

Review by International Advisory Committee  
Granada, April 24, 2026



Unidad de  
Excelencia  
UGR

# Scientific Unit of Excellence High Energy Theory (FTAE)



# Scientific Advisory Board (SAB)



Prof. Ch. Anastasiou

**ETH** zürich



Prof. V. Sanz



Prof. J. Monroe



Prof. S. Söldner-Rembold

**IMPERIAL**



Prof. C. Salgado



# Outline

- Overview of the Unit
- Personnel
- Impact of our Research
- Funding
- Alumni
- Visibility and Outreach
- María de Maeztu Application
- Summary

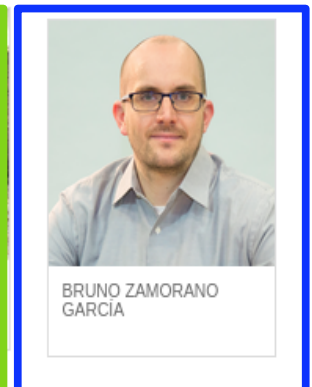
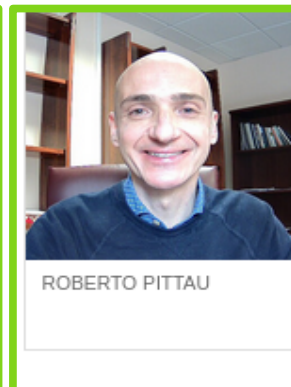
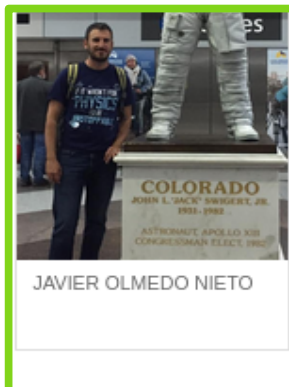
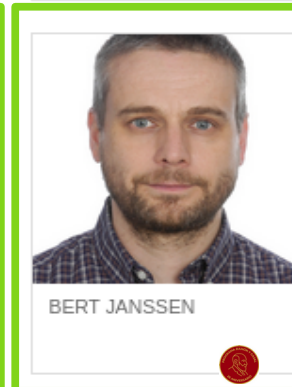
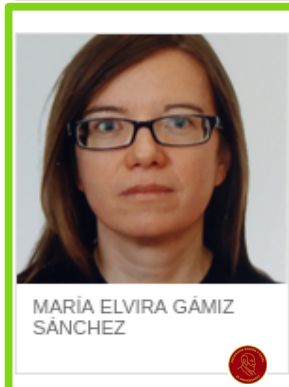
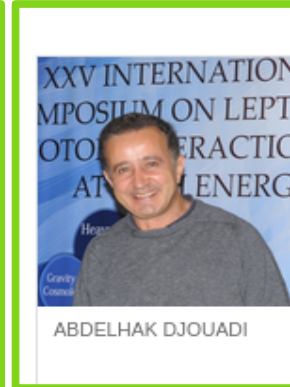
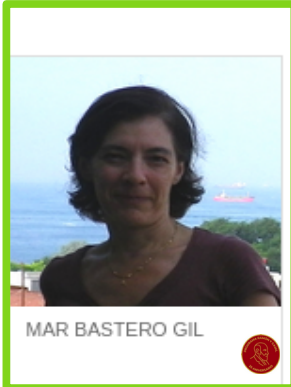
# Overview of the Unit

- The FTAE Unit was approved by the University of Granada on July 21, 2016.
- It belongs to the Departamento de Física Teórica y del Cosmos (46 professors) of the University of Granada.
- Current members of the Unit: 8 Full Prof.; 12 Associate Prof.; 4 RyC fellows, 4 postdocs; 19 PhD students; 1 IT engineer and 1 electronics technician).
- Two Strategic Research Areas:
  - SR1: Particle Physics at Colliders and Beyond.
  - SR2: Astroparticle Physics and Cosmology.
- Funding: 2 international, 11 national, 7 regional.



# Personnel

## Senior Staff



# Personnel



## Junior Staff / Postdocs



JORGE DE BLAS MATEO



ADRIÁN CARMONA BERMÚDEZ



JUAN CARLOS CRIADO ÁLAMO



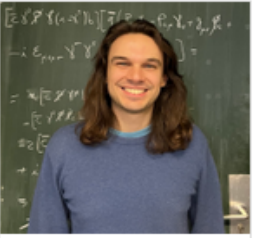
RENATO FONSECA



JAVIER FUENTES MARTÍN



ZHE REN



ANDREA SANFILIPPO



ALBA SOTO ONTOSO



PATRICIA SÁNCHEZ LUCAS



DEAN VALOIS



ROBERTO VEGA-MORALES



Samuel Abreu

# Personnel

## Students



DIOGO COSTA



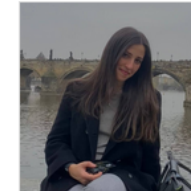
ANDRII DASHKO



PABLO DE LA TORRE DOMÍNGUEZ



PAULO BERNARDO FIGUEIRA DA SILVA FERRAZ



MARIA CRISTINA FIORE



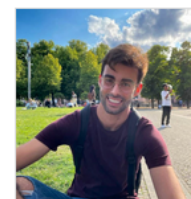
LUIS GIL MARTÍN



CHIARA GIULIANO



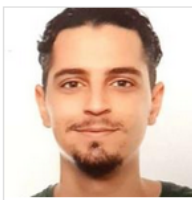
CLARA HERNÁNDEZ GARCÍA



JAVIER LÓPEZ MIRAS



CARLOS MARTÍN MORALES



JOSÉ MIGUEL MARTÍN PÉREZ



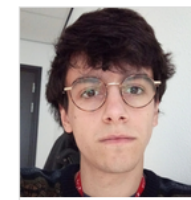
RAMÓN MERINO ROJAS



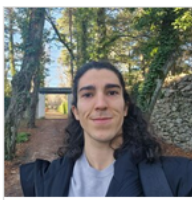
ADRIÁN MORENO SÁNCHEZ



LUIS PELEGRINA GUTIÉRREZ



ALEJANDRO SÁNCHEZ CASTILLO



RAFAEL SÁNCHEZ LÓPEZ



ALICIA VAZQUEZ RAMOS



FUENSANTA VILCHES BRAVO



SERGIO YEBES BAENA

## Technical Support



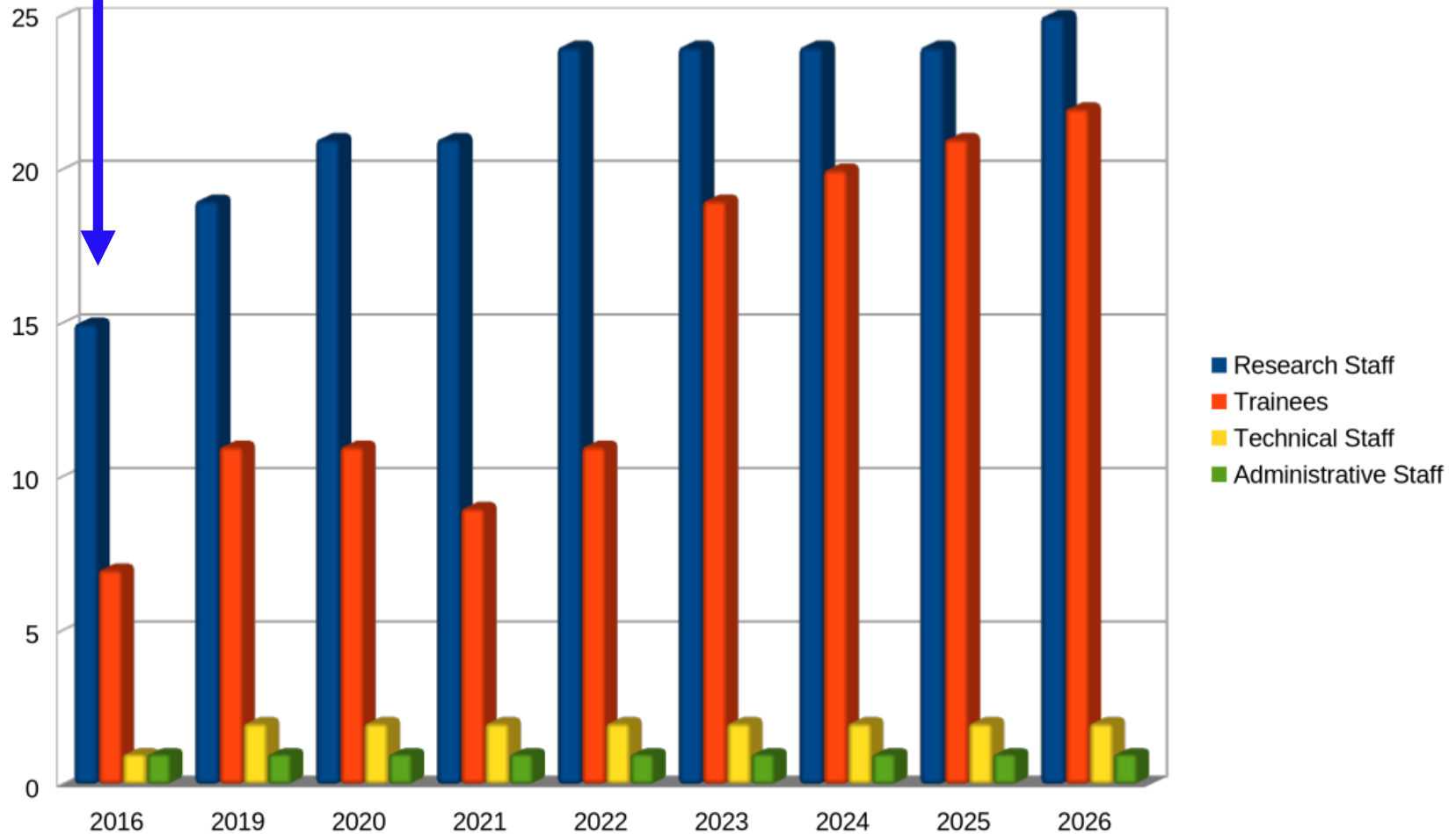
FERNANDO FUENTES-GUERRA FERNÁNDEZ



GERMÁN MARTÍNEZ MALDONADO

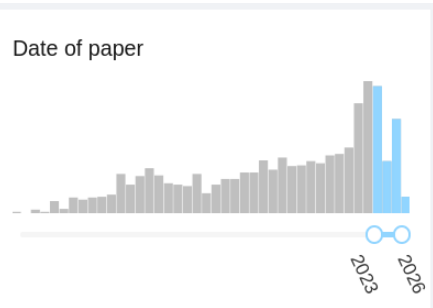
*Creation of the Unit*

# Personnel



- 5 new PhD students and 5 new postdocs will join the group in the fall (1 postdoc leaving).
- Strict procedure now in place for new tenure-track hirings.

# Impact of our Research

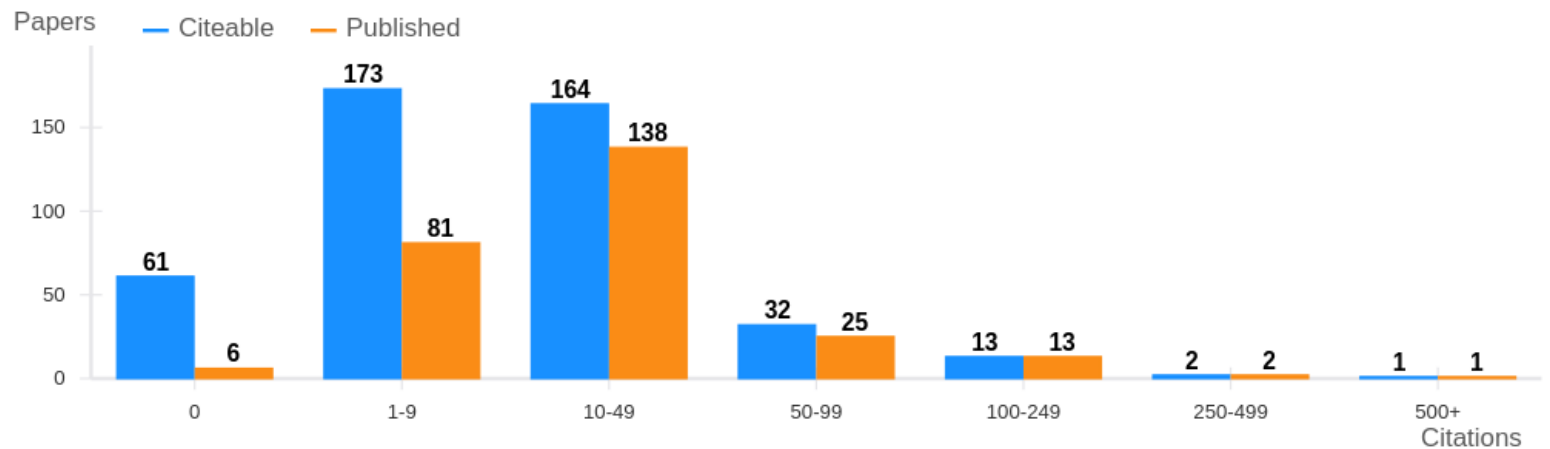


## Summary of publications 2023-2026

### Citation Summary

Exclude self-citations ?

	Citeable ?	Published ?
Papers	446	266
Citations	14,109	12,724
h-index ?	49	46
Citations/paper (avg)	31.6	47.8



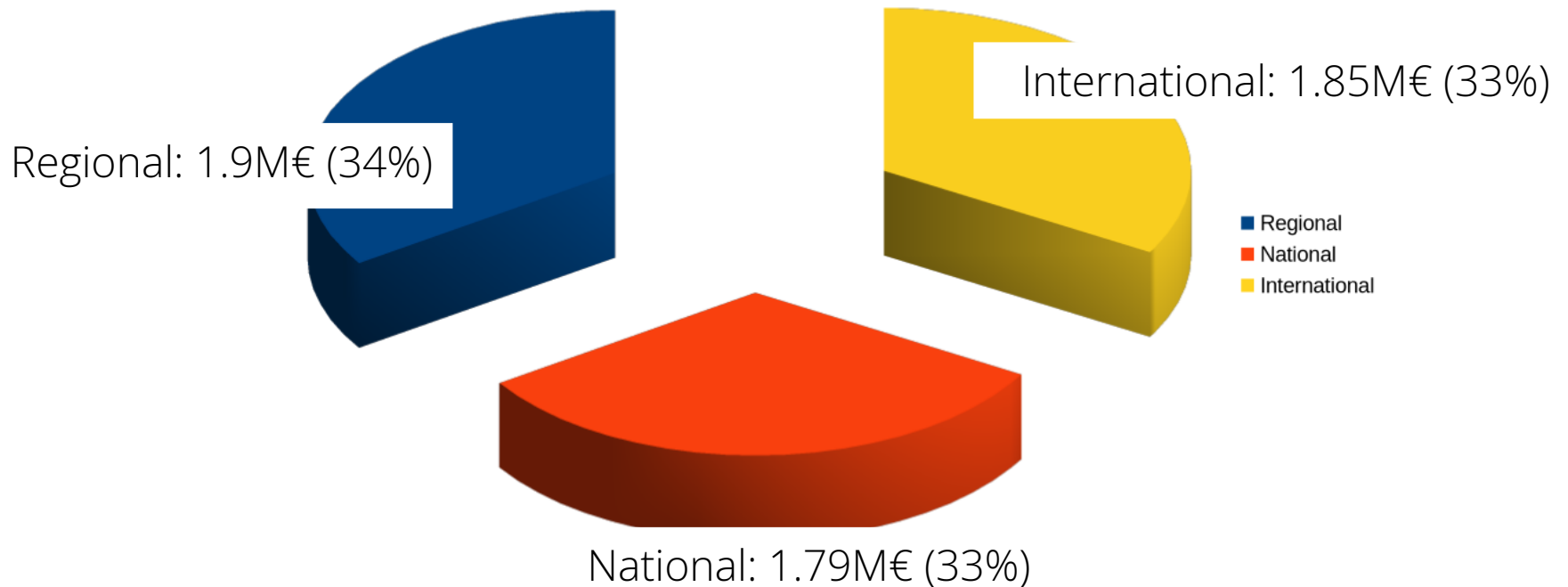
# Funding

Active projects during 2024-Today: 5.55 M€

1 CoG-ERC + 1 MSCA network

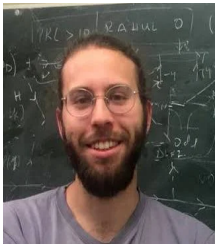
11 National Grants (PID, CNS, ERC -Europa Excelencia-, Leonardo)

7 Regional Grants (MRR, Excellence JdA)



# Alumni

Our alumni go on to excellent scientific and professional careers



**ICTP-AP**  
International Centre  
for Theoretical Physics Asia-Pacific  
国际理论物理中心-亚太地区



\* Best PhD Thesis award  
in Theoretical physics  
from Spanish Physics  
Royal Society



Real  
Sociedad  
Española de  
Física

# Visibility and Outreach

We have strong international visibility



J. de Blas [FCC "Physics studies"]



J. de Blas,  
J. Fuentes Martín



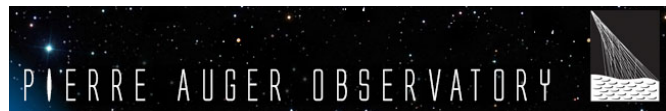
J. de Blas, J. Santiago

## C11: AWARDS

C11: Mission/ Mandate	C11: Additional Information	C11: Members 2025-2027	C11: Repr
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## IUPAP Early Career Scientist Awards in Particles and Fields

2016	Steran Moeen and Liangjian Wen
2014	Claude Duhr, University of Durham, UK; and Kerstin Ta
2012	Teppei Katori and Phillip Urquijo
2010	Florencia Canelli and Jose Santiago
2008	Kai-Feng Chen and Yasaman Farzan



A. Bueno



J. de Blas, S. Navas



F. Cornet, E. Gámiz, JI Illana, S. Navas, J. Santiago



J. Santiago



S. Abreu



**European Research Council**  
Established by the European Commission

A. Djouadi, M. Chala

# Visibility and Outreach

We regularly organise international conferences and participate in outreach activities

The screenshot shows the FTAE website with a navigation bar containing: Home, People, Research, Events, Excellence Unit, Contact, and a lock icon. Below the navigation is a large image of a particle detector with colorful tracks. The main content area is divided into four columns:

- Announcements:** Follow @FTAE\_UGR on Twitter. A news item dated 24/03/2026 titled "The European RECFA committee visits Spain" describes a visit to discuss future accelerator projects like CERN's HL-LHC and FCC-ee. Info: <https://www.i-cpan.es/es/content/el-comit%C3%A9-europeo-recfa-visita-espa%C3%B1a>
- About Us:** The high-energy physics group (FTAE) of the University of Granada was founded in the 90s. Currently, we have 16 senior researchers, 11 junior or postdoctoral fellows and 19 PhD students, thus being one of the largest groups in Spain in our field. Our research covers a variety of topics including experimental neutrino and collider physics, particle and astroparticle physics phenomenology, cosmology, as well as formal aspects of quantum field theory and perturbative and non-perturbative calculations.
- Main Events:** Two event cards are shown: "IbériCos 2026" (22-24 April, 2026) and "LIII International Meeting on Fundamental Physics" (11-15 May, 2026).
- Calendar:** A calendar for April 2026 showing dates 13, 17, 20, 22, 23, 24, 25, and 26 highlighted in green. Below the calendar, "Next events:" lists: 22/04/2026 IberiCos 2026; 23/04/2026 IberiCos 2026; 24/04/2026 IberiCos 2026; 8/05/2026 11:00 Carlos Duaso Pueyo: 'TBA'; 8/05/2026 12:30 Mikael Chala: '¿El universo primitivo experimentó transiciones de fase?'; 11/05/2026 LIII International Meeting on Fundamental Physics.

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We regularly organise international conferences and participate in outreach activities



CERN Council Open Symposium on the Update of  
**European Strategy  
 for Particle Physics**  
 13-16 May 2019 - Granada, Spain



#### Physics Preparatory Group

Halina Abramowicz (Chair)  
 Shoji Asai  
 Stan Bentvelsen  
 Caterina Biscari  
 Marcela Carena  
 Beate Heinemann  
 Xinchou Lou  
 Krzysztof Redlich  
 Leonid Rivkin

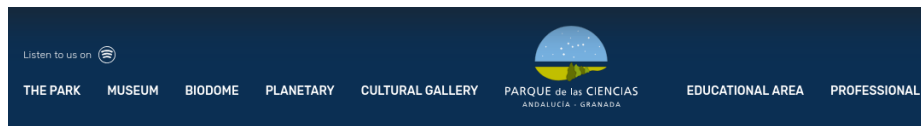
#### Local Organizing Committee

Francisco del Águila  
 Antonio Bueno (Chair)  
 Alberto Casas  
 Nicanor Collino  
 Javier Cuevas  
 Juan José Hernández  
 Mario Martínez  
 Carlos Salgado  
 Benjamin Sánchez Gimeno  
 José Santiago



# Visibility and Outreach

We regularly organise international conferences and participate in outreach activities



Start > Educational Area > Educational Programs > Particle Physics. 2026 Edition

## Particle Physics. 2026 Edition

International Masterclass Hands on Particle Physics.

Final list of centers selected for participation in the Seville venue.

final list of participants at the Seville venue [Discharge](#)

Final list of centers selected for participation in the Granada venue.

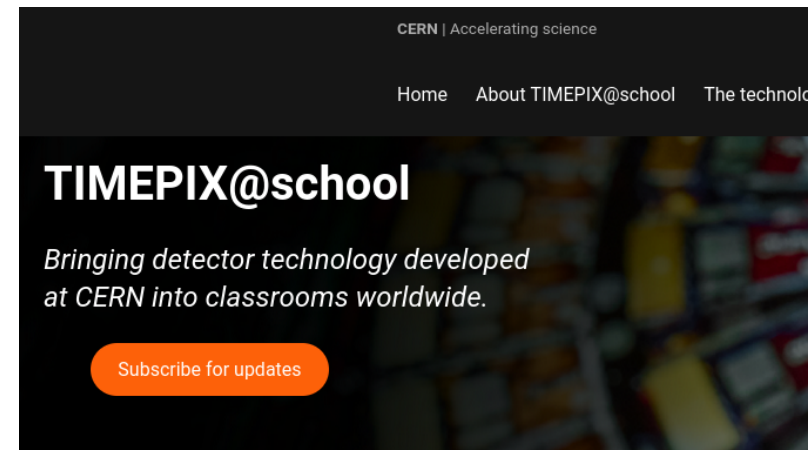
final list of participants at the Granada venue [Discharge](#)

Once again, the **Science Park** hosts the International Particle Physics Day for 2nd year Baccalaureate students from all over Andalusia.



From CERN to the classroom: bringing particle physics to STEM education

15<sup>th</sup> edition!



# Maria de Maeztu Application

The Ministry of Science, Innovation and Universities awards accreditations as a Severo Ochoa Centre of Excellence or María de Maeztu Unit of Excellence with the aim of promoting the quality of Spanish scientific research by recognising the best centres and units that stand out for the relevance and impact, at international level, of the research results obtained during the previous reference period. This action is part of the institutional strengthening sub-programme of the State Plan for Scientific and Technical Research and Innovation 2017-2020.

Two types of action are envisaged depending on the legal status, the degree of autonomy in administrative and economic management and the number of researchers. The selected research centres will be accredited as Severo Ochoa Centres of Excellence and the selected research units will be accredited as María de Maeztu Units of Excellence.

The recognition is granted through an annual competitive call for applications, subjecting the applications submitted to an evaluation and selection process carried out independently by an international scientific committee made up of researchers of recognised prestige and impact. Established centres or units applying for this programme must therefore:

- ⊙ have a high level of impact and competitiveness in their field of activity on the world scientific stage,
- ⊙ regularly submit their research activities to scientific evaluation processes by external and independent scientific committees,
- ⊙ develop their research activities in accordance with a strategic programme that responds to the generation of cutting-edge knowledge,
- ⊙ have training, selection and attraction activities for human resources at international level,
- ⊙ maintain active collaboration and exchange agreements at institutional level with high-level research centres, and
- ⊙ Work on strengthening activities for the transfer and dissemination of knowledge to society.



**EXCELENCIA  
SEVERO OCHOA**

**EXCELENCIA  
MARÍA DE MAEZTU**

# Maria de Maeztu Application

- 2-step application process:
  - 7 research guarantors (top 10% based on 10 milestones)
  - Unit's Scientific Report (past 4 years) + Unit's Strategic Programme (next 4 years)

# Maria de Maeztu Application

- 2-step application process:
  - 7 research guarantors (top 10% based on 10 milestones)
    - a) Scientific contributions in the form of publications, or any other high-impact research output of international relevance (patented inventions under exploitation, new techniques, transfer activities, technological developments, software, relevant contracts, etc.), and invited talks at prestigious international scientific conferences.
    - b) Grants awarded under the AdG, CoG, StG or SyG ERC calls, and under the Pathfinder and Transition categories of EIC calls. Leadership in the coordination of projects within the European Union R&I Framework Programmes; or in other major international collaborations and projects.

# Maria de Maeztu Application

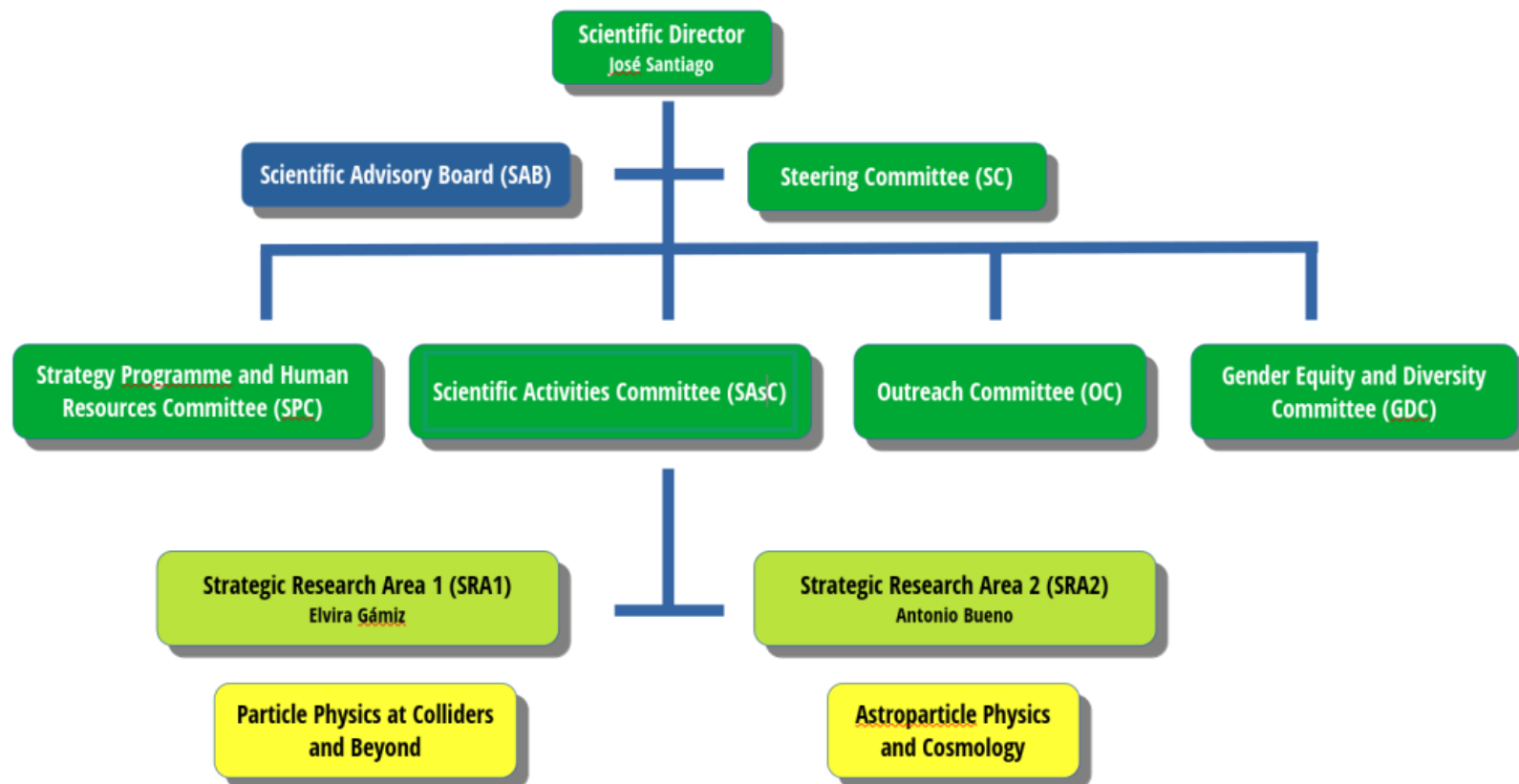
- 2-step application process:
  - 7 research guarantors (top 10% based on 10 milestones)
    - c) Participation in evaluation committees for ERC grant calls, in relevant international panels, or membership in editorial boards of prestigious international scientific journals, or in international scientific organizations where admission is based on merit.
    - d) Receipt of awards or recognition granted on an individual basis by a prestigious national and/or international institution.
    - e) Other R&I-related merits of particular international relevance.

We expect the SAB to provide advice on which guarantors to select.

We did not pass this step last time (2024)!

# Maria de Maeztu Application

- 2-step application process:
  - Unit's Scientific Report



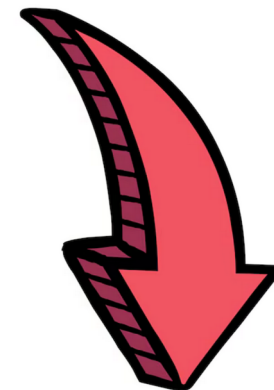
# Maria de Maeztu Application

- 2-step application process:
  - Unit's Strategic Programme
    - Maintain impact and international visibility *Achieved!*
    - Strengthen existing research lines. *Achieved!*
    - New line in SR1: creation of an ATLAS experimental group. *Attempted*
    - New line in SR2: Theoretical developments in phase transitions and gravitational waves *Partially achieved!*
    - Increase number and diversity of predoc and postdoc trainees. *Achieved!*
    - Increase amount of funding from EC. *Achieved!*
  - Previous indicators:
    - New research lines created (EFTs, Neutrino experiments).
    - Attraction of international talent (S. Abreu, int. PhD students and postdocs).

# Summary

- Our Unit has considerably grown since its origin, thanks to internationally competitive attraction of talent programmes.
- We have a strong research output with international visibility and impact in the field.
- The significant effort put into the increment of junior (PhD and postdoc) positions is not easy to maintain (lack of stable funding, lack of office space, ...).
- A **change of paradigm**, like the Maria de Maeztu seal of excellence, or the creation of an institute, seems necessary to keep the momentum and continue contributing to the field at an internationally competitive level.

FTAE@2017



FTAE@2026

