

1st EuCAPT Census



EuCAPT

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Overview

- The European Consortium for Astroparticle Theory (**EuCAPT**, <https://www.eucapt.org>) is a new initiative, with central hub at CERN, that aims to bring together the European community of theoretical astroparticle physicists and cosmologists.
- Goals of EuCAPT:
 - *to increase the exchange of ideas and knowledge;*
 - *to coordinate scientific and training activities;*
 - *to help scientists attract adequate resources for their projects;*
 - *and to promote a stimulating, fair and open environment in which young scientists can thrive.*
- We invited all scientists (PhD students, postdocs, and staff) affiliated to a European institution, and active in Theoretical Astroparticle Physics and Cosmology, to participate in the “1st EuCAPT census” by filling an Indico registration form that included the questions specified in the next slide.
- 660 scientists completed the census between January 13 and 31, 2020.
- This report summarizes the key-findings.

Questions asked

Census

First Name *

Family Name *

Email Address *

Institution PIC (see website below)

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/participant-register-search>

[If PIC not available] Institution name

[If PIC not available] Institution address

[If PIC not available] Institution country

Country of origin *

Position *

EuCAPT strives to achieve an inclusive culture. Help us promote diversity by checking the option that best reflects your gender (this information will not be made public without your explicit consent):

Gender *

Field of Research: Please specify approximate % of time spent on different topics (total should be 100):

Dark Matter
(phenomenology of WIMPs, axions, sterile neutrinos, PBHS, ...)

Dark Energy
(modified gravity, LSS, ...)

Cosmic accelerators
(gamma-rays and neutrinos from astrophysical jets, GRBs, ...)

Cosmic rays
(acceleration, propagation, solar physics, ...)

Dynamical spacetimes
(GWs, numerical relativity, ...)

Early universe
(inflation, leptogenesis, baryogenesis, ...)

Other

Please help us include all relevant fields of research. If you have selected 'Other', please specify:
(e.g. low-energy astrophysical neutrinos, nuclear astrophysics,...)

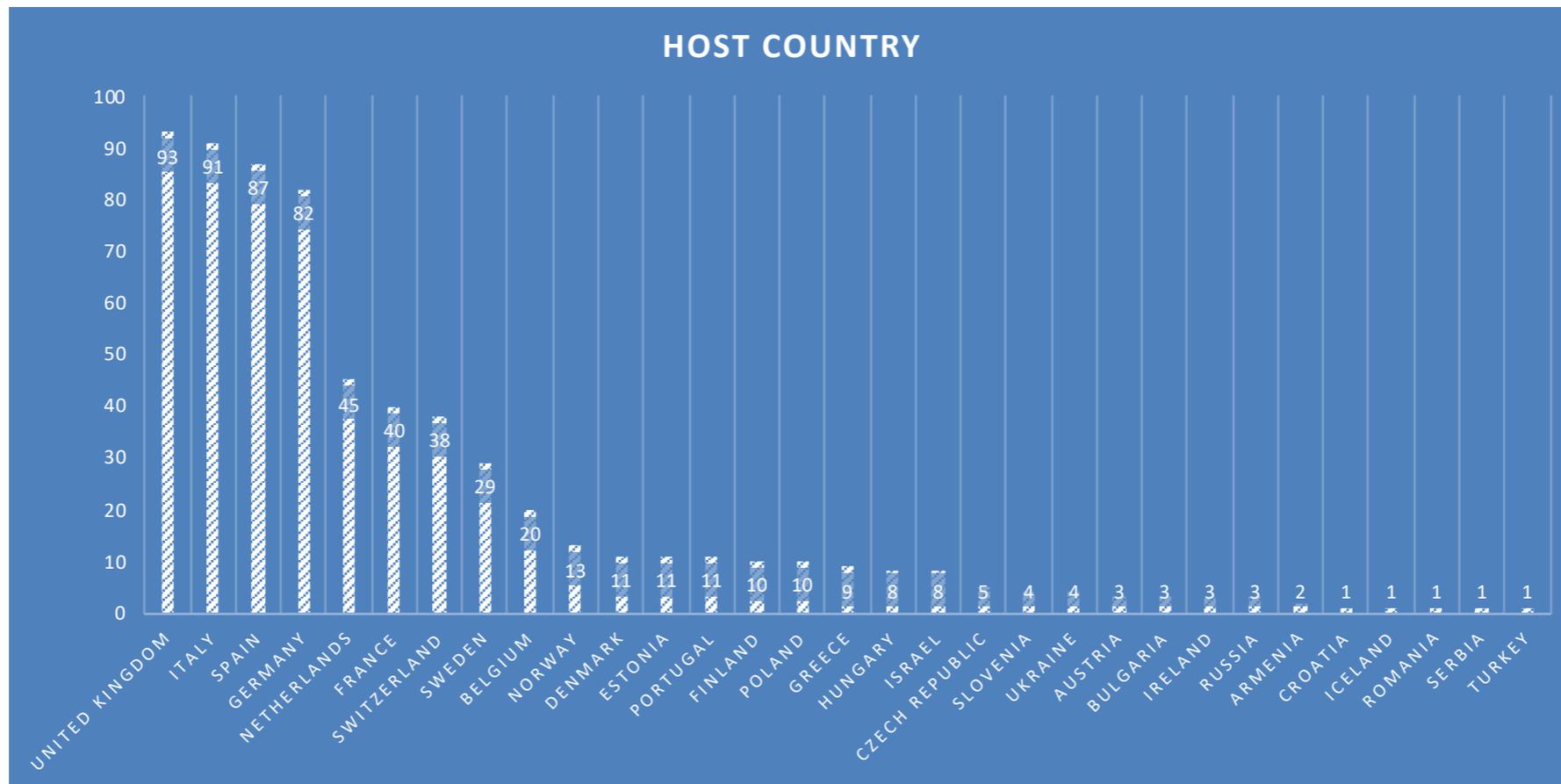
I agree with the handling and storage of my data by EuCAPT in accordance with CERN Data Privacy Protection Policy (<https://home.cern/data-privacy-protection-policy> *)

I want to be informed about EuCAPT activities and to join the EuCAPT mailing list

Thank you for your participation.

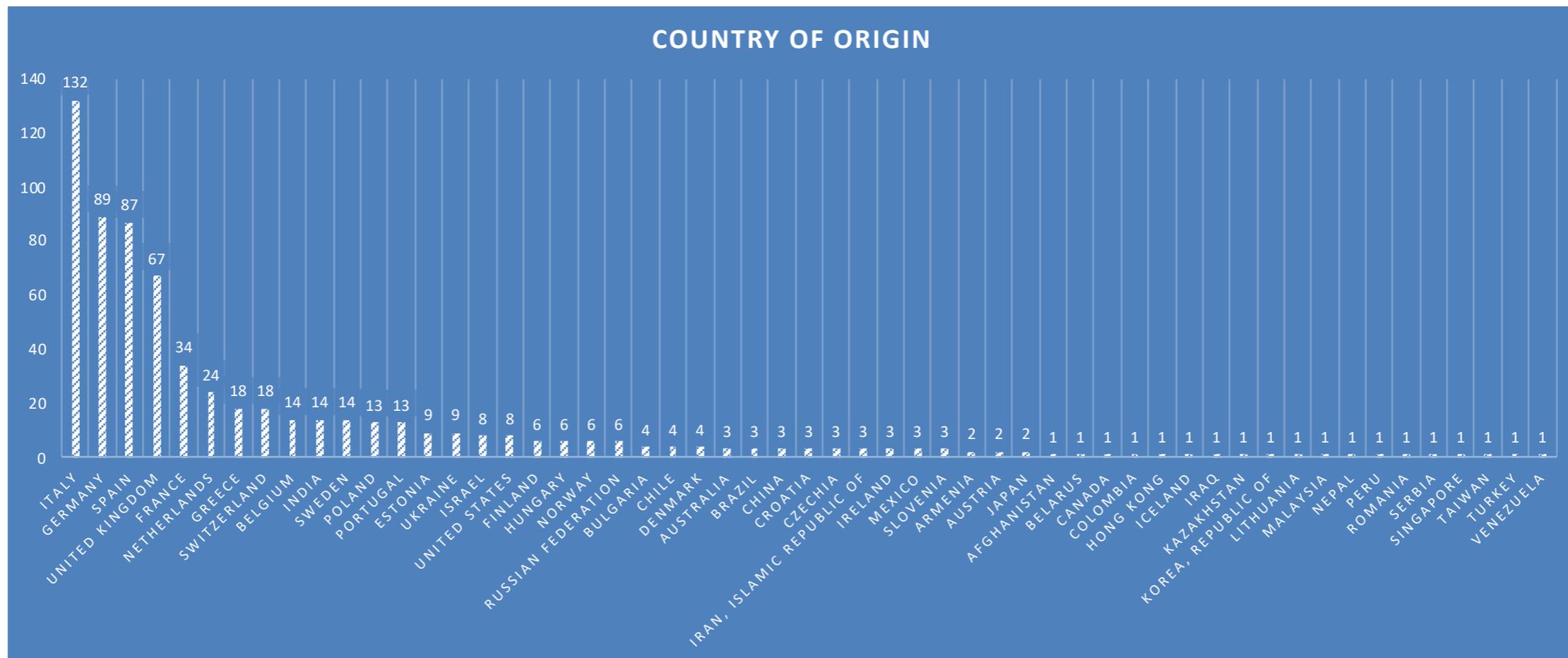
Host country

- Scientists working in 31 European countries (plus 5 non-European countries) have completed the census
- 53% of participants affiliated to 4 countries: UK, Italy, Spain, Germany
- Possible bias introduced by channels used to advertise census.



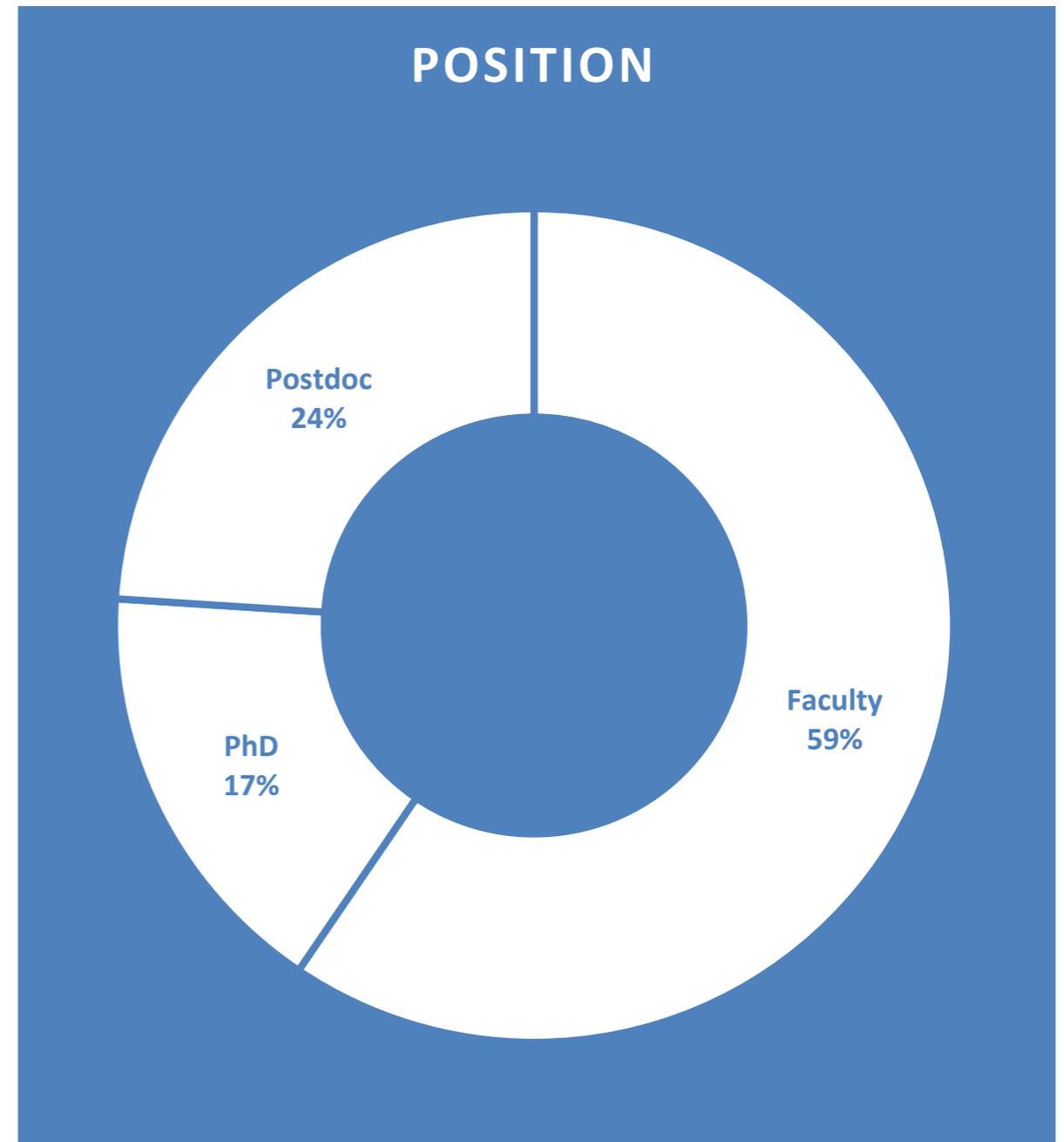
Country of origin

- 55 nationalities represented in EuCAPT
- 56% of participants originate from 4 countries: UK, Italy, Spain, Germany
- Again, possible bias introduced by channels used to advertise census



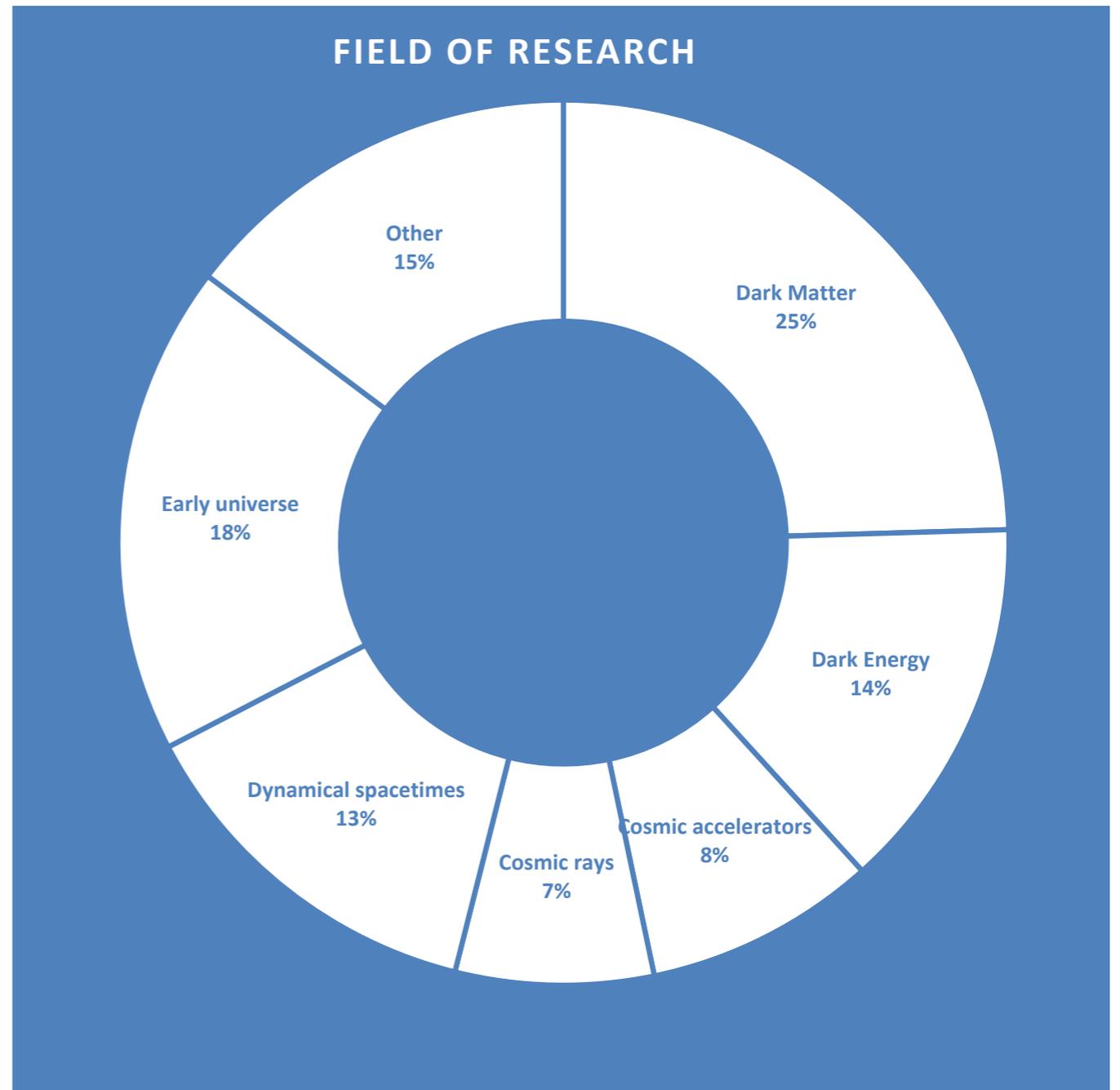
Position

- The majority of registrants are faculty members.
- Important to reach out to younger scientists and encourage them to join.



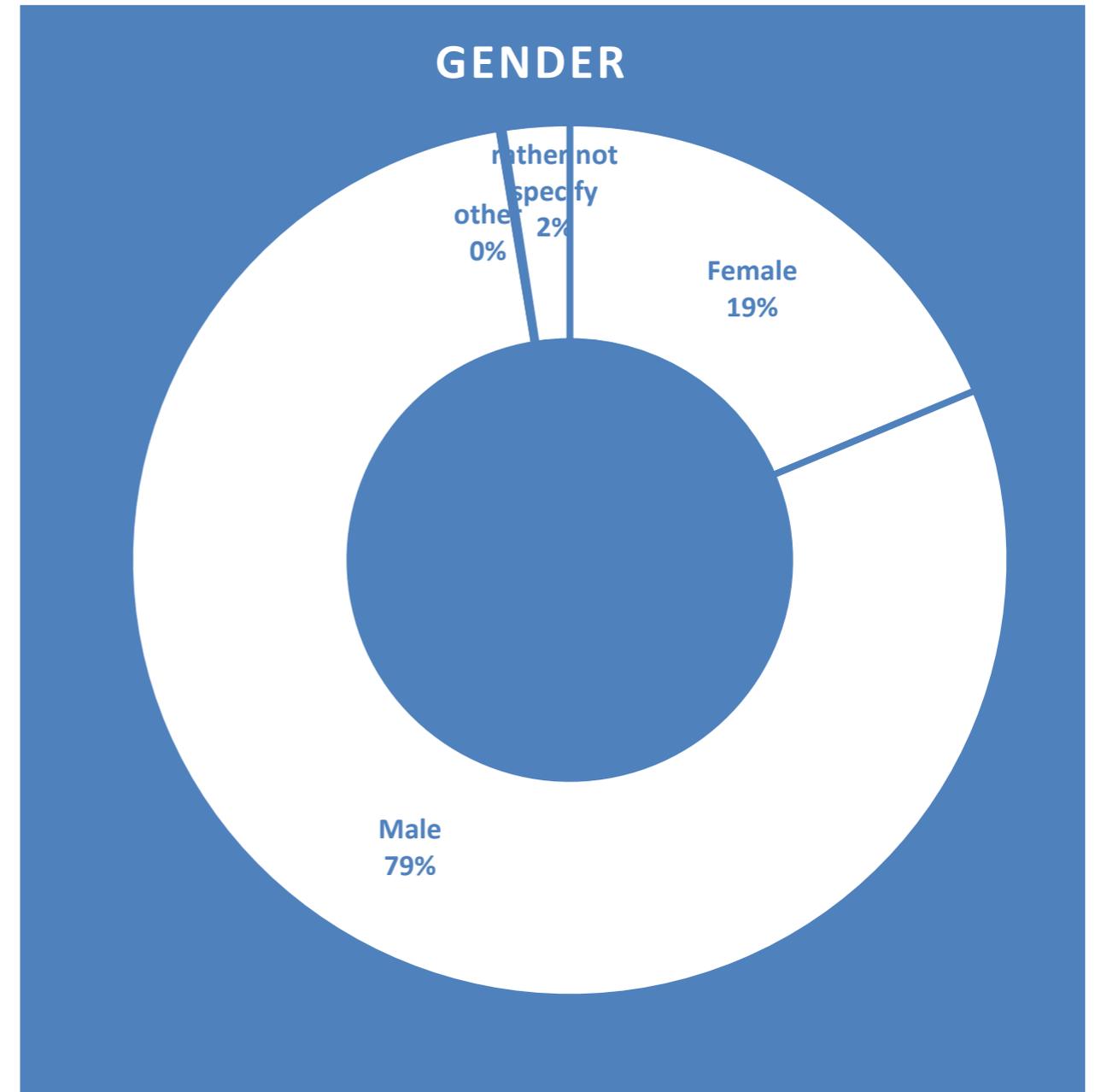
Fields of Research

- A snapshot of the research interests of the EuCAPT community can be obtained by adding up the fraction of time spent by each registrant on a given field of research
- Macro areas explicitly mentioned in the census account for 85% of the time spent by registrants on theoretical astroparticle physics and cosmology
- 134 registrants used the free text box next to 'Other' to specify their field of research:
 - The work of 24 of them broadly falls in the category of 'low-energy neutrino astrophysics', which will be added as macro-area in the next census.
 - Among other, less frequent responses: machine learning, quantum gravity, and particle physics phenomenology.



Gender

- Strong imbalance, only ~20% women
- Results appear consistent with data from the American Physical Society and the UK Institute of Physics, indicating that around 20% of the physics-research community is female (situation deteriorates significantly as one looks higher on the career ladder) <https://cerncourier.com/a/viewpoint-fixing-gender-in-theory/>



Final remarks

- 660 scientists completed the EuCAPT census: strong interest in Europe-wide coordination of Theoretical Astroparticle Physics and Cosmology
- The community is arguably even bigger. EuCAPT will reach out to those who have not yet completed the census, and to groups/communities which appear underrepresented (e.g. low-energy neutrino astronomy, nuclear astronomy, PhD students)
- The data collected offer a first, albeit possibly biased, snapshot of the research interests of the Astroparticle and Cosmology theory community
- The data collected will allow EuCAPT to effectively start the process of consolidating and coordinating the relevant scientific community
- Those who have not completed the EuCAPT census but want to be informed about EuCAPT, can sign up at <https://www.eucapt.org/census>