



# International Congress on Environmental Modelling and Software (iEMSs'2008)

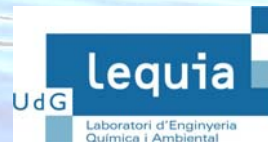
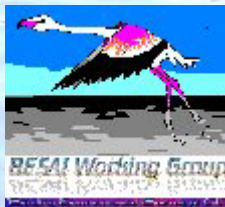
Integrating Sciences and Information Technology for  
Environmental Assessment and Decision Making

# Barcelona 2008

July 2008



Knowledge Engineering and Machine Learning Group  
UNIVERSITAT POLITÈCNICA DE CATALUNYA



# CATALONIA

Girona

Barcelona

Location

SPAIN



# Technical University of Catalonia (UPC)

65 Degrees

32.398 undergraduate students

16 Schools and Faculties

2.985 Ph. D. students

10 Campus

2.642 Research and Teaching staff

13 Libraries

1.294 Administrative staff

41 Departments

267.187.281 € Public funding (2005)

3 Research Institutes

48.260.800 € generated by Research, Innovation and Technological Transfer (2005)

9 Consortiated Schools and Faculties

Member of CLUSTER consortium

12 Vinculated Entities



# Organising Groups

- Knowledge Engineering & Machine Learning Group (KEMLG)
- Dept. of Computer Software
- Technical University of Catalonia
- Campus Nord
- Barcelona
- Chemical and Environmental Engineering Laboratory (LEQUIA)
- Institute of Environment
- University of Girona
- Campus de Montilivi
- Girona



# KEMLG (1)

- **Knowledge Engineering and Machine Learning Group** was founded in 1989 within the Department of Computer Software at UPC
- **Members**
  - 1 Full Professor
  - 6 Associate professors
  - 2 Post-doc researchers
  - 1 partial-time post-doc researcher
  - 7 Ph.D. students
  - $\cong$  10 undergraduate Master's Thesis students



Knowledge Engineering and Machine Learning Group  
UNIVERSITAT POLITÈCNICA DE CATALUNYA

# KEMLG (2)



**Environmental  
Sciences**

**Health**

**Knowledge  
Management**

Multiagent Systems and Grid Computing

Machine Learning and Data Mining

Knowledge Representation

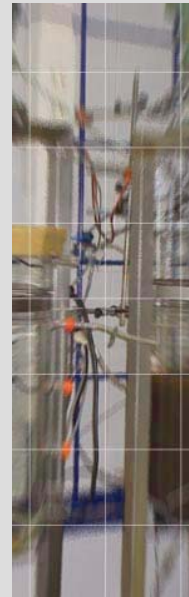
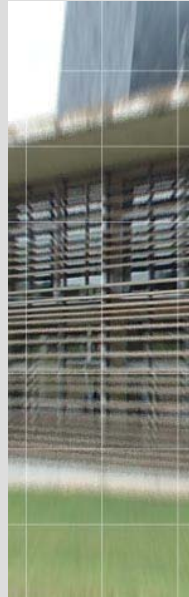
IEDSS, Intelligent Decision Support Systems

# LEQUIA (1)

- Chemical and Environmental Engineering Laboratory was founded in 1993 within the Department of Chemical Engineering at UdG
- Members
  - 1 Full Professor
  - 6 Associate Professors with a PhD in Sciences, Environmental Technologies or Civil Engineering
  - 2 Assistant professors
  - 15 PhD Students
  - 1 Post-doc researcher
  - 2 Technicians
  - $\cong$  5 undergraduate Master's Thesis students



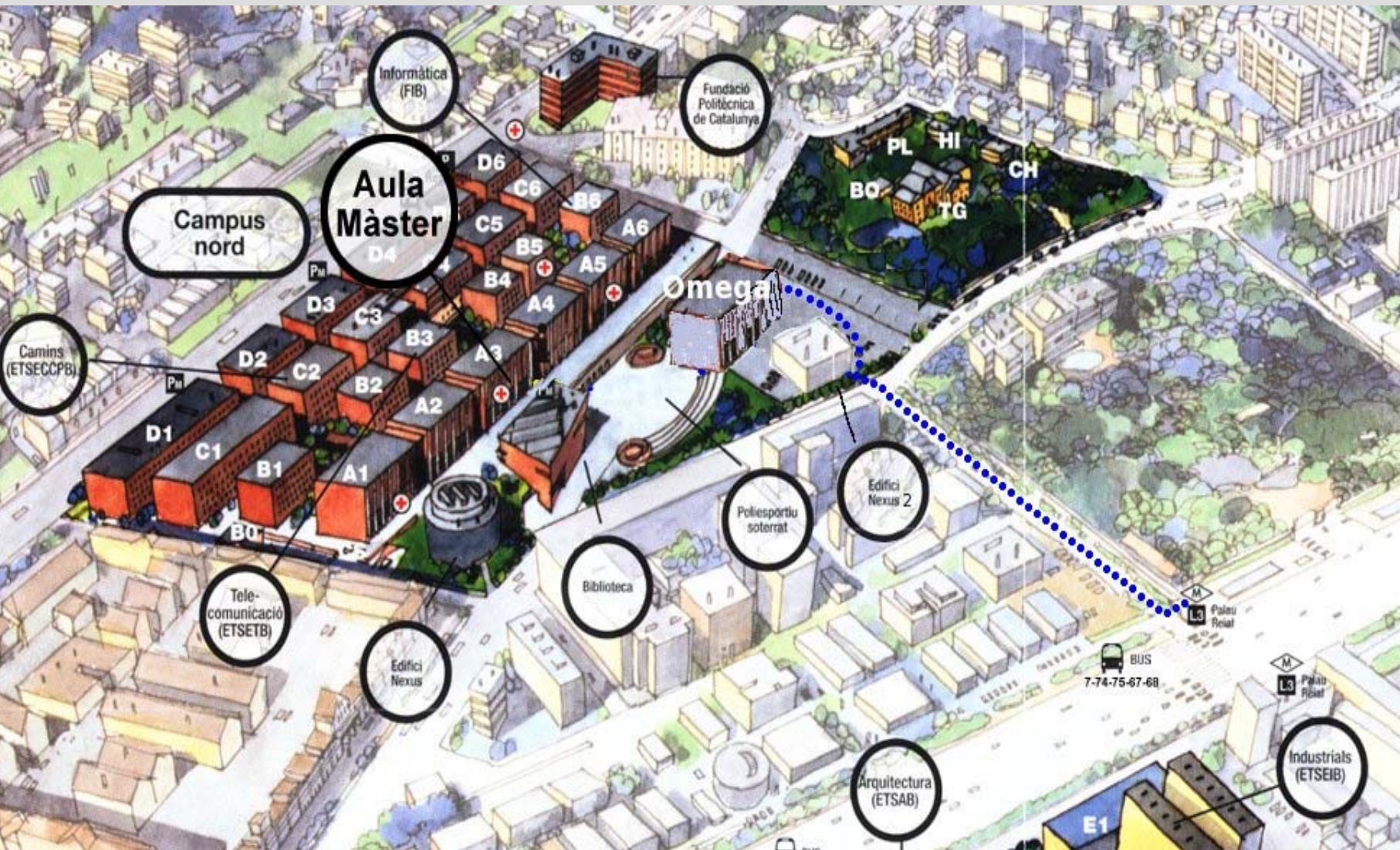
# LEQUIA (2)



- ✓ **Environmental Decision Support Systems**
- ✓ **Biological Nutrient Removal processes**
- ✓ **Multi-criteria conceptual (re)design**
- ✓ **Fuzzy control**
- ✓ **Sludge revalorisation**
- ✓ **Cleaner Technologies**



# VENUE



CAMPUS NORD – UPC - BARCELONA





# TECHNOLOGY TRANSFER POINTS

NEXUS and NEXUS 2



# LIBRARY RECTOR GABRIEL FERRATÉ



© UPC



## COMPUTER SOFTWARE DEPT. OMEGA Building





RECTOR'S OFFICE





VERTEX Building





AUDITORI Plenary Sessions room



© UPC



## CAMPUS VIEW

© UPC



## COMPUTER LABORATORY ROOMS



# COMPUTER SCIENCE SCHOOL



© UPC



© UPC



© UPC

## CAMPUS SQUARES



© UPC



© UPC

SPORT CENTER

What to do and what to see in  
BARCELONA ?

# AGBAR Tower (*Jean Nouville 2003*)



**Olympic Area of Montjuïc:**  
**Communications tower**  
*(Calatrava 1992)*

**Palau Sant Jordi**  
*(Arata Isozaki 1992)*

*Olympic Stadium, 1929*





**UNESCO World Heritage:**

Espai d'imatge - ©Turisme de Barcelona

# **Naissance Façade Sagrada Família**

*(Antoni Gaudí, 1882- ?)*





Jordi Trullàs - ©Turisme de Barcelona



**Park Güell**  
**1900-1914**

# UNESCO World Heritage

## Catalan modernism

*(Antoni Gaudí)*

**La Pedrera**  
*Casa Milà, 1910*



Lluís Bertran - ©Turisme de Barcelona

UNESCO World heritage  
Palau de la Música Catalana  
(Domènech i Muntaner, 1905-1908)







## **OPERA HOUSE: Gran Teatre del Liceu**



**Museums: Picasso, Miró, MACBA, ...**



# Old Town: Gothic Quarter



**The Cathedral**  
**XIIIth Century**



# Old Town: Gothic quarter





# Life City: The Ramblas





# Night Life: Montjuïc's Magic Fountain



## **C. Buhigas, 1929 Universal Exposition**





Espai d'Imatge - ©Turisme de Barcelona

Globo Foto - ©Turisme de Barcelona

## Litoral Seaside

### Old Harbour





Espai d'Imatge - ©Turisme de Barcelona



Espai d'Imatge - ©Turisme de Barcelona



Espai d'Imatge - ©Turisme de Barcelona

## Olympic Harbour and Beaches



# Gastronomy



# SPORT



## F.C. Barcelona Stadium

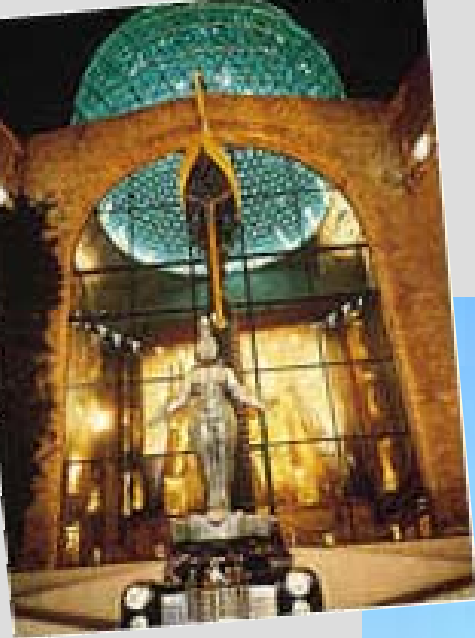


## F.C. Barcelona Museum



What to do and what to see in the  
surroundings ?

# The surrealism: Salvador Dalí's Museum



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## Archeological sites and Beach: Empúries VIth century bC





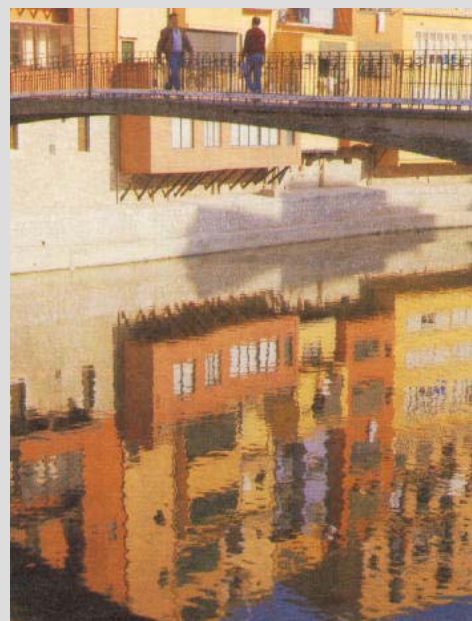




# National Park: Cap de Creus

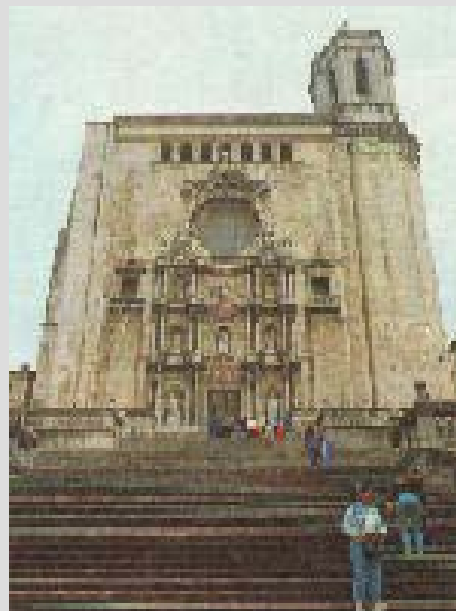






**GIRONA Jewish quartier**

**GIRONA's Cathedral**



## Beaches: The Costa Brava





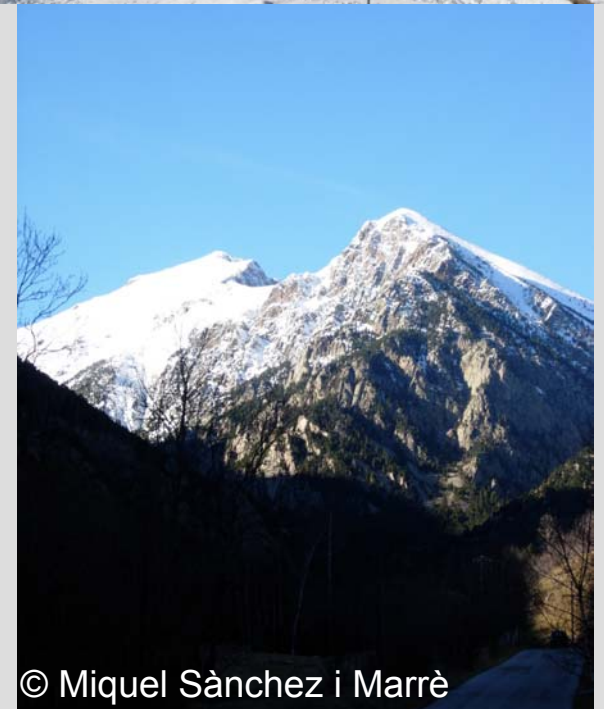


# Nature and Religion: Montserrat Abbey and National Park





# Pyrenees mountains



# Pintoresque villages: Sitges





# How to get Barcelona ?

- By plane:
  - El Prat International Airport
  - Girona-Costa Brava Airport
    - Many low-cost companies (RyanAir, etc.)
- By train
  - Sants Central Train Station
- By ship
  - Barcelona harbour
    - Many cruises and ferries available

# Related Events

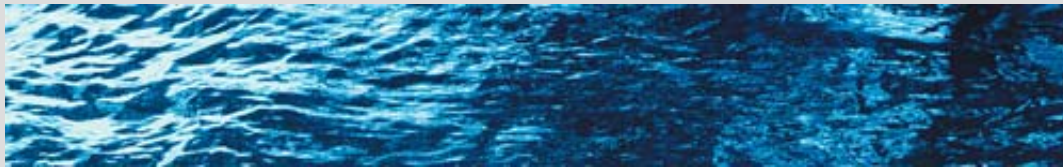
**International Exposition**

**EXPO ZARAGOZA 2008**

**Water and Sustainable Development**

**June 14 – September 14 2008**

**Zaragoza, Spain**



[http://www.expozaragoza2008.es/lib/p\\_idiomas.asp?idioma=EN](http://www.expozaragoza2008.es/lib/p_idiomas.asp?idioma=EN)



SEE YOU in 2008 !!!