Call for WASP-WISE NEST 2024

Updated 2024.10.01 (Version 2024.09.09)

Application deadline 2024-12-01, 14:00

1. Aim and scope

Hereby, WASP and WISE announce the WASP-WISE NEST 2024 call (Novelty, Excellence, Synergy, and Teams), which are joint projects that span across the thematic profiles of WASP and WISE. A NEST shall address a specific strategic high-priority research challenge with international impact and visibility that requires the combined competence of a multidisciplinary team of investigators to be solved. The added value from collaboration, in particular between WASP and WISE, but also within each of the programs, must be clearly emphasized. Scientific novelty, originality and impact, as well as the relevance to Swedish industry and/or society are key elements.

Wallenberg AI, Autonomous Systems and Software Program (WASP, https://wasp-sweden.org/) is Sweden's largest individual research program and provides a platform for academic research and education, fostering interaction with Sweden's leading companies and other actors. The program addresses research in artificial intelligence, autonomous systems, and software as enabling technologies for developing systems acting in collaboration with humans, adapting to their environment through sensors, information, and knowledge, and forming intelligent systems of systems. WASP strengthens, expands, and renews the national competence through strategic recruitments, a challenging research program, a national graduate school, and collaboration with industry and society. WASP aims at increasing gender balance and building a culture based on inclusion and diversity. The program is conducted in close cooperation between leading Swedish universities to promote the competence of Sweden as a nation within the area of AI, autonomous systems and software.

Wallenberg Initiative Materials Science for Sustainability (WISE, https://wise-materials.org) is the largest-ever investment in materials science in Sweden and encompasses major efforts at Sweden's leading universities over the course of (at least) 10 years. The aim is to create the conditions for a sustainable society by researching the next generation of ecofriendly materials and manufacturing processes. This will also facilitate better technology for energy systems of the future, and to combat climate change, pollution, and toxic emissions. Specifically, efforts will be devoted to identifying new or significantly improved materials, which provide a distinct advantage in physical, chemical, biological, or functional performance when compared to existing materials and technologies. This relates to materials that demand fewer resources, are less environmentally hazardous, and enable sound and efficient recycling processes. WISE will also explore materials that, when used in energy technology, generate less negative climate impact under operation, while offering high performance and efficiency when in action at large scales.

2. Who can apply?

A NEST typically consists of 3-5 principal investigators (PI), larger constellation may apply if scientific added value can be motivated. The project is led jointly by one WASP main PI and one WISE main PI. Additionally, one to three co-PIs, from either program, participate. Given the multidisciplinary nature of a NEST, it is anticipated that PI partners from different departments and research environments are involved. A plan for how to bridge geographical and competence gaps should be provided.

An applicant can be involved in a maximum of one proposal as a main PI and maximum of one proposal as co-PI.

The WASP main- and co-PI is employed at one of the WASP partner universities Chalmers University of Technology, KTH Royal Institute of Technology, Linköping University, Lund University, Umeå University or be part of the Affiliated Groups of Excellence at Örebro University, Uppsala University or Luleå University of Technology and have their research focus within AI, Autonomous Systems or Software. Please note that it is not necessary to be a formal WASP faculty (who has signed a WASP affiliation agreement) to apply for this call.

The WISE PI is employed at one of the six WISE partner universities, Chalmers University of Technology, KTH Royal Institute of Technology, Linköping University, Lund University, Stockholm University, and Uppsala University, or with Luleå University of Technology, or with one of the affiliated groups of excellence at Karlstad University, Umeå University, and Örebro University. Please note that it is not necessary for the applicant to be part of the WISE faculty to apply for this call.

Funded project participants must be/become employed at one of the partner universities as described above.

Additional collaborators from industry, governmental organizations and other organizations are encouraged to be part of the consortium, through in-kind contribution.

The WASP and WISE programs aim to achieve an overall gender balanced outcome, and possibly so also in every project.

3. Budget

The total funding for this call is 100 MSEK, maximum 50 MSEK from WASP and 50 MSEK from WISE.
- The project budget is in the range of 10-25 MSEK.
- The maximum budget for one project is 25 MSEK. Maximum 12,5 MSEK from WASP and 12,5 MSEK from WISE.
- 4-10 projects are expected to be funded.
- The project duration is expected to be 4-5 years.

- The main PIs must be able to devote at least 20% of their time to ensure leadership and engagement in the NEST.

Each proposal shall contain a project budget using the KAW budget template (kaw.wallenberg.org/anslagsguide/blankettarkiv).

4.   Use of funding

The intention is that the NEST funding should be used as flexibly as possible, and a major part of the budget shall be allocated to salary costs. The funding can be used for:
- Salary costs for academic personal
    - New PhD students
    - Postdocs
    - Faculty, including the PI and co-PIs
    - Research engineers
- Salary costs for Industrial PhD students and postdocs
- Equipment costs (necessary to perform the project).
- Operating costs, e.g. materials and travel.

PhD students funded in the project are required to be a part of the WASP or WISE Graduate school, respectively. WISE Postdocs funded by the project shall participate in the WISE Graduate school.

The WASP and WISE Programs are funded by KAW and each has distinct KAW donation letters that specify the funding conditions unique to each program. The funding provided does not cover the full cost, and there may be a need for co-funding based on the funding conditions specified for each program as outlined below.

The following applies to the WISE Program (KAW donation letter 2021.0312)

- Salaries can include a maximum of 50% LKP (lönekostnadspåslag/social fees)
- Overhead costs are covered with a maximum compensation of 21,95% divided as 18.45% for indirect costs and 3.5% for premises costs.

The following applies to the WASP funding (KAW donation letter 2023.0462):

- Salaries can include a maximum of 52.5% LKP (lönekostnadspåslag/social fees)
- Overhead costs are covered with a maximum compensation of 25% divided as 20% for indirect costs and 5% for premises costs.
- [Standard WASP funding packages for PhD students and postdocs](#)

5.   Evaluation criteria

The main evaluation criteria are:

- **Scientific quality and impact**

The scientific merits of the proposed research and its scientific impact. The potential for the research, if successful, to significantly advance fundamental understanding in the topic area. Relevance to the research areas of WASP and WISE.

- **Feasibility**

The project's feasibility will be evaluated.

- **Novelty and Originality**

How the proposed project defines new scientific questions, and how the project uses new ways and methods to address those.

- **Merits of the investigators**

It is the collected merits of the team of investigators that are evaluated, and the academic age of participants is taken into account to enable a fair assessment of academic accomplishments. It is important that the main PIs both have time and the potential to take on the academic leadership of the project.

- **Relevance to Swedish society and industry**

The short- and/or long-term relevance to Swedish industry and/or society (such as governmental agencies or other organizations) shall be explained. It is an advantage if industry or other organizations are actively involved in the project in-kind.

- **Multidisciplinarity**

The project shall involve PI and co-PIs with complementary skill sets with a base in the WASP and WISE domain but with possible extensions into other fields.

- **Sustainability Aspects**

Significance of how the proposed project contributes to sustainability.

Important aspects that will be considered are:

- **Diversity**

It is an advantage if the NEST is diversified with respect to age and gender regarding the applicants as well as other project participants.

- **Relevance and added value to the programs**

The application shall address and demonstrate the requirement for inter-program collaboration.

- **Plan for NEST environment(s) and additional resources**

One intention behind the NEST concept is to create several strong WASP and WISE research environments. It is also an advantage if additional resources can be associated with the NEST. This includes both other resources funded by WASP and/or WISE (e.g., existing PhD students, postdocs, and other recruitments), and resources funded from other sources, (e.g., university funding, Swedish Research Council, VINNOVA, Swedish Foundation for Strategic Research).

6.   Proposal structure

The proposal must be composed in Times New Roman font, 11 pt, single-spaced text, margin 2,5 cm and include the following sections:

- **Project Summary (1 page)**
- **Executive summary for publication (1/2 page)**
- **Scientific description (6 pages)**
  The program shall contain the following sections:
  - Introduction
  - Research challenge and chosen approach
  - State-of-the-art and international outlook
  - Project plan including descriptions of *e.g.* hypotheses, methods, expected results, etc
  - Impact in the academic focus areas of the respective programs
  - Collaborations with industry, e.g. through the research arenas, [WARA](#) and [WIRA](#), and other organizations
  References can be added in addition to the stipulated 6 pages.
- **NEST Environment description (2 pages)**
  - Closely related projects and activities in the environment
  - Forms of collaboration (within and between sites)
  - Multidisciplinary added value
  - Communication, outreach and visibility plan
  - Staffing (Directly funded and in-kind)
  - Infrastructure needs
- **The project's contribution to Sustainability (2 pages)**
  Describe the project's expected impact on sustainability.
  Details on sustainability aspects and mission of WISE can be found at
  [Research - WISE (wise-materials.org)](#)
- **Relation to previous and ongoing projects (1 page)**
  If you currently have WASP- and/or WISE-funded activities, describe your new proposal's relation and possible overlap to these existing activities. A significant novelty is expected in comparison to your previously funded WASP and/or WISE activities.
- **Budget motivation and budget according to template (1 page)**
  - Summary description and motivation of project costs
  - Suggested funding from WASP and WISE
  - University and/or industrial in-kind funding
  - Synergy with other available funding for the NEST
  - Project budget shall be made in KAW budget template and the summary page ("1. Sammanställning") for each program shall be submitted in the application. (https://kaw.wallenberg.org/anslagsguide/blankettarkiv)
- **CV for PI and co-PIs**
  Description of merits:
  - Maximum two pages CV for PI and each of the co-PIs
  - List of 10 most relevant publications + Google Scholar link
- **Support letters**

- o Hosting universities (according to template)
- o Industrial and other partners
- o Other WASP and WISE partners
- **Letter of commitment from PI and co-PIs**
  At least the main PIs shall be able to devote at least 20% of her/his time to the NEST. (according to template)

The proposal, including the above sections, shall be submitted as a single PDF file to the submission portal.

7. Submission

The proposal shall be submitted to the submission portal no later than **2024-12-01, 14:00.**

8. Timeline

2024-09-09   Call opens

2024-12-01   Call closes **14:00**

April 2025   Decision of accepted projects communicated

2025-09-01   Desired project start

2026-01-01   Latest project start