NEURO PAC

NSF AccelNet NeuroPAC Fellowship Program

Background

NeuroPAC is an NSF-supported effort under the AccelNet (Accelerating Research through International Network-to-Network Collaborations) program, led by the University of Maryland and Johns Hopkins University. Its goal is to network internationally neuromorphic engineers with computational neuroscientists, roboticists, and researchers of computational theory, control, and perception to advance the foundations of Neuromorphic Intelligence.

Currently the participating institutions include: UMD, JHU, UC Berkeley, UC San Diego, Univ. of Pittsburgh, UPenn, CalTech, Baylor College, ETH Zurich, University of Cambridge, TU Delft, TU Graz, TU Berlin, Lulea University, Julich Forschungszentrum, IIT, ZHAW, Univ. of Groningen, Univ. of Waterloo, University of Granada, Western Sydney University, Sheffield Hallam University, Royal Institute of Technology, University of Cadiz, Mitre Corporation, Neuromorphic Computing Lab of Intel. Researchers from other institutions interested in the topic are encouraged to join.

To foster collaboration between the international network partners, NeuroPAC is sponsoring a fellowship program, that will allow junior researchers to stay at a partner institution and work on cross-disciplinary research within the areas of the NeuroPAC program, under the mentorship of advisors from both their own and the visiting institute. All students, Postdoctoral fellows, and researchers are encouraged to apply.

Award Information

We invite proposals for funding of up to $22,000 for up to a semester-long. Shorter stays (for example for the summer) will also be considered. Graduate students, postdoctoral fellows and researchers are encouraged to propose projects within the scope of the AccellNet NeuroPAC program. Projects should strengthen the initiative of the program and be a collaboration between the proposer's home institution and one of the partner institutions. The program will support travel, lodging, and living costs for their stay at the partner institution.

Fellows of the program will be required to submit a short report at mid-term to demonstrate progress, and a final progress report within two months following the end of their stay at the host institution. Fellows will present their work in an online presentation within the NeuroPAC seminar series and are encouraged to contribute to the NeuroPAC blog.

Eligibility

The Fellows program is open to graduate students and postdoctoral researchers within the neuromorphic community from all institutions. Applications can be submitted from now till July

2025, and they will be reviewed as they arrive. The program supports visits of US students at international institutions (including the US), and visits of international students at US institutions.

Proposal Preparation and Submission

Proposals should include the following items:

1. Applicant's Bio sketch
2. A brief, 1-page statement summarizing the qualifications and specific expertise of the advisors at the home and host institution, and how these skills will be integrated together for co-mentorship of the applicant throughout the Fellowship.
3. A description of the proposed work (up to three pages). The document should contain the following Sections:

    a. *Background and Specific Aims*: This section should clearly describe the background, the objectives of the project, and the hypotheses or questions addressed. This section should end with a numbered list of the Aims.
    b. *Approach*: This section should clearly describe the research design, measures, data analysis plan, and any preliminary data.
    c. *Significance*: This section should illustrate the importance of the project or describe the critical barrier to progress in neuromorphic engineering and how the project will improve scientific knowledge, technical capability, and/or practice if the Aims are achieved.
    d. *Cost estimate:* Include an estimate of expected costs or travel, housing, and living expenses for the project duration.

Submit applications to fellowship@neuropac.info

Application Review Criteria

- *Innovation:* The project seeks to have a transformative role in bringing new computational tools or experimental approaches to advance neuromorphic technology.
- *Interdisciplinary:* The project uses multiple theoretical and empirical approaches and clearly draws on expertise spanning more than one discipline, and institution.
- *Approach:* The project's design, methods, and analytic plan are well-developed, integrated, and appropriate to the aims of the proposed project and the research environment with consideration of potential pitfalls and alternative solutions.
- *Contribution to the mission of the AccelNet fellowship program:* High level research integration and clear indication of mentoring support to the applicant from both advisors.

Fellowship Committee

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