



**Institut de Física  
d'Altes Energies**



**EXCELENCIA  
SEVERO  
OCHOA**

# **IFAE WELCOME DAY SLIDES**



# Marco Aparo Postdoc in ATLAS



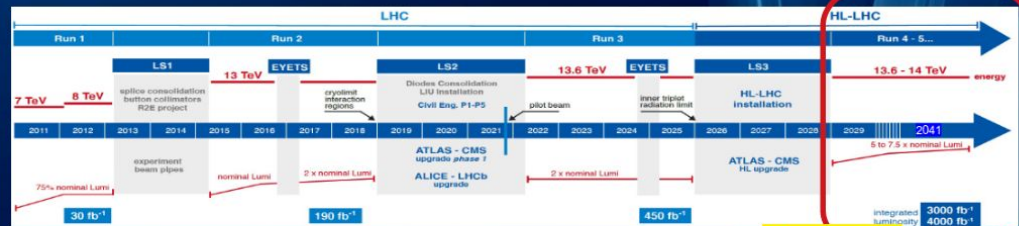
From near Siracusa, Sicily, Italy

- BSc and MSc at University of Catania, Italy
  - PhD and 1<sup>st</sup> postdoc (2 years) at University of Sussex, UK
  - At IFAE's ATLAS group since 1<sup>st</sup> September
- Research interests:

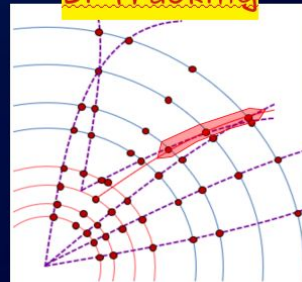
- BSM Exotic searches in multi-leptonic final states
- Tracking performance of the ATLAS trigger system for the Phase II upgrade

Hobbies:

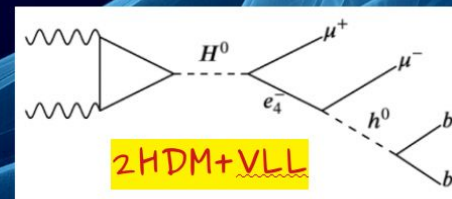
Movies, Cooking, Music, Reading



EFTracking



Phase II upgrade







# Guillermo Baltà Foix

**Born: Barcelona, 2 August 2000**  
**BSc in Physics at UAB**  
**MSc in HEP, Astrophysics and Cosmology at IFAE – ICE**  
**Currently working in the Theory Group**  
**Flavour physics and B-physics phenomenology (Supervised by Quim Matias and Rafel Escribano)**  
**Hobbies: playing basketball, running and reading**





**Davide Barbini**

*PhD Student - Theory Group*  
(Supervisor F. Rompineve)



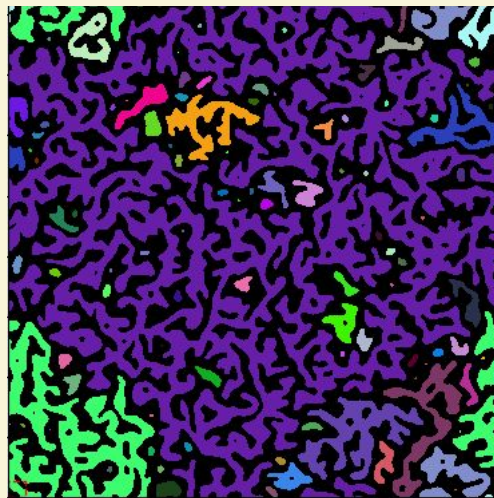
**Born:** Rome, 11 August 2000

**Bachelor & Masters:** Sapienza (2019–2024)

**Master Thesis:** Ultra Heavy Accidental Dark Matter  
(Roberto Contino)

### Currently working on *BSM in Cosmology*

- 1) Domain walls networks dynamics with analytical calculations and numerical simulations
- 2) Dark matter production from topological defects in axion-like theories (*soon*)



*Snapshot of a 2D  
numerical  
simulation of a  
domain walls  
network*

### Domain Walls Networks



# Yuliia Borysenkova

1st year PhD in theory group (supervisor Diego Blas)



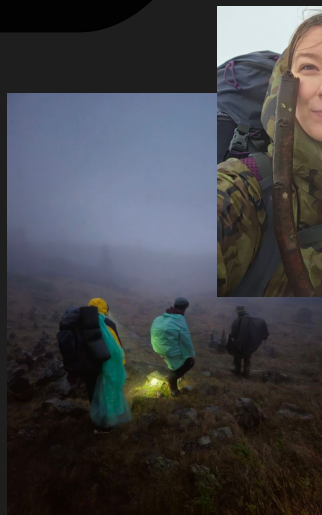
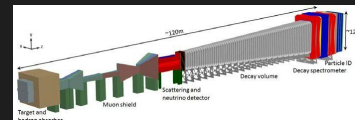
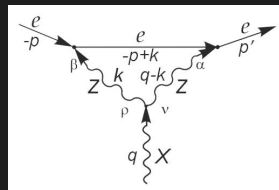
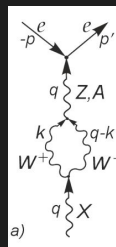
**BSc & MSc:** Taras Shevchenko National University of Kyiv, Ukraine (2017-2023)

**Master thesis:** The Chern-Simons Bosons Interactions with the SM Particles and Their Decays

**Field of interests:** Particle physics, EFTs, BSM physics, Cosmology, GW

**Currently working on Gravnet project:** simulation and detection methods for high-frequency gravitational waves

$$\mathcal{L}_{CS} = c_z \epsilon^{\mu\nu\lambda\rho} X_\mu Z_\nu \partial_\lambda Z_\rho + c_\gamma \epsilon^{\mu\nu\lambda\rho} X_\mu Z_\nu \partial_\lambda A_\rho + \{c_w \epsilon^{\mu\nu\lambda\rho} X_\mu W_\nu^- \partial_\lambda W_\rho^+ + h.c.\}$$





# Giacomo D'Amico

MY PAST

Large Sized Telescope



Me giving a Pizza Seminar on  
March, 29th 2023



# Noé Duarte González

Born in Plasencia, Cáceres

BSc in Physics and Mathematics, University of Seville  
(2018-2023)

*BSc Thesis: Shape of atomic nuclei and dynamical symmetries*

MSc in Particle Physics and Astrophysics, University of  
Granada (2023-2024)

*MSc Thesis: Neutrino-nucleus interactions in scaling models*

Current work: strong interactions phenomenology w/  
Rafel Escribano & Pablo Sánchez-Puertas

My hobbies: comic books, films, Taylor Swift & basketball



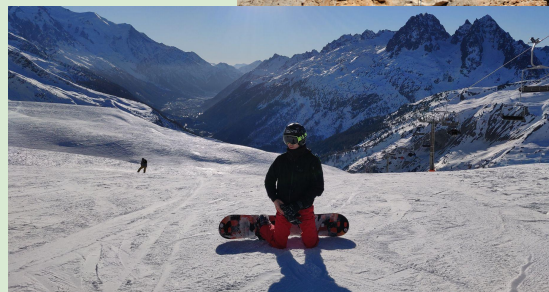
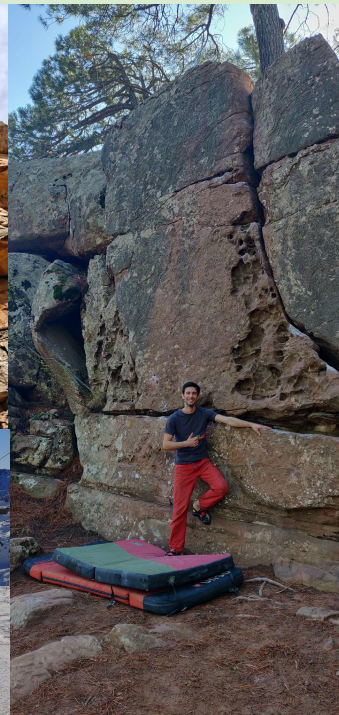
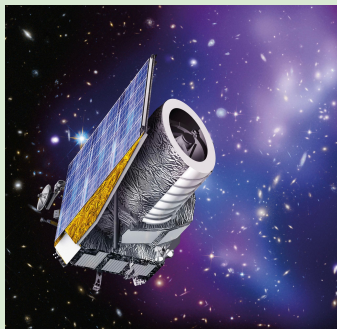


# Christos Georgiou - postdoc, cosmo group

Research interests: Cosmology with large-scale structure, galaxy alignments.

Surveys: KiDS, Euclid, LSST-DESC

*Real* interests: Climbing, board games, hiking, snowboarding, music, photography, dancing







*Pablo Jiménez*





Pablo Jiménez



Pablo Jiménez





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DE MADRID

*Pablo Jiménez*





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de La Laguna



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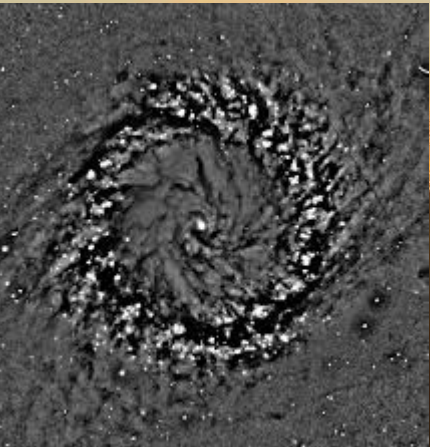
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*Pablo Jiménez*



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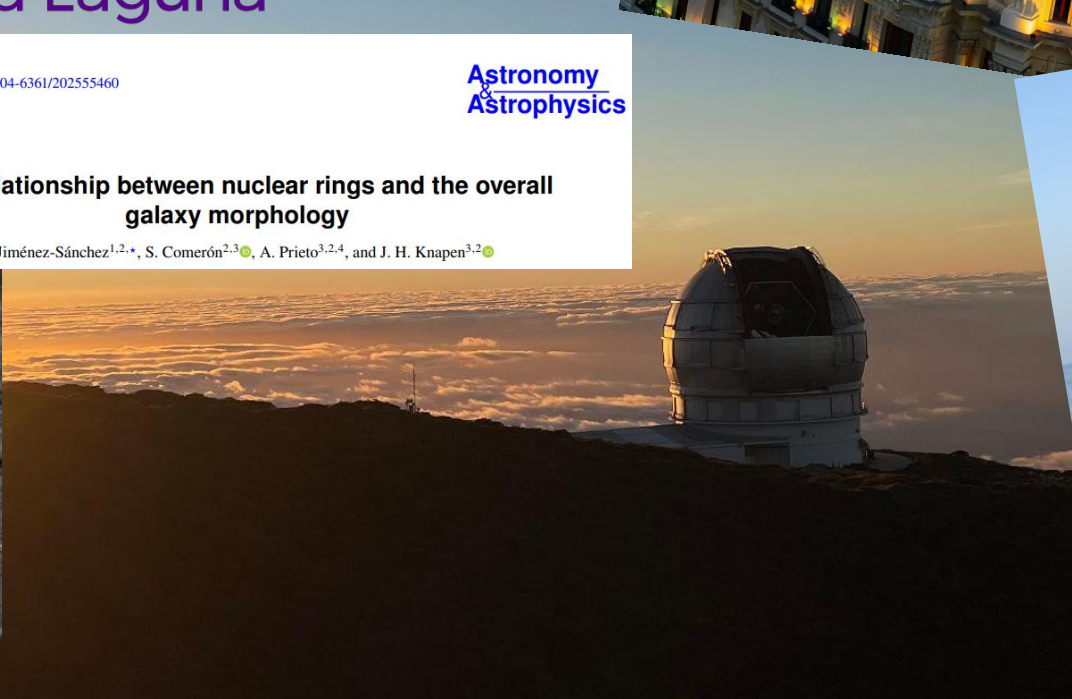
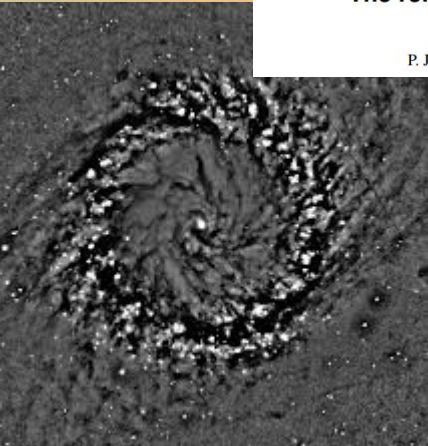


A&A, 700, A101 (2025)  
<https://doi.org/10.1051/0004-6361/202555460>  
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Astronomy  
&  
Astrophysics

## The relationship between nuclear rings and the overall galaxy morphology

P. Jiménez-Sánchez<sup>1,2,\*</sup>, S. Comerón<sup>2,3</sup>, A. Prieto<sup>3,2,4</sup>, and J. H. Knapen<sup>3,2</sup>







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*Pablo Jiménez*



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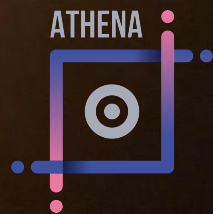
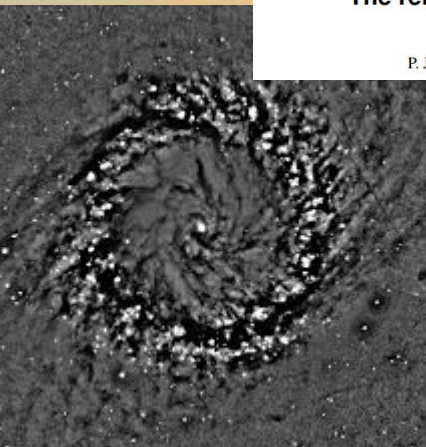


A&A, 700, A101 (2025)  
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Astronomy  
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ARRAKIHS





# Daniel Lozano Jarque



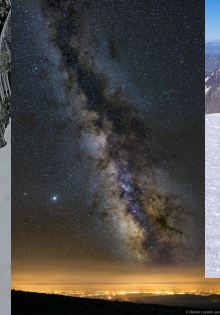
Mollet del Vallès, Barcelona (2001)

## Education:

- BSc in Physics, Autonomous University of Barcelona (UAB)
- MSc in HEP, Astrophysics and Cosmology (UAB-IFAE-ICE)
- PhD Student - Cosmology group at IFAE

## Hobbies & interests:

- alpinism, rock climbing, biking, astronomy & astrophotography and music





# Daniel Lozano Jarque



Mollet del Vallès, Barcelona (2001)

## Education:

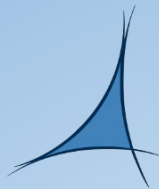
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- MSc in HEP, Astrophysics and Cosmology (UAB-IFAE-ICE)
- PhD Student - Cosmology group at IFAE

## Hobbies & interests:

- alpinism, rock climbing, biking, astronomy & astrophotography and music



# Àlex Luelmo Rodríguez



PIC  
port d'informació  
científica

📍 Tiana, Barcelona -  2000

## 🎓 Education:

- Higher Degree in **Network Computer Systems Administration**.  
Stucom Centre d'Estudis, Barcelona.
- University Degree in **Software Application Techniques**.  
La Salle Universitat Ramon Llull, Barcelona.

## 👛 Experience:

- **Nexiona**: Full-Stack Software Developer.
- **PIC**: Front-end Developer - CosmoHub Project.

## 🌟 Hobbies:

- Hiking - Traveling
- Movies/TV Shows
- Some video games too

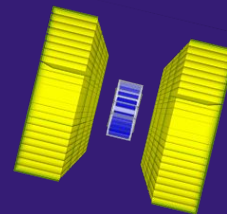
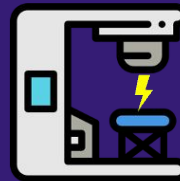




# Elisabetta Medina



- Ph.D. in Medical Physics group @UniTO&INFN  
*FRIDA project: Solid-state detectors as beam monitors for FLASH radiotherapy.*
- Postdoc in Medical Physics group @IFAE  
*CHLOE-PET project: development of advanced TOF-PET modules. SOFTPIX project: high-resolution soft X-ray imaging.*

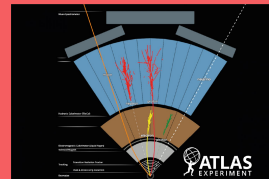


*But also ...*



# Pritha Mitra

India, 1999



## Education

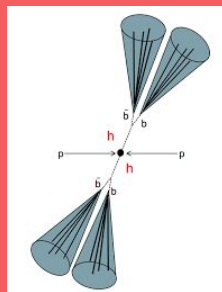
Ph.D Student in IFAE, ATLAS group since February, 2025

- B.Sc in Physics (2017-2020) (Visva-Bharati University, Santiniketan)
- M.Sc in Physics (2020-2022) (Specialization in Particle Physics)
- Thesis in "Symmetries in High Energy Physics" (Visva-Bharati University, Santiniketan)
- Research Fellow in Department of High Energy Physics, TIFR, Mumbai (2023-2024) - CMS Experiment



## Current Research Interests

- Searches for di-Higgs production in the  $4b$  jet final state
- Contributing to  $b$ -jet trigger Calibration



## Hobbies

- Reading
- Writing
- Movies
- Painting



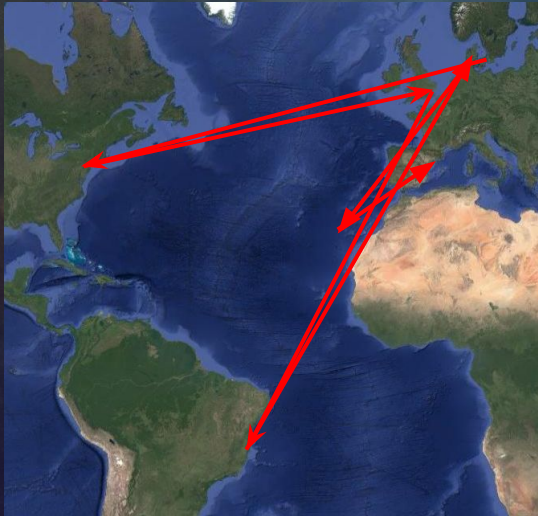


# Benjamin Nobre Hauptmann

## Interests:

Photography/astrophotography  
Board games ([pls hmu if you play Go](#))  
Hiking, scuba diving  
Building arduino stuff

PhD in the gamma group  
Danish/Brazilian space nerd  
WILL beat you in Mario Kart 8







## Clarisse Prat

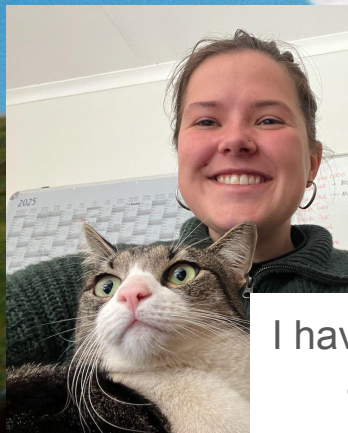
French- South African, undergrad and masters at WITS in Johannesburg  
Started at IFAE in September, working with Tamara

### Masters thesis:

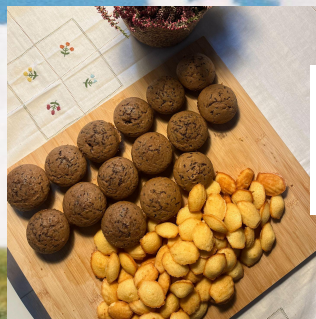
focused on DM in colliders, some pheno  
and an ATLAS search



Surname is apparently very  
Catalan, so good place to be



I have a cat named **Higgs** - fitting since I'm  
an ATLAS PhD student working on  
di-Higgs (and Exotics and Trigger)



I bake when I am stressed, and bring the  
baked goods into the office when I do

### Other hobbies include:

- reading
- swimming
- knitting
- hiking
- skiing



# SANCHARI RAY

- :: born in Kolkata, India 2002
- :: BS-MS from IISER Kolkata 2020-25  
(masters in CMS, level 1 scouting)
- :: PhD at IFAE ATLAS grp 2025-?



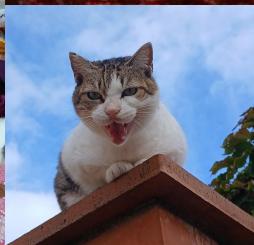
Theatre



watercolour



CATS!!!!



Bon  
appetit



# Guillermo del Riego Ruiz

## PhD at QCT group

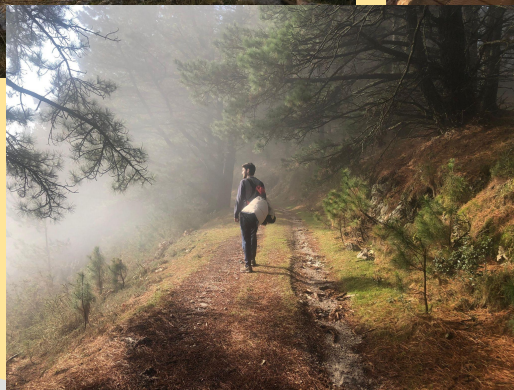
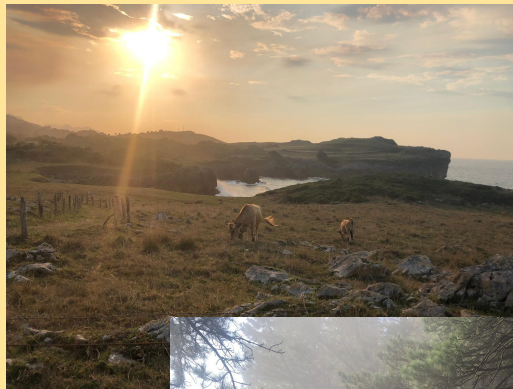
Born in Oviedo, Asturias

BSc in Physics  
Universidad de Oviedo

Web developer for 2 years

MSc in Quantum Science and  
Technology, UB

I like traveling, hiking cooking and  
doing sport







# Ennio Salvioni

*Junior faculty (Ramón y Cajal)*

Theory Group  
At UAB & IFAE since Sep 2025



## Where:

Start @ Venice, Italy

PhD @ CERN/Padua

Postdoc @ UC Davis, TU Munich, CERN

Junior faculty @ Padua, Sussex

## And:

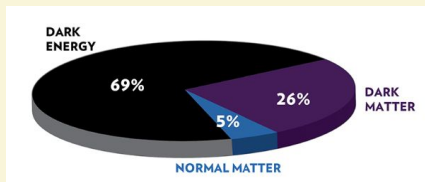


(pretty bad)

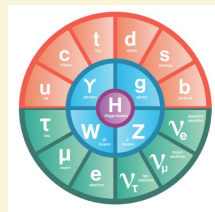
(pretty good)



## What: phenomenology beyond the Standard Models



New physics in cosmological data  
(especially Large Scale Structure surveys)



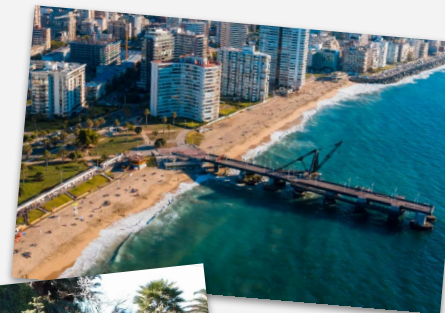
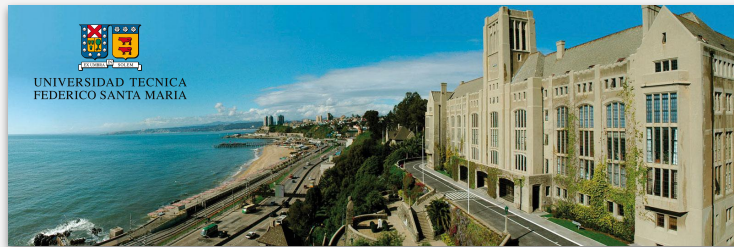
New physics at particle colliders  
(especially Higgs-centric)

## More:

Office C7b-044 (upstairs)  
English; Spanish; French?

# Claudio San Martín Valenzuela

- Joining the Medical Physics Group @ IFAE
- Bachelor & Master's degrees: Physics @ Universidad Técnica Federico Santa María (USM), Valparaíso, Chile



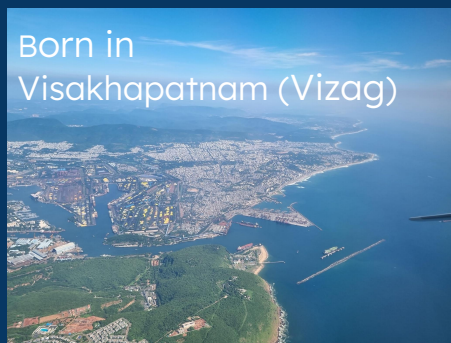
- Research at Fermilab
  - Precision Timing Group (CMS collab)
  - Testing **LGAD** and **SNSPD** devices!
  - Analysis of Higgs to  $\mu^+\mu^-$  with Run 3 data!

- Hobbies
  - Reading (sometimes)
  - Embroidery (sometimes)
  - Video games
  - Tabletop games





Born in  
Visakhapatnam (Vizag)

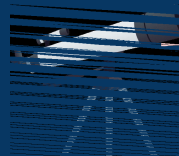


# Sindhu Satyavolu

Postdoc in Observational cosmology at  
IFAE since Oct 23, 2024



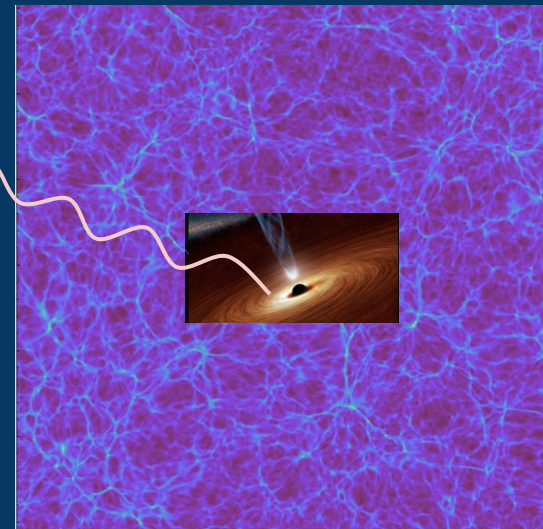
2014- 2018  
Undergraduate  
in  
Engineering  
Physics at IIT  
Madras



2018- 2024  
PhD in  
Theoretical  
Physics at  
TIFR Mumbai



Outside work:  
I enjoy music, traveling  
and cheering for my  
favorite sports teams



I work on modeling and  
data analysis of quasars  
in the early universe

# Udai Sharma (1999 - )



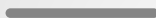
**Bachelors in  
Electronics Engineering**

Indraprastha University,  
New Delhi, India



**Master's in Astrophysics**

Dublin City University  
Dublin, Ireland



**PhD**

Gamma ray group, IFAE

## Experience:

- Little bit of General Relativity, *Master's thesis on the process of spaghettification when falling into a blackhole*
- XMM newton analysis of Supernova Remnants
- Currently working on  $\gamma$ -ray emissions from AGN jets

## Interests:

- Cooking
- Football
- Trekking
- Gym
- Photography

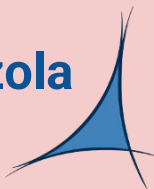




# Sílvia van den Bogaart Marzola



Sabadell, Barcelona | 1999



PIC  
port d'informació  
científica



## Education & Research

- B.Sc. in **Computer Engineering** (Specialisation in Information Technology) + B.Sc. in **Telecommunication Systems Engineering**, UAB — *32 outstanding grades*
- M.Sc. in **Telecommunication Engineering**, UNIR — *9 outstanding grades*
- **COLAB 2022** grant & **WavesLab Group** member, UAB
- **IMFW 2024**: “Advances on Multiplexer Synthesis: The Herringbone Topology”



## Professional Experience

- **Qorvo**: R&D Software Engineer — microwave filter software 🍎📱
- **PIC**: Research Software Engineer — COSMOHUB back-end

## Hobbies:



Dancing |



Music |



Cooking |



Reading |



Painting



# Elisabet Vallejo Pagès

- Birthdate: Aug 22nd 2000
- Physics BSc at UB
- Astrophysics and Cosmology MSc at UB
- Joined GW group at IFAE: Sub-solar mass search and stray light
- Hobbies: Futbol, salsa, climbing, snorkelling and singing





# AGN & blazars

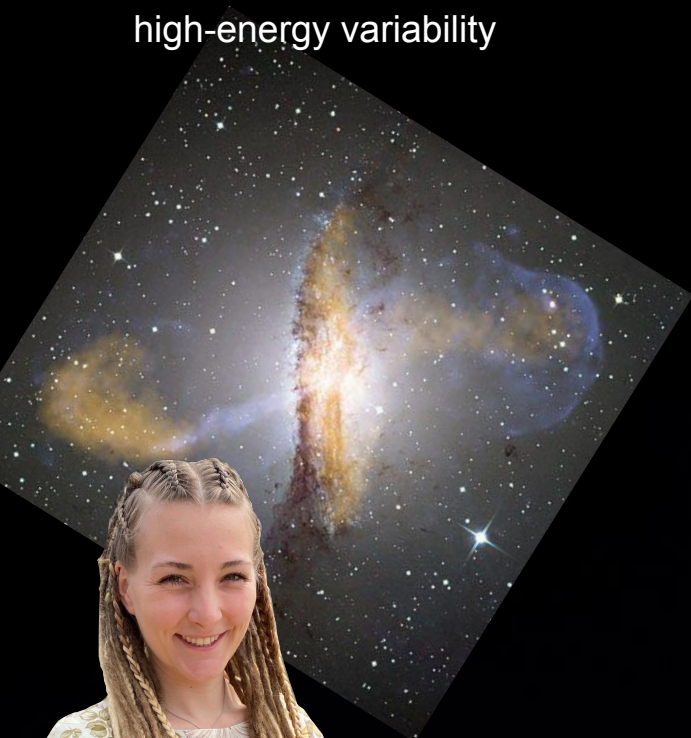
Particle acceleration and  
high-energy variability

# gamma-ray instruments

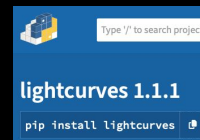
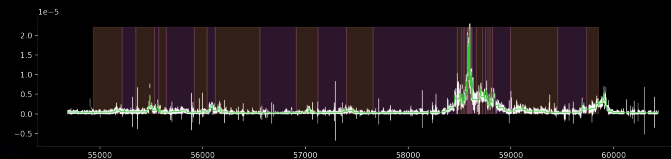
Fermi-LAT, MAGIC, SiPMs in space  
(radiation damage)

# time series analysis

Signatures of gravitational lensing,  
software development

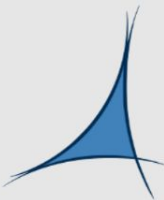


$$y(t) = x(t) + a \cdot x(t + \tau)$$

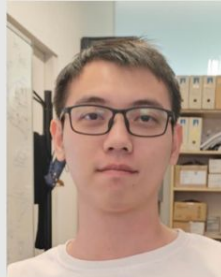


GitHub:  
swagner-astro

Sarah Wagner, Post Doc in the gamma group



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**Name:**GuangZai Ye

**Nickname:**Photony

**Email:**yg21094858348@gmail.com

PhD student in Applied AI group

Student of Martin Børstad Eriksen

Funded by CSC

(CHINA SCHOLARSHIP COUNCIL)

2022.9-2025.7

Jinan University

Theoretical physics (Master)

2016.9-2020.7

Jinan University

Applied physics (Bachelor)

### **Master's Focus:**

Black Hole Thermodynamics And Numerical Relativity

### **Publications:**

Spontaneous Vectorization in the Einstein-Maxwell-Vector Model [Published]

Spontaneous Vectorization in the Einstein-Born-Infeld-Vector Model [Preprint]

### **Hobbies :**

Video games, Animation