HELLENIC REPUBLIC
MINISTRY OF DEVELOPMENT
GENERAL SECRETARIAT FOR RESEARCH AND INNOVATION

Ministry of Digital Governance

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Date: 2025.11.24 11:55:19 EET
Reason:
Location: Athens

FOUNDATION FOR RESEARCH & TECHNOLOGY - HELLAS
INSTITUTE OF ASTROPHYSICS

One (1) PhD student position in the project "SMILE"

Search for Milli-lenses to discriminate between dark matter models

(Call: ERC-2021-STG, GA 101040021)

Funded under HORIZON.1.1 - European Research Council (ERC)

European Commission | Horizon 2020 European Union funding for Research & Innovation

Ref. 201995
Heraklion, 24.11.2025

The Institute of Astrophysics (IA) of the Foundation for research and Technology Hellas (FORTH), in the framework of the project SMILE, (Call: ERC-2021-STG, Proposal number: 101040021) funded under HORIZON-EUROPE.1.1. - European Research Council (ERC) is seeking to recruit one (1) PhD student position.

Title: Exploring Gravitational Lens Models in Milli-Lens Systems within several Dark Matter Scenarios

Job Description

The successful candidate will contribute to the theoretical and observational study of milli-lens systems, with particular emphasis on testing different lens models and approximations within several dark matter theoretical frameworks. The objective is to comprehensively characterize a milli-lens system by considering different types of lenses, such as supermassive black holes and compact dark matter halos. This research will establish the lensing framework necessary for identifying milli-lens systems within SMILE.

Additionally, the candidate will test the efficiency of different DM models in producing strong lenses using packages for gravitational lensing modelling and lensing simulations as *lenstronomy* and *pyHalo.* The outcome will be compared with the milli-lens expectations in the SMILE project as obtained using a semi-analytical model presented in Loudas et al., 2022 A&A 668, A166. Numerical simulations will also allow the student to test the effect of having multiple sub-galactic DM halos contributing to the gravitational potentional of a single milli-lens system.

Required qualifications

To apply for the position, the candidate needs to have a Bachelor Degree and Master Degree in Physics (or related fields), and has to be already accepted in a PhD program in a Greek University. Good programming skills and past research experience inherent to the project are also positively evaluated.

The aforementioned required qualifications will be judged as follows:

- Degree titles (50%)
- Experience in Python coding and past research experience (50%)

Location: IA - FORTH, Heraklion Crete GREECE

Start Date: January 1, 2026

Project Duration: 12 months (renewable up to 2 years) upon satisfactory performance and availability of funds.

Monthly salary: Depending on experience and qualifications and according to the calculation of salaries and allowances based on the civil servants' payroll.

Application Submission

Interested candidates who meet the aforementioned requirements are kindly asked to submit their applications, no later than **December 09 at 23:59 local Greece** time to the address (info@ia.forth.gr), with cc to Dr. Carolina Casadio (ccasadio@ia.forth.gr).

In order to be considered, the application must include:

- Application Form (please download file from the job announcement webpage https://www.ia.forth.gr/employment-opportunities)
- Brief CV
- Scanned copies of academic titles

Any application received after the deadline will not be considered for the selection

Contact

For information and questions regarding the application and selection procedure, candidates are asked to contact the secretariat (info@ia.forth.gr), tel. +30 2810-394200.
For information and questions about the advertised position and the research activity of the group, please contact Dr. Carolina Casadio (ccasadio@ia.forth.gr).

Evaluation procedure

Applications will be evaluated by a three-member evaluation committee. In case of interview procedure, applicants will be invited to participate in person or teleconference.

In case of titles and qualifications awarded by foreign Higher Education Institutions, the provisions of the Law 55/2023 (article 36) and 4957/2022 (article 304) are implemented.

The results of the selection will be announced on the website of IA-FORTH. Applicants have the right to appeal the selection decision, by addressing their written objection to the IA secretariat within five days since the results announcement on the web. Objections are submitted in one of the following ways: in person, by an authorized person, by post, by courier. They also have the right to access (a) the files of the applicants as well as (b) the table of applicants' scores (ranking of applicants results). All the above information related to the selection procedure will be available at the secretariat of IA-FORTH in line with the Hellenic Data Protection Authority. Access to personal data of co-applicants shall be limited to personal data (and relevant data) and supporting documents which have been the basis of the evaluation of the applicants for the specific post(s). Prior to the announcement of the personal data and/or documents of the co-applicants to the applicant, FORTH will inform the data subjects in an appropriate way.

The selected applicants will be notified personally regarding the success of his/her application and will be requested to submit certified copies of his/her degrees. If the submitted documents do not agree with the original application, the applicant will be dismissed.

GDPR

FORTH is compliant with all legal procedures for the processing of personal data as defined by the Regulation EU/2016/679 on the protection of natural persons with regard to the processing of personal data. FORTH processes the personal data and relevant supporting documents that you have submitted to us. Processing of that data is carried out exclusively for the needs and purposes of this specific call. Such data shall not be transmitted to or communicated to any third party unless required by law.

FORTH retains the above data up to the announcement of the final results of the call, unless further process and reservation is required by law or for purposes of exercise, enforcement, prosecution of certain one's legitimate legal rights' as defined in the Regulation EU/2016/679 and/or in national law.

Under the Regulation EU/2016/679 applicants have the rights to be informed about your personal data, access to, rectification and erasure, restrictions of process and objection to as provided by applicable regulation and national laws. We acknowledge also to you, that you have the right to file a complaint to the national Data Protection Authority. For any further information regarding exercise of your personal data protection rights, you may contact the Data Protection Officer at FORTH at dpo@admin.forth.gr.

Applicants have the right to withdraw your application and consent for the processing of your personal data at any time. We inform you that, in this case, FORTH shall destroy such documents and/or supporting documents submitted and shall delete the related personal data