http://www.value-cost.eu/TS1

cost
EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY

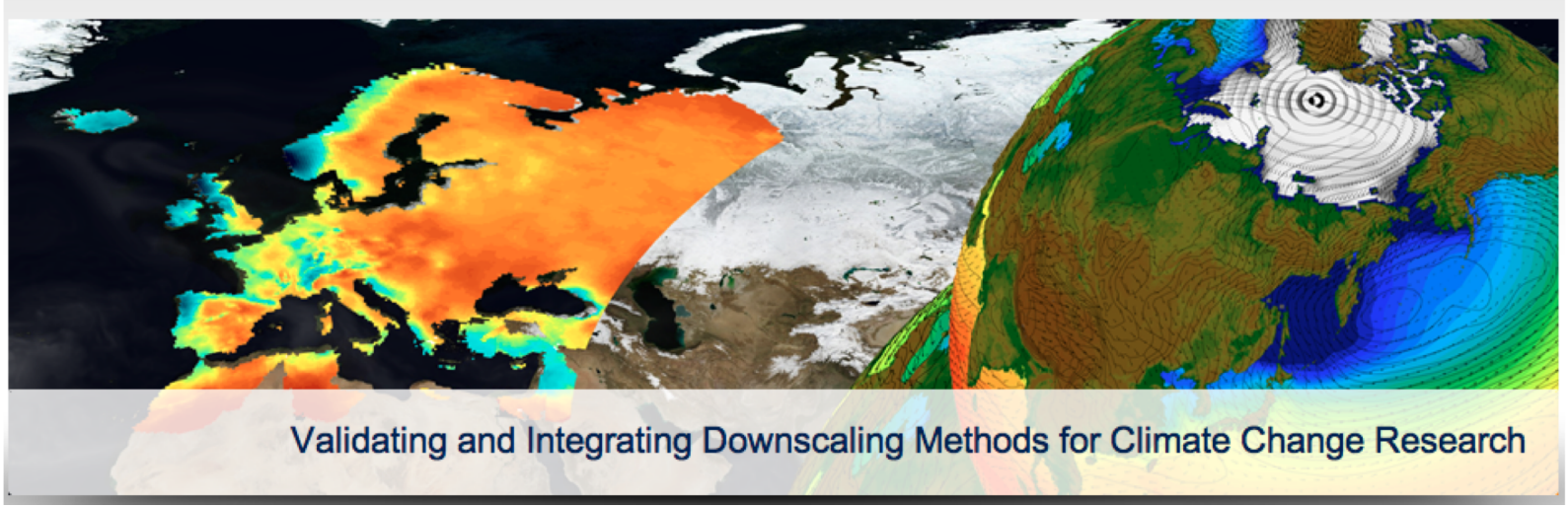
Organising Committee:
Douglas Maraun
Martin Widmann
Jens H. Christensen
Jesús Fernández
José M. Gutiérrez

VALUE

First Training School:

"Introduction to Dynamical and Statistical Downscaling"

Santander 6-15 Nov. 2012



Reimbursement

Please find attached the **attendance list**. This list needs to be signed by **all involved persons for all those days they are around**. This is important for the reimbursement (they will only get reimbursed for the days they have signed). Douglas need to have the original list with signatures for the reimbursement.

Santander Meteorology Group

A multidisciplinary approach for weather & climate

Local Organization

Grupo de Meteorología, Santander

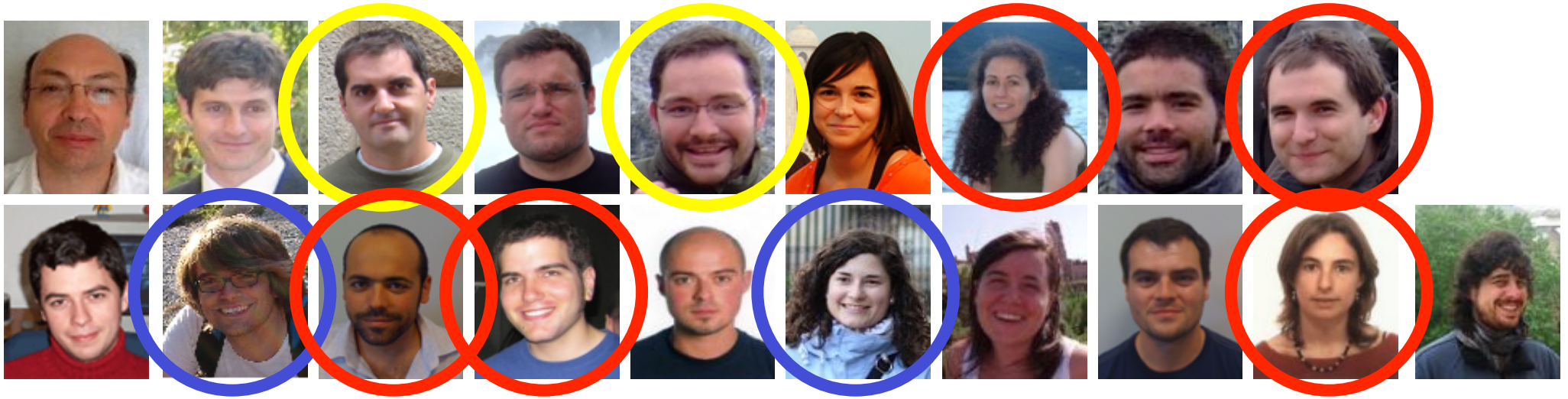
UNIVERSIDAD DE CANTABRIA

CSIC

Dpto. Matemática Aplicada y Ciencias de la Computación

IFCA Instituto de Física de Cantabria

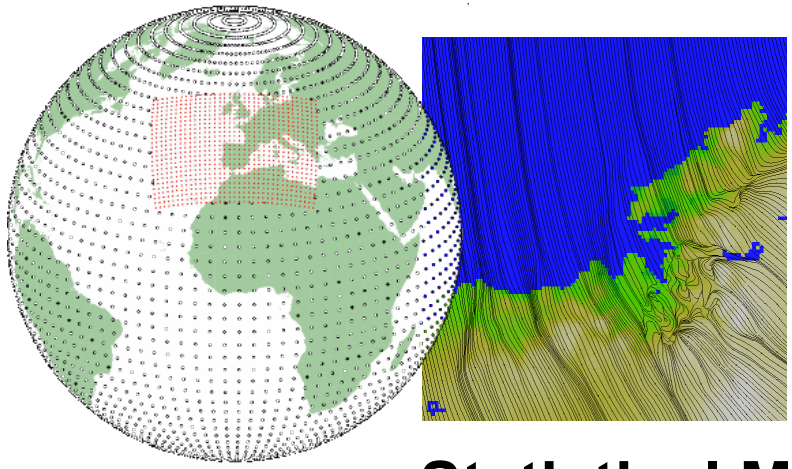
- Instituto de Física de Cantabria (**IFCA**)
- Dpto. Matemática Aplicada y CC. de la Computación (**UC**)

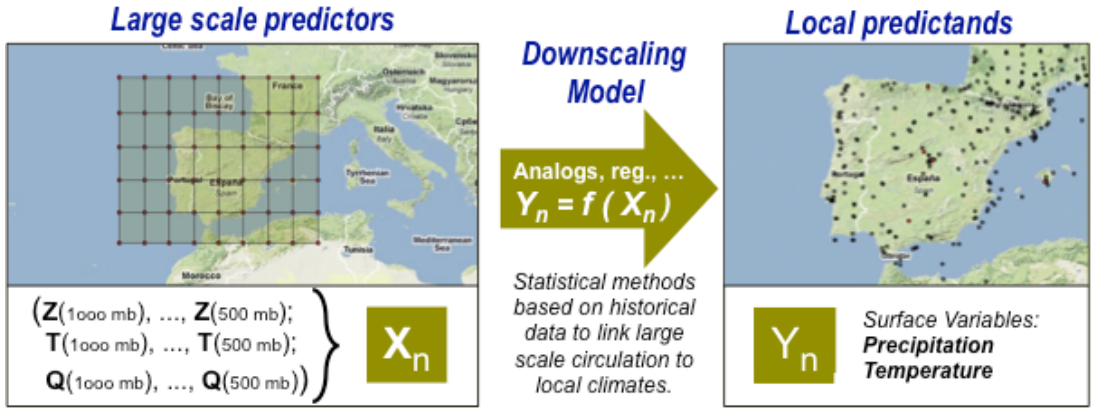


Info: http://www.meteo.unican.es

Email: meteo@unican.es

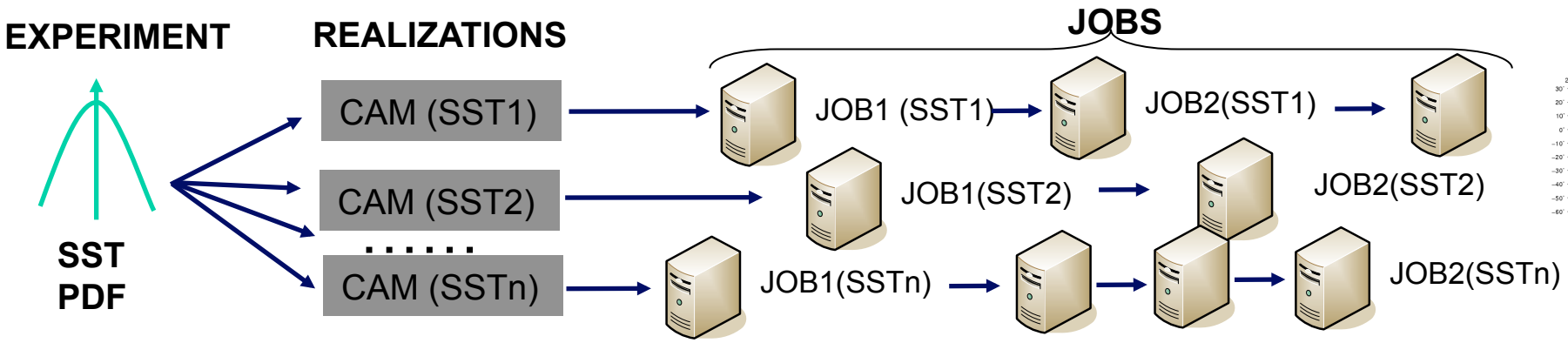
➔ Numerical Regional Climate Modeling (Jesús Fernández)





➔ Statistical Modeling and downscaling (José M. Gutiérrez)

➔ Grid Computing in Earth-Sciences (Antonio S. Cofiño)



Santander Meteorology Group

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Computational Infrastructure

http://www.meteo.unican.es/computing

~350 cores + 200 TB (disk).

Santander Meteorology Group | A ... | Computing Infrastructure – Santa... | WRF-UC Wind forecast | Santande...

Grupo de Meteorología de Santander

Un enfoque multidisciplinar para la meteorología y el clima

Buscar login

Principal
- Presentación
- Instituciones
- Personal
- Actividades docentes
- Colaboraciones
- Contacto y cómo llegar

Investigación
- Áreas de investigación
- Proyectos
- Redes de investigación
- Computing resources
- Publications (stats)
  - Libros
  - Artículos
  - Publicaciones en congresos
  - Tesis
- Congresos

Desarrollo
- Portales web
  - Downscaling Portal
  - Health Indicators
- Datasets
  - Spain02 (20km)
  - Cantabria (1km)

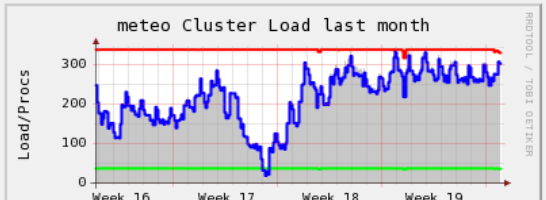
Computing Infrastructure - Santander Meteorology Group

The research activities of the group are supported by a computing infrastructure which is also used for GRID computing activities, including a preproduction laboratory to test and tune the applications before running them in the production resources. Thus, our cluster have the same characteristics that can be found in big production clusters (infiniband, shared storage, etc.). Moreover, this infrastructure is part of the Spanish E-Science initiative (our group is also a certified support group for Earth-Science and Artificial Intelligence applications) and the European EGEE and EELA production infrastructures.

The cluster is physically located in the Facultad de Ciencias CPD (Univ. Cantabria) and the installation and management is done in collaboration with the Servicio de Informatica (IT Service) of Cantabria University.

Apart from the cluster itself, a production XEN cluster is used to host the following virtual machines: NAT (server for routing between internet and the false network), VPN (access to the false network), MONITOR (Ganglia and Nagios), MAR (user interface), UI, CE, SE and MON (gLite Services). There is also another physical machine that manage the main services provided by the group (SERVICES).

Overall the **GMS** cluster has **242 cores (338 virtual processor units using HT)** and **158 TB (hard-disk)**.
=>[Short course for use of the PBS system (Spanish)]
=>[Ganglia monitoring system]



Predicción Meteorológica Local estadística y dinámica [+ info]
Precip. (mm) | Temp max. (ºC)
Mar (hoy) Mié Jue Vie

PROMETEO modelo estadístico

WRF modelo dinámico

Para más información iMeteo

Noticias
13 Mayo 2011 [Curso]
El Sol y su Influencia en el Clima de la Tierra
13 Mayo 2011 [Curso]
Emplazamiento de Centrales Generadoras Offshore para la P...
19 Oct 2010 [Evento]
Proyecto fin de carrera: "Análisis de la seguridad de la...

Internet

http://www.unican.es/WebUC/Unidades/SdeI/servicios/red/english_version_conexion_personal_invitado.htm

WIFI: **UNICAN-i**

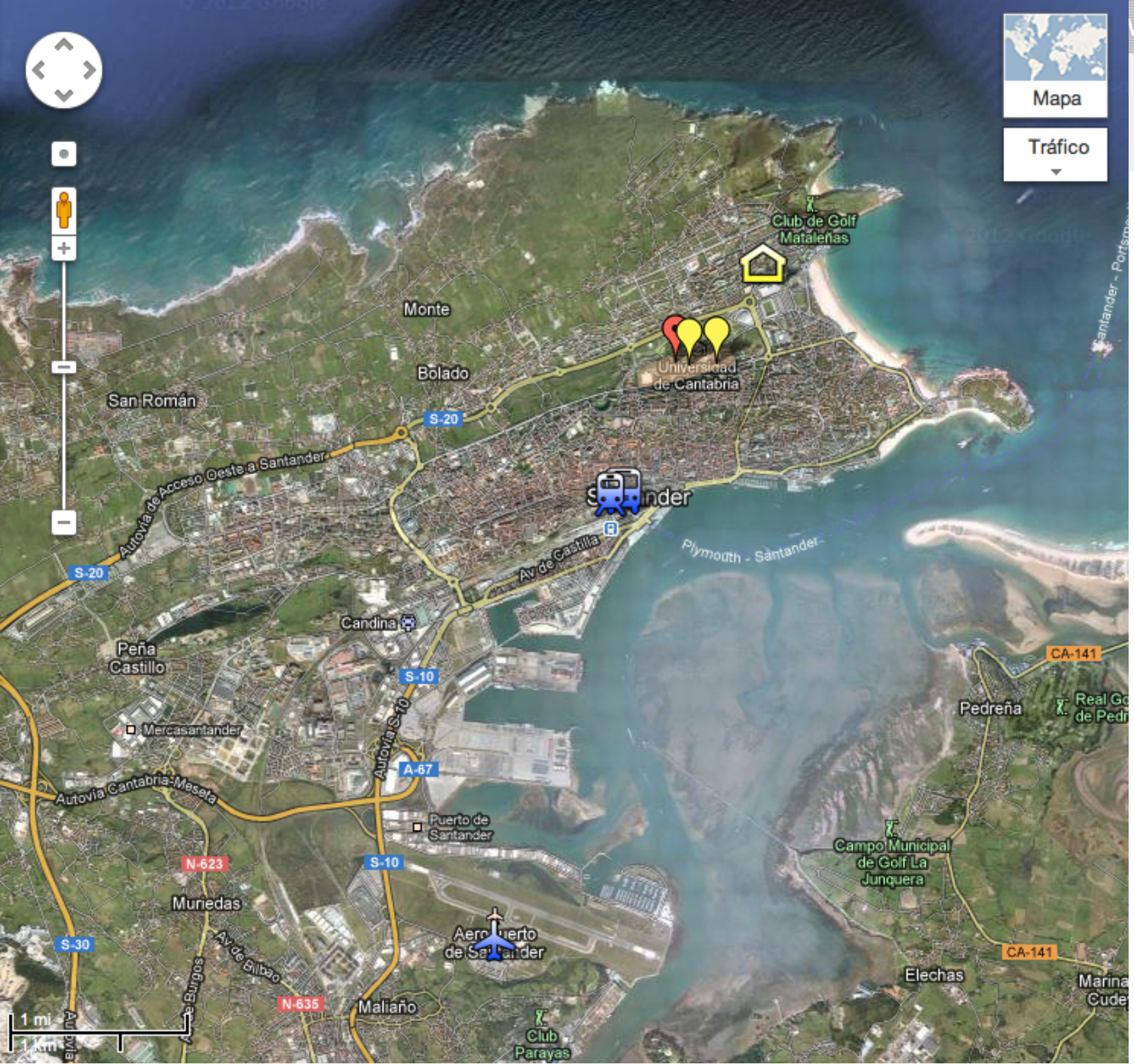
User: **Value**

Password: **Value2012**

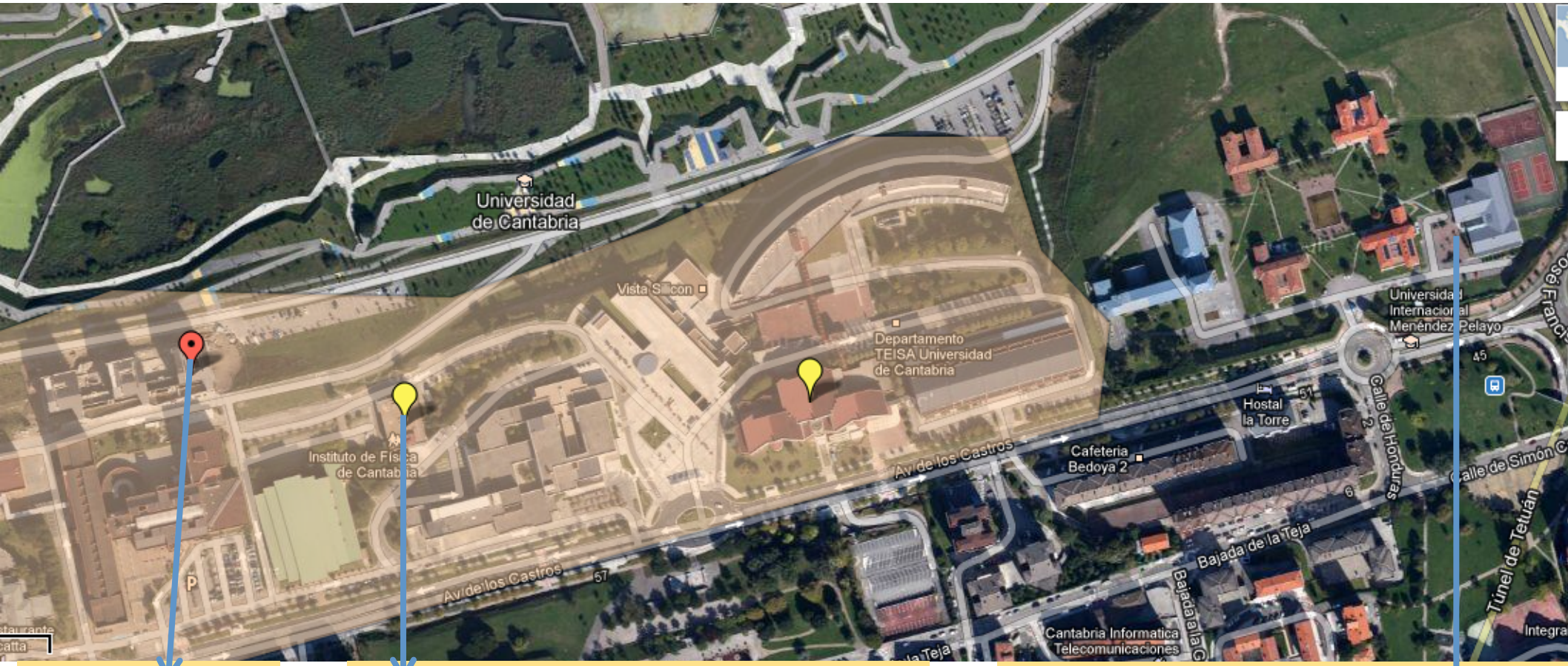
Eduroam is also available at campus.

Up to 25 connections

Logistics


Mapa
Tráfico
Club de Golf Mataleñas
Monte
Bolado
San Román
Universidad de Cantabria
S-20
Autovía de Acceso Oeste a Santander
Av de Castilla
Plymouth - Santander
Candina
Peña Castillo
S-10
Mercasantander
Autovía S-10
A-67
Autovía Cantabria-Meseta
Puerto de Santander
N-623
Muriedas
Av de Bilbao
Aeropuerto de Santander
S-30
N-635
Maliaño
Club Parayas
Pedreña
CA-141
Campo Municipal de Golf La Junquera
Elechas
1 mi
1 km

Logistics



Tres Torres

Multimedia Room. Facultad de Ciencias

UIMP dining room 13:30-15:00. **6.5€** 2 courses + salad bar

Santander Meteorology Group

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Weather Forecast

http://www.meteo.unican.es/imeteo

Santander Meteorology Group

Local weather forecast (physics ar

Home Access Register

Predicciones diarias del Grupo de Meteorología de Santand
de **PROMETEO** (predicción estadística). Estos datos se dis
Haz click en los mapas para ver el *meteograma* de un punto
multi-física) y las públicas de HIRLAM-AEMET (líneas). Re
[comentarios] [bugs]

Map

Prediction for 6/11/2012 Daily

- Stations Data
- Gridded Data
  - WRF_UC_Phys1
    - Precipitación
    - Viento
    - Nieve
    - Temp. Máx.
    - Temp. Mín.

WRF_UC_Phys1: Precipitación (mm)

0.1 5 15 25 40
min 2 10 20 30 50

Map Satellite

Portugal Spain

Meteograma para: Lon: -3.79 Lat: 43.28

Viento (km/h) 40 30 20 10 0

Temp. (C) 17.5 15 12.5 10 7.5 5 2.5

Precip. (mm) 20 17.5 15 12.5 10 7.5 5 2.5 0

Tuesday Wednesday Thursday Friday

09 12 15 18 21 00 03 06 09 12 15 18 21 00 03 06 09 12 15 18 21 00 03 06 09 12 15

Lines (GFS-NCEP) Shades (WRF-UC multiphysics)

Elaborado: 05/11/2012
www.meteo.unican.es

Lon: -3.79 Lat: 43.28

UC predictia

- Nieve
- Temp. Máx.
- Temp. Mín.

WRF_UC_Phys1: Viento (Km/h)

0 10 20 30 40 50 60 70 80
min 5 15 25 35 45 55 65 75m

Portugal Spain

predictia
INTELLIGENT DATA SOLUTIONS

http://www.value-cost.eu/TS1

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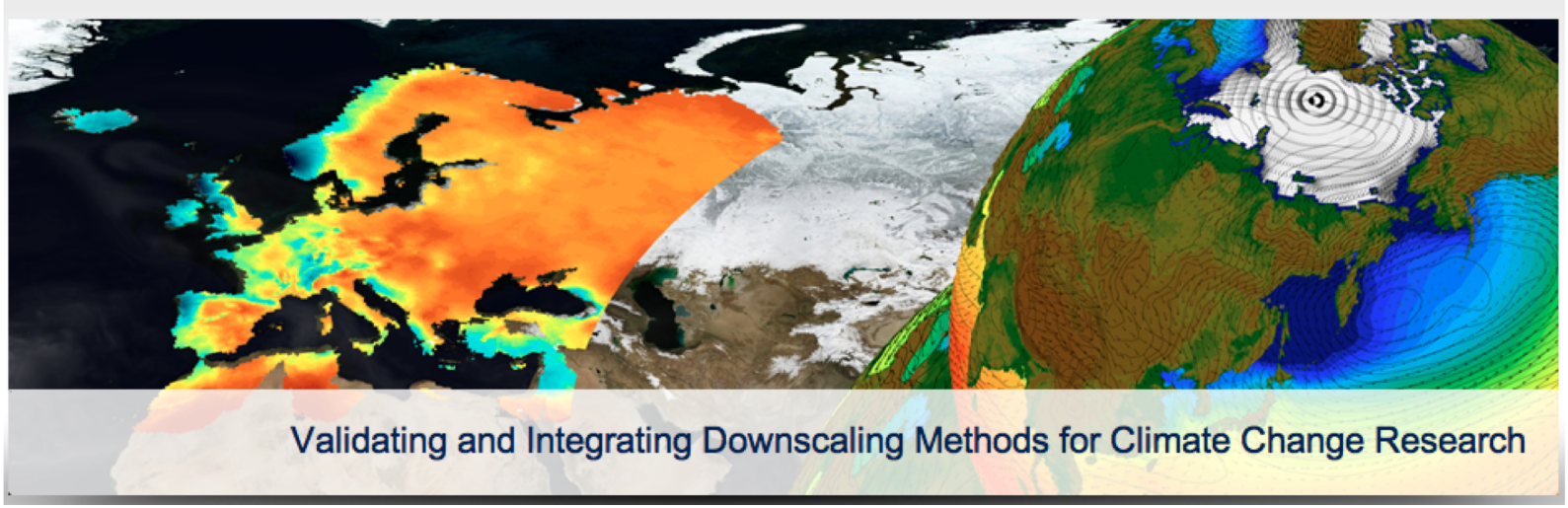
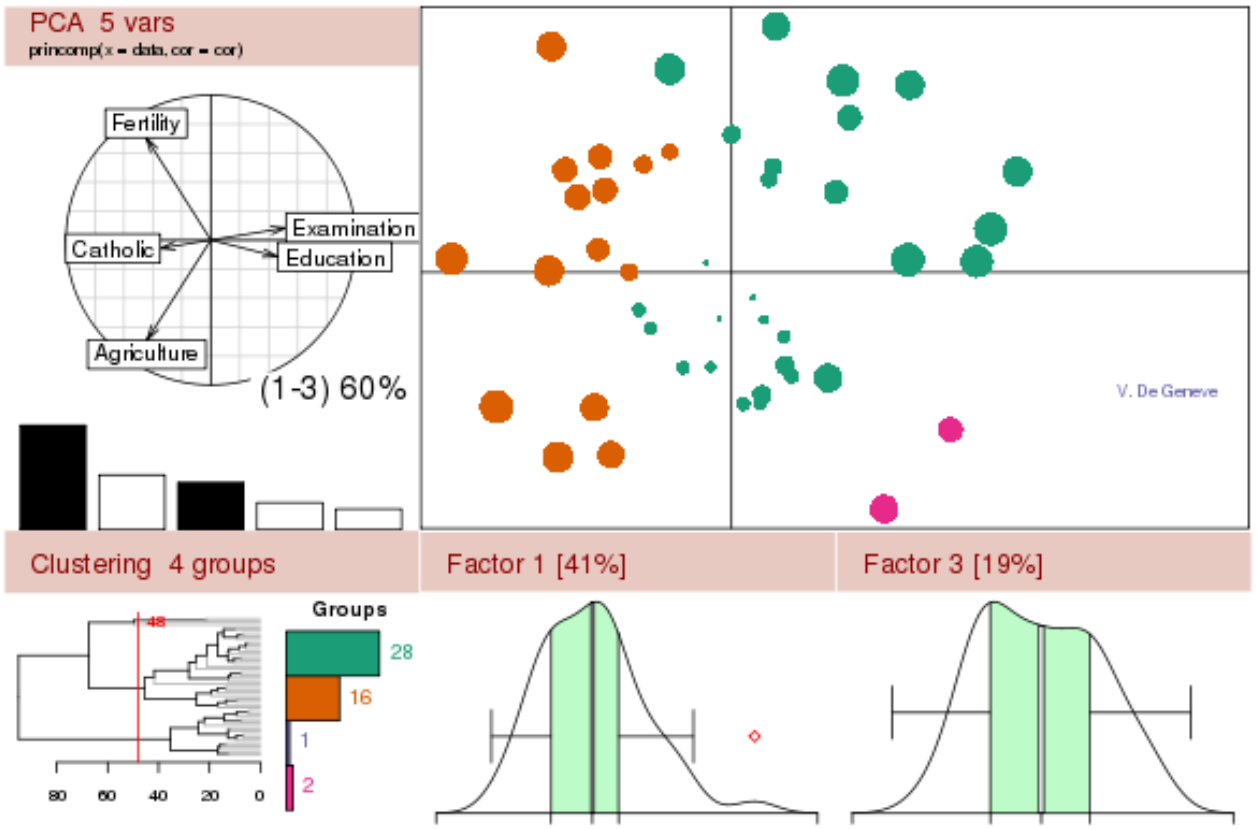


The "R" Package

The R Project for Statistical Computing



About R
- What is R?
- Contributors
- Screenshots
- What's new?

Download, Packages
- CRAN

R Project
- Foundation
- Members & Donors
- Mailing Lists
- Bug Tracking
- Developer Page
- Conferences
- Search

Documentation
- Manuals
- FAQs
- The R Journal
- Wiki
- Books
- Certification
- Other

Getting Started:

- R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To **download R**, please choose your preferred CRAN mirror.
- If you have questions about R like how to download and install the software, or what the license terms are, please read our answers to frequently asked questions before you send an email.

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WRF and WRF4G

WRF THE WEATHER RESEARCH & FORECASTING MODEL

Search

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Links
- Wiki
- Trac
- Matlab en el cluster
- Cluster Monitoring

Home
- Presentation
- Institutions & location
- Staff
- Teaching activities
- Collaborations
- Contact & travel info

Research
- Research topics
- Projects

View | Edit | Track | Translation

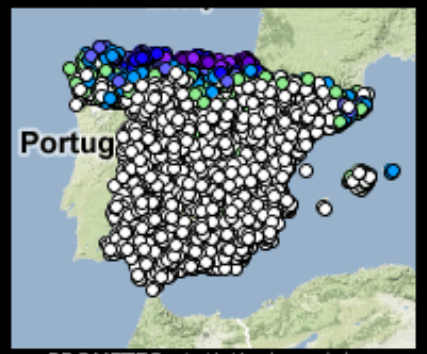
WRF4G

Simple workflow management of WRF experiments on distributed computer resources

Visit the documentation and tutorial of WRF4G

WRF for GRID (WRF4G) is a framework for the execution and monitoring of the WRF Modelling System in distributed computer resources (see this presentation). It provides a flexible and easy way of designing complex experiments involving many simulations (multiple start/end dates, multiparametric simulations, long climate runs, ...). The monitor

Local weather forecast
(physics and statistics) [+ info]
Rainfall (mm) | Max temp. (°C)
Tue (today) Wed Thu Fri



PROMETEO statistical model

WRF dynamical model

Empirical-Statistical Downscaling

Rasmus E. Benestad[1], Deliang Chen[2] & Inger Hanssen-Bauer[1]
Norwegian Meteorological Institute, PO Box 43, 0313, Oslo, Norway,
Earth Sciences Centre, Gothenburg University, Sweden

June 15, 2007

GLIMCLIM: Generalised Linear Modelling of Daily Climate Sequences

This package contains a suite of programs for fitting and simulating Generalised Linear Models to daily climate sequences from a network of sites (e.g. weather stations, or model grid nodes). The programs can be used to analyse historical data, and to provide simulations of future climate scenarios, for example to provide input to hydrological models or for flood risk assessment. For an overview of the theory and application of these programs, see my research reports, numbers 194 and 195 at the Department of Statistical Science, University College London. Also the following references:

Santander Meteorology Group

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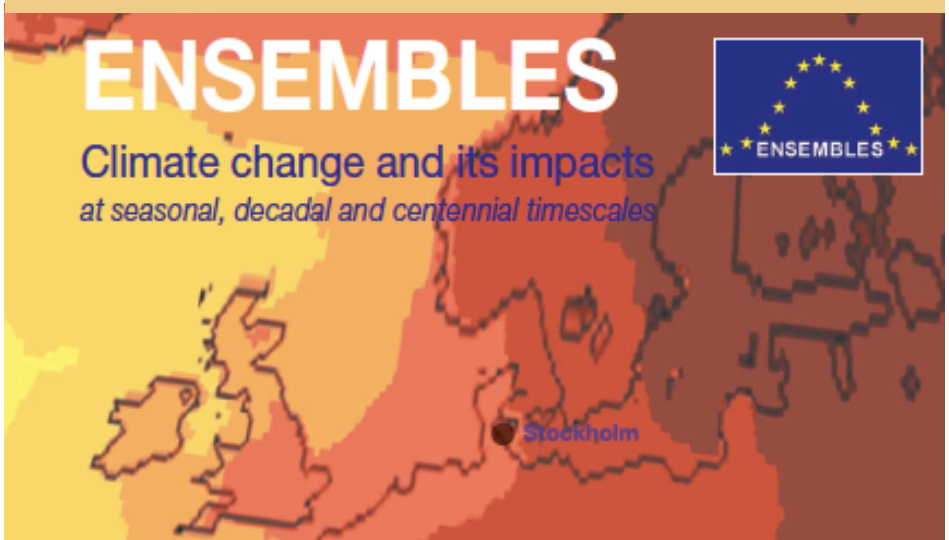
The Statistical Downscaling Portal

http://ensembles-eu.metoffice.com

ENSEMBLES Project (2004-2009)

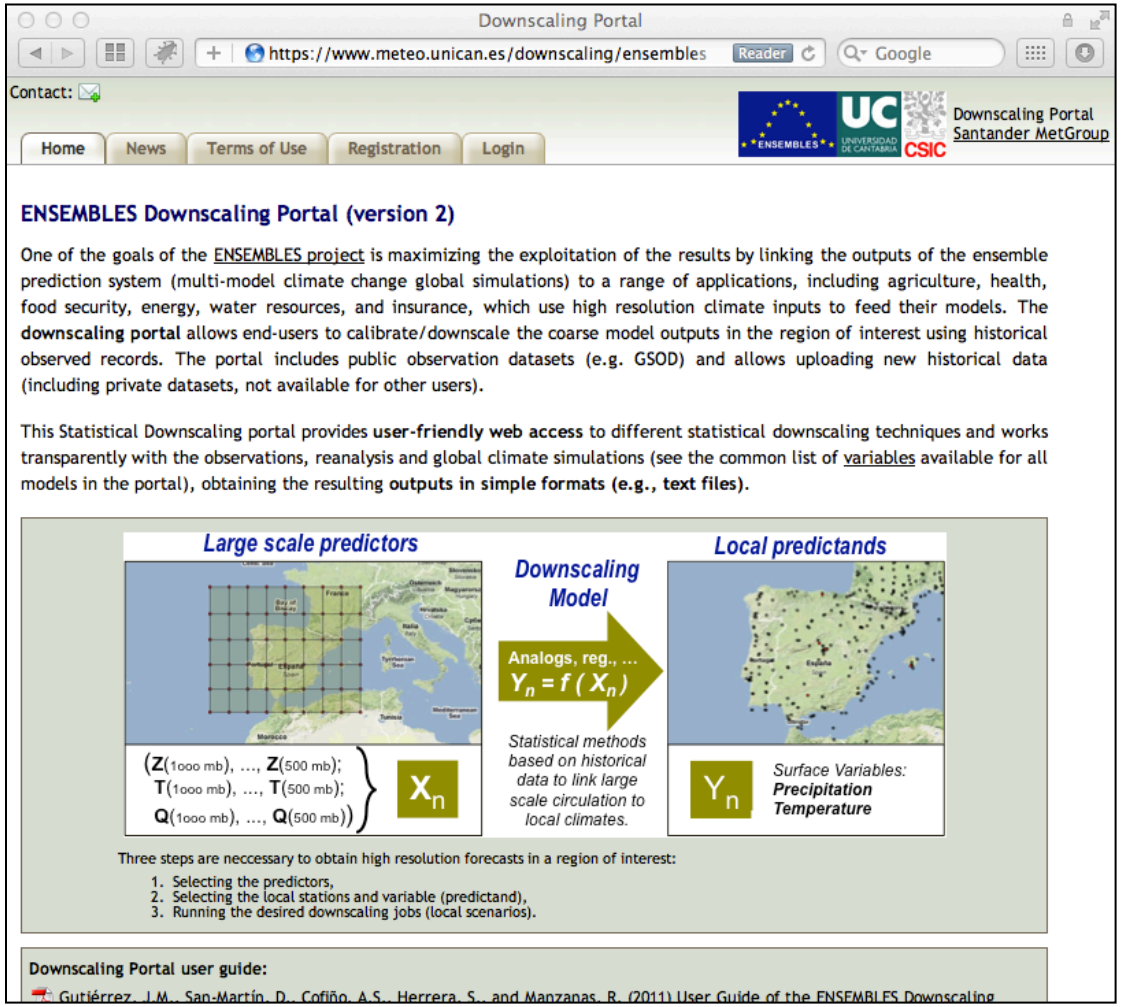
Develop an ensemble prediction system for climate change and linking the outputs to a range of applications.

- **Statistical Downscaling (SD) methods/tools.**
- **GCM and RCM simulations.**
- **Gridded observations: E-OBS**



The statistical downscaling portal is a free tool for user-friendly downscaling.

http://www.meteo.unican.es/ensembles



Santander Meteorology Group

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Presentación del Grupo

Grupo de Meteorología, Santander

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