16th International Conference of the Catalan Association of Artificial Intelligence

23rd, 24th and 25th October, 2013
University of Vic

Organized by:
Departament de Tecnologies Digitals i de la Informació
University of Vic

Invited talks

Wednesday, October 23rd, 15:30 – 14:30
Vladimir Estivill-Castro (Griffith University , UPF visitor) **Integration of Planing and Reasoning into an Architecture that Enables Model-Driven Development**

Vladimir Estivill-Castro (http://www.ict.griffith.edu.au/~vlad/) is currently team leader of MI-PAL, who has participated in RoboCup 2011, RoboCup 2012 and RoboCup 2013 in the Standard Platform League using the Humanoid Robot Nao. His main interest are software engineering, algorithmic engineering, computational complexity, intelligent data analysis, privacy preserving data mining and knowledge discovery.

Prof. Estivill-Castro holds a Ph.D. from the University of Waterloo in Canada and degrees from UNAM in Mexico. He serves in the editorial board of the Journal of Research and Practice in Information Technology, is editor in chief of the series Conferences in Research and Practice in Information Technology and serves on the editorial review board of the International Journal of Data Warehousing and Mining. Prof. Estivill-Castro is a scholar based at Griffith University in Australia but regularly visits the Universitat Pompeu Fabra in Spain

Friday, October 25th, 9:30 – 10:30
Carme Torras (IRI-CSIC), **From the Turing test to science fiction: The challenges of social robotics**

Carme Torras (www.iri.upc.edu/people/torras) is Research Professor at CSIC, head of the Research Group "Perception and Manipulation" at the Institut de Robòtica i Informàtica Industrial (CSIC-UPC), and author of the science-fiction novel "La mutació sentimental". Her research interests range from robot kinematics, computer vision and neurocomputing, to geometric reasoning and manipulation planning.

Social Program

Wednesday, October 23rd, 19:30
Guided Tour into the Old Town

Vic is the capital town of these lands, a twice-a-week market-place since medieval ages. Every Tuesday and Saturday there is a crowded market in the very city centre, at the gothic arches surrounding the place you could find the farmers' market. You could also buy excellent pork derivates in the nearby specialized butcher's shops. Walking through the old town streets you could feel the ancient history at every building. Visit the Cathedral, with S.XX frescoes from J.M. Sert and don't miss the Episcopal Museum, with their valuable collections of paintings of S.XII Romanesque, S.XIV-XVI Gotic and 16th to18th centuries and a large number of collections of the industrial or decorative arts.

We will do a trip around the old town and we will end at Casa Convalescència building, where we will be welcome by a representation of the City .

Thursday, October 24th, 20:00

Gala Dinner. In the modernist Salle at the Casino de Vic, hosted in the modernist Casa Comellas near the Old Market Square.

Lunch place for 24th & 25th

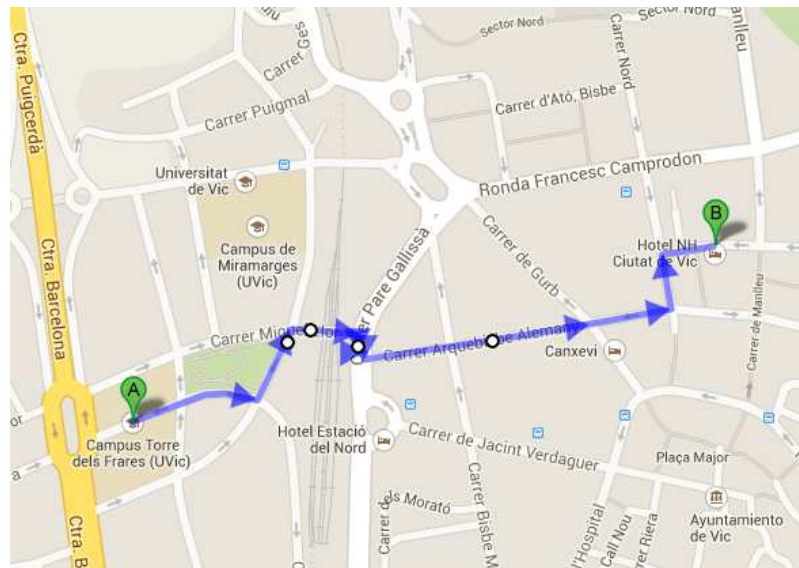*Tuesday, October 24th, 13:30-15:00*
Lunch at NH Hotel Ciutat de Vic

Friday, October 25th, 14:10-15:30
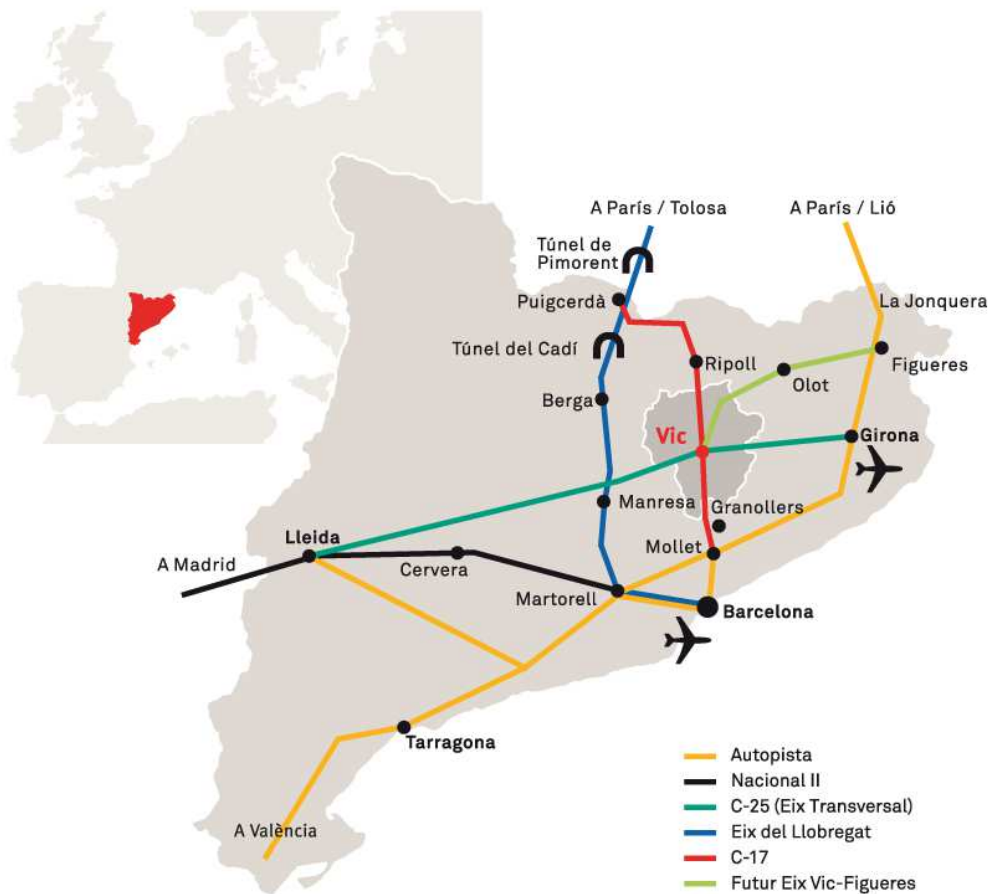**Lunch at NH Hotel Ciutat de Vic**

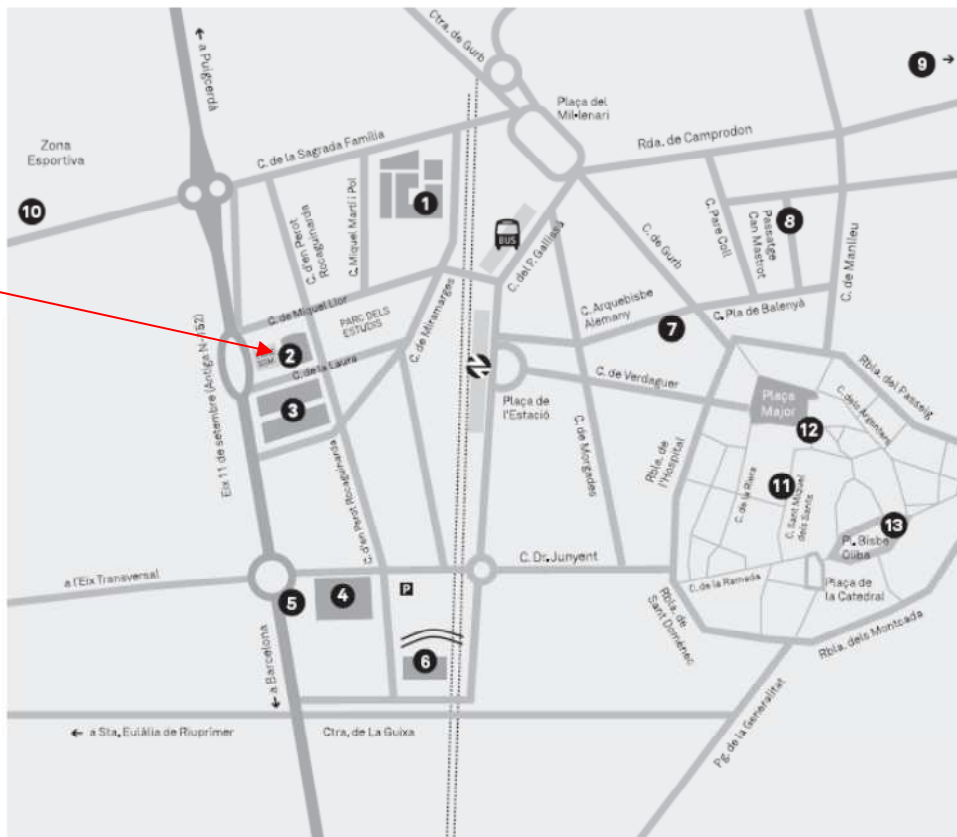10 min walk from the site of the conference

Location

Map

- **65 Km from Barcelona Train R3 / Bus**

- **62 Km Girona, EixBus**
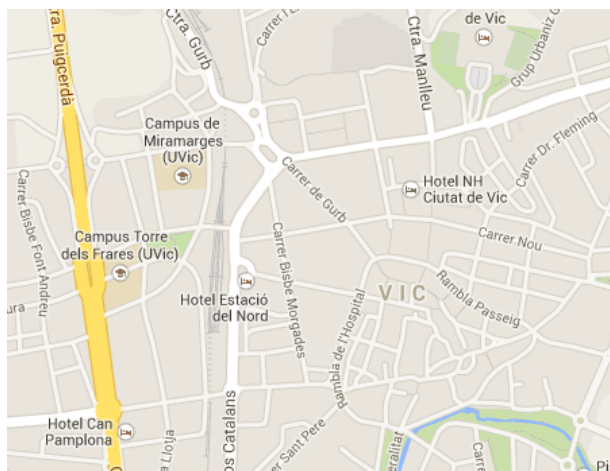
- **BCN-El Prat 72Km**

- **Girona Airport 54Km**

Congress Site

Segimon Serrallonga Conference Room, in the "**Masia de la Torre dels Frares**" UVIC(Universitat de Vic), in front of the Renfe R3 (Rodalies 3) train station, and near the Central Bus Station of the town.

1. Campus Miramarges
2. Masia Torre dels Frares
   Escola d'Idiomes / Eumo Editorial / Eumogràfic
3. Edifici Torre dels Frares
4. Edifici El Sucre
5. Hotel can Pamplona
6. Recinte firal El Sucre

7. Biblioteca Joan Triadú i Museu de l'Art de la Pell
8. Hotel Ciutat de Vic
9. Hotel Balmes / Hospital General de Vic
10. Residència Canonge Collell
11. Residència Sant Miquel dels Sants
12. Ajuntament de Vic
13. Museu Episcopal

Hotels

Locations of Hotels and UVIC campus on the map

Allotjaments Vic/ Seminari [+]

El Seminari
Ronda Francesc
Camprodon, 2
08500 Vic
Telèfon Ⓢ 902 70 20 32

www.seminarivic.cat
estades@seminarivic.cat

Hotel Ciutat de Vic (3 estrelles) [+]

Passatge Mastrot, s/n
VIC 08500
Telèfon Ⓢ 938 892 551

www.nh-hotels.com

Hotel Estació del Nord (2 estrelles) [+]

Hotel Estació del Nord
Plaça Estació, 4
08500 Vic
telèfon. Ⓢ 93 516 62 92

www.estaciodelnord.com
info@estaciodelnord.com
reserves@estaciodelnord.com

Hotel Can Pamplona (3 estrelles) [+]

Eix Onze de Setembre,10
VIC 08500
telèfon: Ⓢ 938 833 112

www.canpamplona.com

Hotel Balmes (3 estrelles) [+]

Hotel Balmes (3 estrelles)
Carrer Francesc Pla "el Vigatà", 6
VIC 08500
telèfon Ⓢ 938 891 272

www.hoteljbalmes.com

Conference Program

Wednesday, October 23rd

Registration
13:30 – 15:00 Registration

Institutional Opening
15:00 – 15:30 Institutional Opening

> *Rector of the University of Vic: Jordi Montaña*
>
> *ACIA Chair: Vicenç Torra (IIIA-CSIC)*
>
> *General Chair CCIA 2013: Vicent Botti (UPV)*
>
> *Programme Chair: Karina Gibert (UPC)*
>
> *Local arrangement Chair: Ramon Reig-Bolaño (UVIC)*

Invited talk
Chairperson: Ramon Reig-Bolaño (UVic)

15:30 – 16:30 Integration of Planing and Reasoning into an Architecture that Enables Model-Driven Development
Vladimir Estivill

Session 1: Relational Learning
Chairperson: Felip Manyà (IIIA)

16:30 – 16:50 An Approach to Re-representation in Relational Learning
Santiago Ontañón and Enric Plaza.

16:50 – 17:10 Graph constrained label propagation on water supply networks
Manuel Herrera, Eva Ramos Martínez, Joaquín Izquierdo, Rafael Pérez García

17:10 – 17:30 Hierarchical Inference Applied to Cyc
Dario Garcia-Gasulla and Ulises Cortes.

17:30 – 17:50 Coffee Break & Poster Session

Session 2: Planning, Satisfiability and Constraints
Chairperson: Oscar Sapena (UPV)

17:50 – 18:10 Comparison of MOMDP and Heuristic Methods to Play Hide-and-Seek
Alex Goldhoorn, Alberto Sanfeliu and René Alquézar.

18:10 – 18:30 Forward-Chaining Planning with a Flexible Least-Commitment Strategy
Oscar Sapena, Eva Onaindia and Alejandro Torreño Lerma.

18:30 – 18:50 A Max-SAT-based Approach to Constructing Optimal Covering Arrays
Carlos Ansótegui, Idelfonso Izquierdo, Felip Manya and José Torres-Jiménez.

18:50 – 19:10 Solving Routing and Wavelength Assignment problem with Conflict-Driven ASP solvers.
Ramon Bejar, Cèsar Fernández, Francesc Guitart and Carles Mateu.

19:30 Social event: Vic guided Tour and Reception at the City Hall

Thursday, October 24th

Session 3: Multiagent systems
Chairperson: Bea López (UDG)

09:30 – 09:50 Applying IRON to a Virtual Community Scenario
Javier Morales, Iosu Mendizabal, David Sanchez-Pinsach, Maite López-Sánchez and Juan A. Rodríguez-Aguilar.

09:50 – 10:10 Applying COAALAS to SPiDer
Jonathan Moreno, Ulises Cortes, Dario Garcia-Gasulla, Sergio Alvarez-Napagao and Ignasi Gómez-Sebastià.

10:10 – 10:30 Coffee Break & Poster Session

Session 4: Preprocessing
Chairperson: Manuel Herrera (UBruxelles)

10:30 – 10:50 External Validity Indices for Unsupervised Feature Selection
Javier Bejar.

10:50 – 11:10 An experimental features selection approach in a multiclass classifier
Ramon Reig-Bolaño and Pere Marti-Puig.

11:10 – 11:30 Vector Space Model Anonymization
Daniel Abril, Guillermo Navarro-Arribas and Vicenc Torra.

11:30 – 11:50 Break and Poster Session

Session 5: Patterns extraction in Data Mining, Modelling, learning, soft-computing and hybrid approaches
Chairperson: Miquel Sánchez (UPC)

11:50 – 12:10 The Architecture of a Churn Prediction System Based on Stream Mining
Borja Balle, Bernardino Casas, Alex Catarineu, Ricard Gavalda and David Manzano-Macho.

12:10 – 12:30 Kernel Functions for Categorical Variables with Application to Problems in the Life Sciences
Lluís Belanche and Marco Villegas.

12:30 – 12:50 Finding patterns in Cognitive Rehabilitation
Alejandro García Rudolph and Karina Gibert.

12:50 – 13:10 An Efficient Closed Frequent Itemset Miner for the MOA Stream Mining System
Massimo Quadrana, Albert Bifet and Ricard Gavalda.

Session 6: Post-processing, model interpretability and decision support
Chairperson: Alfredo Vellido (UPC)

15:00 – 15:20 Post-Processing the Class Panel Graphs: Towards Understandable Patterns
from Data
Beatriz Sevilla, Karina Gibert and Miquel Sànchez-Marrè.

15:20 – 15:40 Natural language-based automatic qualitative description of clusters
Germán Sánchez-Hernández, Núria Agell and Juan Carlos Aguado.

15:40 – 16:00 The Use of NLP Interchange Format for Question Answering in Organizations
Majid Latifi and Miquel Sànchez-Marrè.

16:00 – 16:20 Annotated-Traffic Lights Panel as a tool to evaluate the risk of decisions
based on prototypes
Dante Conti and Karina Gibert

16:20 – 16:40 Coffee Break & Poster Session

Session 7: Recommenders, Similarity and CBR
Chairperson: Aïda Valls (URV)

16:40 – 17:00 An Approach for Sketch Retrieval based on Qualitative Shape Similarity Matching
Lledó Museros, Zoe Falomir, Ismael Sanz and Luis González-Abril.

17:00 – 17:20 A semantic similarity measure for objects described with multi-valued
categorical attributes
*Antonio Moreno, Aida Valls, Ferran Mata, Sergio Martínez, Lucas Marín and Carlos
Vicient.*

17:20 – 17:40 An approach to couple two forms of feedback in conversational recommenders
Maria Salamó, Anna Puig and David Contreras.

17:40 – 18:00 Melanoma Diagnosis based on Collaborative Multi-Label Reasoning
*Ruben Nicolas, Albert Fornells, Elisabet Golobardes, Guiomar Corral, Susana Puig and
Josep Malvehy.*

18:00 – 19:30 Panel Discussion:"Is there scientific journalism in our country? The importance of the Artificial Intelligence dissemination"
Chairperson: Josep Puyol (IIIA)

21:00 Social event: Gala Dinner

Friday, October 25th

Invited talk
Chairperson: Carles Sierra (IIIA)

09:30 – 10:30 From the Turing test to science fiction: The challenges of social robotics
Carme Torras

10:30 – 10:50 Coffee Break & Poster Session

Session 8: Perception and image processing I
Chairperson: Núria Agell (ESADE)

10:50 – 11:10 Selection of Gabor Filters with Choquet Integral for Texture Analysis in Mammogram Images
Aida Valls, Cindy Medina, Antonio Moreno and Domenec Puig.

11:10 – 11:30 Towards Cognitive Image Interpretation – Qualitative Descriptors, Domain Knowledge and Narrative Generation
Zoe Falomir.

11:30 – 11:50 Large-scale image classification using ensembles of nested dichotomies
Arnau Ramisa and Carme Torras.

11:50 – 12:10 Break and Poster Session

Session 9: Perception and image processing II
Chairperson: Jordi Solé (UVic)

12:10 – 12:30 Automatic Hand Detection in RGB-Depth Data Sequences
Vitaliy Konovalov, Albert Clapes and Sergio Escalera.

12:30 – 12:50 Granular Computing for Gait Recognition through Singular Spectrum Analysis
Albert Samà, Francisco J. Ruiz and Núria Agell.

12:50 – 13:10 Quantitative analysis of non-verbal communication for competence analysis
Alvaro Cepero, Albert Clapes and Sergio Escalera.

13:10 – 13:30 Closed Contour Shape Descriptors with High Compression Properties Based on the Discrete Hartley Transform
Pere Marti-Puig, Ramon Reig-Bolaño and Jaume Danés Garulera.

14:00 – 15:30 Lunch

15:30 – 15:50 Marc Esteva Vivanco Award

15:50 – 16:05 ACIA Award

16:05– 16:20 ACIA Grants

16:20 – 16:30 Closure

16:30 – 17:30ACIA General Meeting and coffee