

# High Energy Physics at **Granada\*** University

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*On behalf of*

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December 16th, 2008

\* ANDALUCÍA: **Granada**, Sevilla, Huelva

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**CERN**

# HEP Topics at Granada

- ▶ **Electroweak and QCD physics:** *Monte Carlo programs for LHC and new techniques for loop calculations.*  
R. Pittau (**ALPGEN**), M. Treccani, P. Draggiotis.
- ▶ **Phenomenology of the SM and its extensions at LHC and ILC:** *top physics, new interactions, neutrino physics.*  
F. del Águila, J. A. Aguilar-Saavedra (**ATLAS**), F. Cornet, I. Grau, J. I. Illana, R. Pittau, N. Castro (**ATLAS**).
- ▶ **Flavour physics.** J. Prades.
- ▶ **Extended models:** *SUSY, extra dimensions, GUTS.*  
F. del Águila, J. A. Aguilar-Saavedra, M. Masip, M. Pérez-Victoria, O. Kittel.
- ▶ **Astroparticles:** *AUGER.*  
A. Bueno, S. Navas, J. Lozano, J. González.

# HIGHLIGHTS at Granada

## Experience in bridging Theory and Experiments at CERN

- ▶ Widely used tools from past to present:
  - TOPAZO @LEP1;
  - EXCALIBUR @LEP2;
  - ALPGEN @LHC (by *M. L. Mangano, R. Pittau et al.*).
  
- ▶ Participation in Experimental collaborations:
  - MEMBERS of ATLAS (*J. A. Aguilar-Saavedra, N. Castro*).

# National and International HEP Projects at Granada

## Spanish HEP Projects:

- ▶ **FPA2006-05294** (2006-2011), P.I. F. del Águila Giménez;
- ▶ **FPA2006-00684** (2006-2009), P.I. A. Bueno;
- ▶ **FPA2008-02984** (2009-2011), P.I. R. Pittau.

## Participation in EU HEP Networks:

- ▶ **MRTN-CT-2006-035482 (FLAVIANET)** (2006-2010),  
P.I. A. Pich;
- ▶ **MRTN-CT-2006-035505 (HEPTOOLS)** (2006-2010),  
P.I. C. Papadopoulos.