

# CAOS

LABORATORY  
CONTROL, LEARNING  
AND SYSTEMS  
OPTIMIZATION

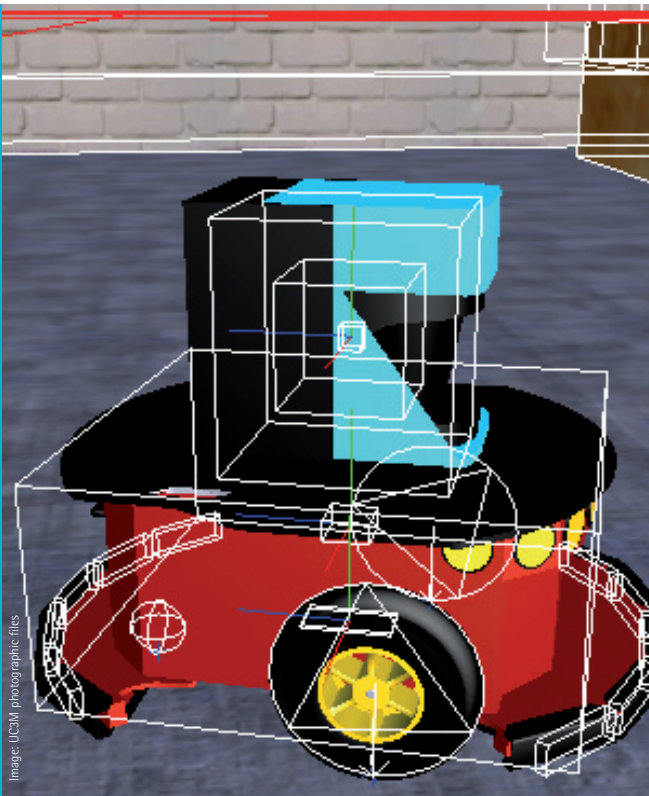


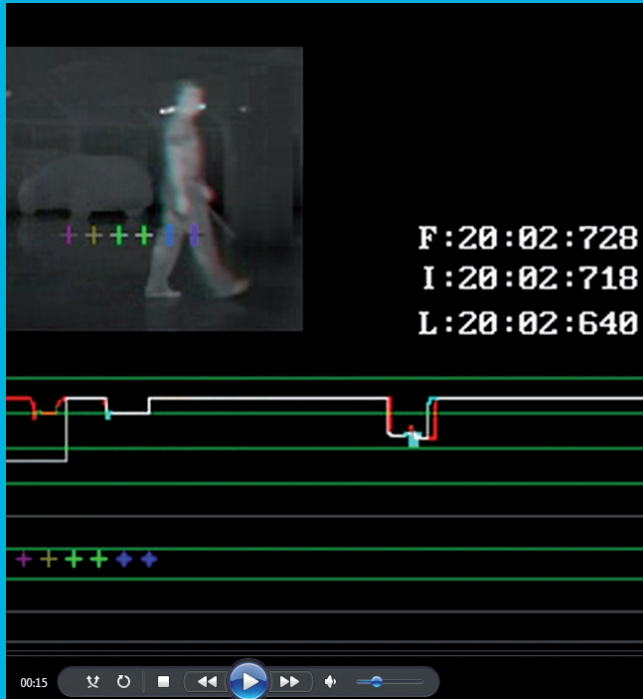
Universidad  
Carlos III de Madrid  
[www.uc3m.es](http://www.uc3m.es)

UC3M

R E S E A R C H G R O U P S

Image: UC3M photographic files





*Sensor Fusion (radar and thermal imaging)*

The Control, Learning and Systems Optimization Laboratory (CAOS), led by Dr. M<sup>a</sup> Araceli Sanchís de Miguel, is formed by a team of 12 professionals who are experts in the prediction, optimization, control of business services, processes and decisions based on data analysis, using advanced artificial intelligence technologies.

Technologies know-how that CAOS' members contribute to group's research lines allow automating services and developing of complex tasks within companies.

## • LINES OF RESEARCH •

- Artificial intelligence
- Intelligent data analysis
- Pattern recognition
- Activity recognition
- Control optimization
- AI applied in games



*Robot and sensors*

## • OUTSTANDING COLLABORATIONS AND R&D&I PROJECTS •

The CAOS group maintains collaborations with: GAMCO, S.L. (Machine Generation of Knowledge Models); Sigma Data Services, S.L.

The most relevant R&D&I projects of the group include:

- Advanced Driver Assistance System for Urban Environments: Artificial Intelligence.  
*Funding Entity: Ministry of Education and Science. Date: 2004-2007*
- Pedestrians and Bikers Detection System - Sensor Fusion  
*Funding Entity: Ministry of Education and Science. Date: 2007-2010*
- Trainutri. Training and Nutrition senior social platform.  
*Funding Entity: European Union. The Ambient Assisted Living Joint Programme  
Date: 2010-2012*

## • INNOVATIVE TECHNOLOGICAL SOLUTIONS •

- System for the efficient identification of road traffic signs by means of sets of classifiers.
- Advanced tools for the automatic analysis of market data.
- Forecasting Time Series by mean of Artificial Neural Networks and Evolutionary Computation.
- Activity recognition: algorithms for human/agents activities recognition.
- Artificial intelligence software targeted to computer sector companies interested in integrating these techniques into the products and Solutions that they offer.



Science Park Universidad Carlos III de Madrid

Technology Transfer Office

Tel +34 916244023/4011 · Fax +34916244097

E-mail [comercializacion@pcf.uc3m.es](mailto:comercializacion@pcf.uc3m.es)

Web [www.uc3m.es](http://www.uc3m.es)

# CAOS

## *Contact Information*

HEAD RESEARCHER  
Araceli Sanchis

E-MAIL  
[araceli.sanchis@uc3m.es](mailto:araceli.sanchis@uc3m.es)

WEBSITE  
[www.uc3m.es/portal/page/portal/research/research\\_groups/caos](http://www.uc3m.es/portal/page/portal/research/research_groups/caos)



Universidad  
Carlos III de Madrid  
[www.uc3m.es](http://www.uc3m.es)

IMAGE OF COVER: *Virtual environment for robot*