

# Early Career Researcher Session

CHIPP 2024 Annual meeting

# My career path

## And my research in astroparticle physics



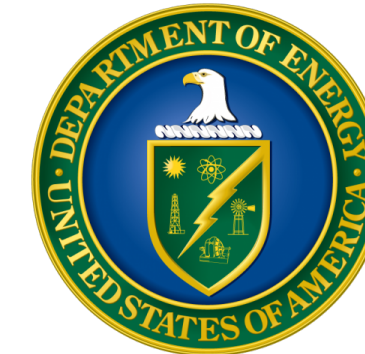
Bachelor and Master  
at University of  
Milano-Bicocca, Italy



PhD at University of  
Zurich, Switzerland



BERKELEY LAB



Postdoc at Lawrence  
Berkeley National  
Laboratory, USA

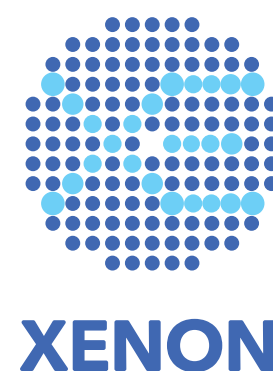


SNSF Ambizione grant at  
University of Zurich,  
Switzerland

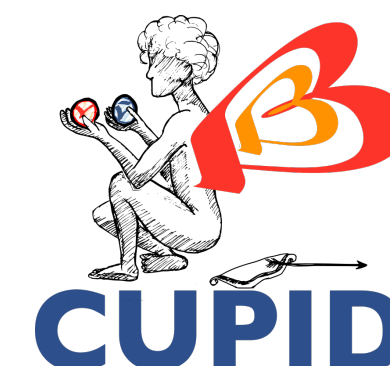
Master thesis on  
hardware and TES  
readout for HOLMES -  
direct measurement of  
neutrino mass



Data analysis for WIMP  
and  $0\nu\beta\beta$  with XENON1T  
and hardware for  
XENONnT - direct dark  
matter detection



Some analysis for CUORE  
(ML) and R&D on TES light  
detectors and readout for  
CUPID -  $0\nu\beta\beta$



Analysis on double weak  
decays with XENONnT  
and R&D for DARWIN/  
XLZD -  $0\nu\beta\beta$  and WIMP



# Ambizione grant

## The application process

- Two steps: evaluation of titles and project + interview
- Many guidelines from SNSF on how to structure the project and on how to practically apply
- Start in advance with the process even if you still not have clear ideas on all the aspects of the projects → quite some documents to prepare beside the scientific part (cv, budget,...)
- Contact well in advance the host institution, you need support letter from them and they can help preparing for the interview
- There will be some expert but mostly non-expert: start with a good introduction on the field and why the project is relevant and then enter into some details

# Ambizione grant

## How to have an idea

- It is not easy - you need some years in the field
- Think at the direction the field you are working on is going:
  - what are the needs for future experiments? What are the problems we are encountering with the current ones and how we could solve them?
  - Are there some measurements that would help improving the current knowledge on physics properties of the detector?
  - Are there some new physics channels that we can now access or some already explored channels that we can improve thanks to new tools?
- Chat with expert of the field, your supervisor or other people in the collaboration, or that you met during conferences, ... Don't be afraid to ask! (Worse case you get no reply)

# Ambizione grant

## Some considerations

- Unfortunately, there are external factors that do not depend on how good the project or the applicant are:
  - Which research topics are trendy? Where the funding agencies are investing?
- Ambizione is the first step, the projects are low risk low-er gain (ERC can be high risk high gain)
- You need to fill in as much as you can all the fields but you do not need to have done everything listed in the documents/guidelines
- Internationalisation is taken into account (change of institution, country, experiment, field)
  - Apply to a different experiment/field is welcomed but you need to have some expertise as the committee has to believe you are able to carry on the project

# Other questions?

- ...