One (1) master student position & one (1) post-doc position

in HEISINGBERG project

Spatial Quantum Optical Annealer for Spin Hamiltonians

(Call: HORIZON-EIC-2022-PATHFINDERCHALLENGES-01, GA 101114978)

Funded under HORIZON-EIC - HORIZON EIC Grants

European Innovation Council

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Heraklion 24/10/2023

The Institute of Electronic Structure and Laser of the Foundation for research and Technology Hellas (IESL -FORTH), in the framework of the project HEISINGBERG, (P.I.: Prof. P. Savvidis, Call: HORIZON-EIC-2022-PATHFINDERCHALLENGES-01, GA 101114978), funded under HORIZON-EIC - HORIZON EIC Grants, is seeking to recruit one (1) master student & one (1) post-doctoral researcher.

Master Student

Development of set of phase-only spatial light modulators (SLMs), coupled with appropriate optical components in order to perform specific operations on the spatial profile of a laser beam encoding a spin system. The key point to realise an XY Hamiltonian within this approach is the use of several phase levels on each SLM mode, which allows approximating a continuous optical spin.

Required qualifications

- Bachelor Degree in Physics (20%)
- Experience in laser laboratory (40%)

Additional qualifications

- Experience with programming, automation and electronic circuit (30%)
- Fluency in English (10%)

Location: IESL-FORTH, Heraklion Crete GREECE
Start Date (earliest): December 1, 2023
Project Duration: 8 Months with possibility of extension according to the needs of the project
Budget: 500 euro

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Post-doc

Computational modelling of spin systems with emphasis in novel methodologies involving the driving of a spatial photonic spin simulator into the quantum regime by upgrading its coherent drive to squeezed light and designing dedicated custom-tailored and purpose-built algorithms.

Required qualifications

- PhD Degree in Physics (10%)
- Experience in simulations and modelling of condensed matter systems with emphasis in quantum well excitons and microcavity polaritons (20%)
- Strong publication record (20%)
- Two (2) reference letters (20%)

Additional qualifications

- Experience in European Programs management (20%)
- Fluency in English and German (10%)

Location: IESL-FORTH, Heraklion Crete GREECE
Start Date (earliest): December 1, 2023
Project Duration: 12 Months with possibility of extension according to the needs of the project
Budget: approx. 1100 - 1500 euro

Application Submission

Interested candidates who meet the aforementioned requirements are kindly asked to submit their applications, no later than **November 3, 2023, 23:59 local Greece time** to the address (hr@iesl.forth.gr), with cc to Prof. P. Savvidis (psav@materials.uoc.gr).

In order to be considered, the application must include:

- Application Form (please download file from the job announcement webpage https://www.iesl.forth.gr/en/jobs-bids/jobs/job-positions)
- Detailed curriculum vitae (CV) of the candidate
- Scanned Copies of academic titles
- Certificate for enrollment in a master's program (for the master student position)

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 (hr@iesl.forth.gr), tel. +30 2810-391301.
For information and questions about the advertised position and the research activity of the group or the institute, candidates are asked to contact Prof. P. Savvidis (psav@materials.uoc.gr).

Selection Announcement

The result of the selection will be announced on the website of IESL-FORTH.

Candidates have the right to appeal the selection decision, by addressing their written objection to the IESL secretariat within five (5) days since the results announcement on the web. They also have the right to access (a) the files of the candidates as well as (b) the table of candidates' scores (ranking of candidates results). All the above information related to the selection procedure will be available at the secretariat of IESL-FORTH in line with the Hellenic Data Protection Authority.

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. We inform you that under the Regulation EU/2016/679 you 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. You 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.