counts with more than 70 research people in four core areas: Sensors, Fusion & Perception, Actuators, Control & Decision, Modeling, Learning & Adaptation, and Architectures, Systems & Cooperation. These four core research areas define the science of field robotics and intelligent systems and represent the main

focus of the ACFR. Eduardo's main research interest is about the field of robotics, focusing on the automation of open pit mines. He is the author of more than 100 journals and conference papers and has several patents in the area described before. His talk in the conference was about different research in the area of open pit mines, involving intelligent vehicles, computer vision, pattern recognition, sensors, etc.

Divendres, 26 d'Octubre, 9:30 – 10:45

Óscar Cordón: **Some Real-world Applications of Soft Artificial Intelligence: Scientogram Mining, Assembly Line Balancing, and Forensic Identification**



Óscar Cordón (SM'11) is Full Professor with the University of Granada (UGR), Granada, Spain. He was the founder and leader of that University's Virtual Learning Center between 2001 and 2005. From 2006 to 2011 he was one of the founding researchers of the European Centre for Soft Computing, Mieres, Spain, in his role of Principal Researcher, and he is still contracted as Scientific Advisor at the Centre.

He has been, for more than 15 years, an internationally recognized contributor to R&D Programs in fuzzy systems, evolutionary algorithms, and ant colony optimization. He has published around 280 peer-reviewed scientific publications including a research book on genetic fuzzy systems and 66 JCR-SCI-indexed journal papers, advised 13 Ph.D. dissertations, participated in 34 research projects and contracts (coordinating 20 of them), and co-edited eight special issues in international journals and three research books. By October 2012, his publications had received 1956 citations, carrying an h index of 23, and being included in the 1% of most-cited researchers in the world (source: Thomson's Web of Knowledge). He also has an approved international patent on an intelligent system for forensic identification that is being commercialized in Mexico. He is Associate Editor of 11 international journals and was recognized as the IEEE TRANSACTIONS ON FUZZY SYSTEMS Outstanding Associate Editor in 2008. He is a reviewer for more than 30 international journals. Since 2004, he has taken many different representative positions with Eusflat and the IEEE Computational Intelligence Society (CIS). He is currently a member of the IEEE CIS AdCom (term 2010-2012).

Prof. Cordón received the UGR Young Researcher Career Award in 2004. In July 2010, he received the IEEE CIS Outstanding Early Career Award in its 2011 edition, the first such award conferred. In 2011, his developments on soft computing methods in forensic identification were recognized with the IFSA Award for Outstanding Applications of Fuzzy Technology and with the granting of the EUSFLAT Best Ph.D. Thesis Award to Dr. Ibañez's PhD dissertation, co-advised by Dr. Cordón.

Programa social

Haurà un autobús que pujarà i baixarà tots els dies cap a/des de l'Universitat. Al matí sortirà a les 9:00 des de l'hotel Meliá. El dimecres 24 baixarà a les 20:00 cap al Castell. El dijous 25 baixarà a les 20:00 cap als hotels.

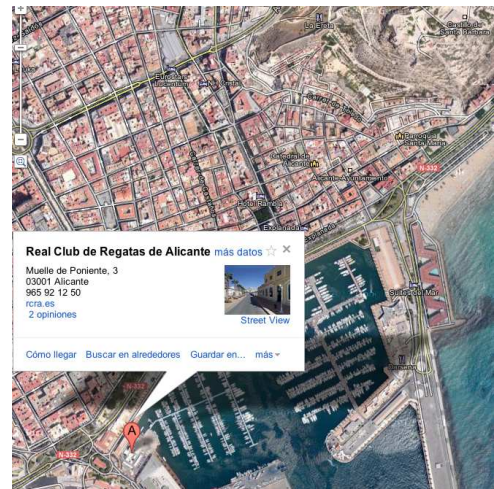
Dimecres 24 d'octubre. 20:00

Visita al Castell de Santa Bàrbara http://es.wikipedia.org/wiki/Castillo_de_Santa_B%C3%A1rbara
Visita guiada i sopar tipus cocktail. A les 20:00 sortirà un autobús des de la Universitat i ens durà al castell. Després baixarà als hotels i tornarà a pujar fins a la Universitat. Qui vulgui pot pujar amb el seu cotxe fins al Castell.

A la part alta del monte Benacantil, sobre la cridada Cara del Moro, es troba aquest castell. El conjunt que hi ha en l'actualitat és el resultat de diferents intervencions al llarg del temps. Així hi ha diversos recintes. L'origen del castell és àrab, no quedant restes visibles a causa de les transformacions medievals, les obres de les quals més antigues són el *Macho* i la muralla que forma el segon recinte. En el segle XVI va haver altra intervenció que abaluartó tot el recinte. En el segle XVIII es va produir una destrucció parcial, després de la qual es van realitzar reparacions i millores en el recinte defensiu. En 1852 va ser desartillado i va perdre el seu valor estratègic. Del conjunt encara queden diverses edificacions com casernes, torres, el cridat revellín del Bon Repós i les muralles de les quals solament queden restes en els vessants de Benacantil.

Dijous 25 d'octubre. 21:30

Sopar de gala. Restaurante Aldebarán. Real Club de Regatas de Alicante



Els menjars dels dies 25 i 26 tindran lloc en el restaurant Mar i Terra situat en el club social 1.

Programa de la conferencia

Dia 1 (24/10/2012)

15:30 - 16:00	Registre
16:00 - 16:20	Inauguració del congrés
16:20 - 17:00	Sessió 1: KDD, DM and Machine Learning 1 Chairman: Diego Viejo <i>The use of the Traffic Lights Panel as a goodness-of-clustering indicator. An application to Financial Assets</i> Dante Conti and Karina Gibert <i>Active learning of actions based on Support Vector Machines</i> Francisco Ruiz, Albert Samà and Núria Agell
17:00 - 17:30	Pausa café
17:30 - 18:30	Sessió 2: KDD, DM and Machine Learning 2 Chairman: Núria Agell <i>Towards the formalization of re-identification for some data masking methods</i> Vicenç Torra <i>Data Mining and Query Answer techniques applied to a bio-nutritional trials focused Expert System</i> Oscar Alonso, Pedro de la Peña, Aitor Moreno, Gabriel Anzaldi and Xavier Domingo <i>Using Gabriel graphs in Borderline-SMOTE to deal with severe two-class imbalance problems on neural networks</i> Primitivo Toribio, Roberto Alejo, Rosa María Valdovinos and Horacio Pacheco-Sánchez
18:30 - 19:30	Premi ACIA
20:00	Visita al Castell d'Alacant.

Dia 2 (25/10/2012)

9:30 - 10:45	Xerrada convidada <i>Challenges of Automation and Safety in Field Robotics</i> Eduardo Nebot
10:45 - 11:45	Sessió 3: Natural Language Processing and Recommenders Chairman: Vicenc Torra <i>Towards Object Descriptions in Natural Language from Qualitative Models</i> Zoe Falomir, Lledó Museros, Pablo Ródenas and Ismael Sanz <i>Semantically-Enhanced Recommenders</i> Victor Codina and Luigi Ceccaroni <i>Extending a temporal defeasible argumentation framework with possibilistic weights</i> Lluís Godó, Enrico Marchioni and Pere Pardo
11:45 - 12:15	Pausa café
12:15 - 13:35	Sessió 4: Computer Vision Chairman: Domenec Puig <i>Supervised Texture Classification Using Optimization Techniques</i> Domenec Puig, Jaime Melendez, Agusti Solanas, Aïda Valls and Antonio Moreno <i>Modelling facial expressions dynamics with Gaussian Process Regression</i> Adria Ruiz and Xavier Binefa <i>Survey on Spatio-Temporal View Invariant Human Pose Recovery</i> Xavier Pérez-Sala, Sergio Escalera and Cecilio Angulo <i>A study of registration techniques for 6DoF SLAM</i> Vicente Morell, Miguel Cazorla, Diego Viejo, Sergio Orts and Jose Garcia
13:35 - 15:30	Dinar
15:30 - 16:50	Sessió 5: Robotics Chairman: Cecilio Angulo <i>Selection and adaptation of an object detection method for robot grasping</i> Ferran Rigual, Arnau Ramisa, Guillem Alenya and Carme Torras

The role of i-Walker in post-stroke training
Benedetta Giuliani, Ulises Cortés, Antonio Martinez Velasco, Cristian Barrué and Roberta Annicchiarico

Using a RGB-D camera for 6DoF SLAM
José Muñoz, Daniel Pastor, Pablo Gil, Santiago Puente and Miguel Cazorla

Learning Topological SLAM using Visual Information
Anna Romero and Miguel Cazorla

16:50 - 17:20 Pausa café

17:20 - 18:40 **Sessió 6: AI Applications to Real World**
Chairman: Domingo Gallardo

A Case-Based Hybrid System for Injection Molding Sensorization
Isaac Pinyol, Raquel Ventura and David Cabanillas

Firsts Studies on Self-Preserving Digital Objects
Josep Lluís De La Rosa and José Antonio Olvera

Intelligent Building Energy Management through holistic knowledge based approach
Gabriel Anzaldi, Aitor Corchero, Dan Gutu, Milan Marinov, Michael James Dibley and Kris McGlenn

Quantitative and qualitative approaches for stock movement prediction
Jordi Petchamé Sala, Àngela Nebot and René Alquézar

18:40 - 20:00 Assamblea ACIA

21:30 Sopar de gala.
Lloc: Restaurante Aldebarán
Muelle de Poniente, 1 (Real Club de Regatas)
Junto a C.C. Panoramis

Dia 3 (26/10/2012)

9:30 - 10:45 **Xerrada convidada**
Some Real-world Applications of Soft Artificial Intelligence: Scientogram Mining, Assembly Line Balancing, and Forensic Identification
Óscar Cordon

10:45 - 11:15	Pausa café
11:15 - 12:55	<p>Sessió 6: AI for Optimization Problems Chairman: José García</p> <p><i>Exploring Genetic Algorithms and Simulated Annealing for Immobile Location-Allocation Problem</i> Ferran Torrent, Víctor Muñoz and Beatriz López</p> <p><i>Analysis and Generation of Pseudo-Industrial MaxSAT Instances</i> Carlos Ansótegui, María Luisa Bonet, Jordi Levy and Chu Min Li</p> <p><i>A SAT-Based Approach to MinSAT</i> Carlos Ansótegui, Chu Min Li, Felip Manyà and Zhu Zhu</p> <p><i>Multicast Session Protection Planner - Tool to plan and deploy protection infrastructure: SPEA approach</i> Ferney A. Maldonado-Lopez and Yezid Donoso</p>
13:00 - 13:30	Cloenda
13:30	Dinar

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Patrocinadors:

Vicerrectorado de
Cultura, Deportes y
Política Lingüística



Universitat d'Alacant
Universidad de Alicante

Colaboradors:

Ministerio de Economía y competitividad.
Proyecto TIN2011-15366-E

