

NanoARTS– Art meets Nanoscience

CALL FOR PROPOSALS

A joint initiative of the Swiss Arts Council Pro Helvetia and the Adolphe Merkle Institute (AMI)

Deadline for applications: **31 March 2022**, 17.00 (Swiss time)

The **Swiss Arts Council Pro Helvetia** and the **Adolphe Merkle Institute (AMI)** are looking for artists and scientists who are interested in collaborating, with the aim of stimulating exchanges between art, science, technology and humanities. The **NanoARTS** programme creates a space for new artistic projects and explorative research practices by selecting and accompanying up to three tandems working together as part of a transdisciplinary collaboration.

We welcome joint applications from artists who wish to explore one of the areas of nanoscience described below in order to enrich their practice, together with scientists who are looking to engage in transdisciplinary research practice.

NANOSCIENCE AT AMI

The AMI strives to be a leader in fundamental and application-oriented interdisciplinary research on soft nanoscience. The research at AMI combines fundamental and application-oriented aspects in a multidisciplinary setting.

For this pilot project, artists are invited to apply jointly with a scientist working on one of the following themes:

1. Plastic Materials with Special Functions – Polymer Chemistry & Materials

Different types of plastics can cover a broad range of properties and this family of materials can therefore be used to produce almost any kind of object. Recently, research on stimuli-responsive polymers, which change some of their properties in response to an external stimulus, has attracted a lot of interest. This has led to the development of materials with interesting and unusual functions, e.g., the possibility to change their shape, mechanical properties, color, fluorescence, or other characteristics when exposed to heat, water, light, mechanical force or another external stimulus. <https://www.ami.swiss/en/groups/polymer-chemistry-and-materials/>

2. Understanding and Controlling Nanostructures – Soft Matter Physics

- 3.** The aim is to understand and reproduce structured materials found in nature, and to create nanomaterials that boost the performance of energy technologies such as solar cells and batteries. To fully understand the optical properties of fauna and flora and relate them to their structural anatomy, both their colour reflection and their 3D structural morphology have to be measured and related to each other. This then allows to reproduce these colour effects in manufactured materials, potentially replacing toxic pigments. In photovoltaics and batteries, many electronic processes take place at surfaces and interfaces. By gaining an understanding, we aim to improve their performance by creating appropriately structured morphologies.

<https://www.ami.swiss/physics/en/> **In Vivo Technology – BioPhysics**

The goal is to contribute to the molecular understanding of disease, developing sensitive diagnostic assays and sensors, as well as characterizing individual protein molecules for

applications in biomarker detection, routine protein analysis, personalized medicine, and proteomics. The research group is interested in engaging in critical artistic discourse related to advances in integrating technologies into living organisms, which requires electrical energy sources that are biocompatible, mechanically flexible, and can utilize the chemical energy present in biological systems. <https://www.ami.swiss/biophysics/en/>

4. **Interactive Biology – BioNanomaterials**

This research group is interested in designing novel nanomaterials or tailored substrates with extraordinary properties to guide cell growth and differentiation and to explore fundamental interactions of nanomaterials with human cells and tissues such as lung, intestine and skin. By developing robust nanomaterials and novel analytical methods, this group offers high quality research and services to academia, industry and regulatory authorities to analyze nanomaterials in drug products or consumer goods. <https://www.ami.swiss/bionanomaterials/en/>

THE PROGRAMME

The **NanoARTS** programme will support up to three transdisciplinary tandems composed of an artist (or artist collective) and a scientist (or lab group) over a period of twelve to eighteen months. The tandems will meet on a regular basis on different sites (AMI laboratories, studios, scientific and artistic events and gatherings, etc.) and collaborate in a way which is meaningful for both the artists' and the scientists' practice.

The selected tandems will be accompanied by an expert in art-science mediation. Through contextualizing workshops, common activities and tailored coaching, the art-science mediator will frame and accompany the exchange between artists and nano-scientists. Furthermore, the art-science mediator will be present during the production process of the artistic outcome as well as its dissemination, providing experience as well as targeted networking.

FUNDING

NanoARTS grants each tandem the following support:

- **Up to 9'000 CHF** compensation for the artist to cover living expenses (artist only).

Compensation will be paid to the artist for every day dedicated to the activities of the tandem, on a self-defined per diem basis. The artist can claim this support under the condition that she/he is self-employed while working within the framework of the tandem.

- **Up to a 10% workload** over the period of the tandem exchange (scientists only).

Dedicated time for the scientist to commit to the transdisciplinary exchange during his or her working time.

- **Up to 5'000 CHF** in support of the operational costs of the tandem (artist and scientist).

This includes the transport costs of the tandem partners, or the purchase of consumables needed for scientific or artistic work (scientific experiments, material for creative activities, etc.).

- **Up to 25'000 CHF** production grant (artist only)

The exact amount will be based on a detailed budget (flight ticket, lodging, transport, material, justified compensation for living expenses, visa, coordination fee for the scientific unit etc.). Funding for the field trip will be granted on the basis of a separate budget (cf. Application form B), which can be handed in together with the proposal for the tandem or latest until 31.04.2022. The exact sum of the funding will be defined in proportion to the size of the fieldtrip.

MEET YOUR TANDEM PARTNER

Artists and scientists interested in the proposed format of collaboration are invited to participate in a matchmaking event. **The event will take place on February 17th from 14:00 – 17:00 at the Adolphe Merkle**

Institute in Fribourg. The matchmaking will be accompanied by a presentation of the programme and short speeches/presentations, followed by a networking drink.

SUBMIT YOUR APPLICATION

Artists and scientists interested in forming a tandem are requested to propose a collaborative process, defining format, objectives, and motivation. The tandem's proposal must engage with issues and topics linked to the Adolphe Merkle Institute as described above.

Scientists must meet the following criteria:

- Employed at AMI
- PhD student level and above
- Fluent in English

Artists must meet the following criteria:

- Recognized track record of professional artistic practice
- Swiss national or active in the Swiss artistic scene
- Active in any of the disciplines supported by Pro Helvetia (Design, Interactive Media, Literature, Music, Performing Arts, Visual Arts)
- Fluent in English

Tandems develop joint proposals for the collaboration. Proposals must be in English and submitted via the online application form. A full application consists of the following:

- Artistic portfolio and CV
- CV and publication list of the scientist
- Proposal for collaborative process
- Budget

EXPECTATIONS

Selected tandems of the NanoARTS programme will be expected to:

- Schedule meeting times for regular exchanges with their respective tandem partners.
- Participate in three NanoARTS workshops organised by Pro Helvetia and AMI.
- Submit a systematic record of the collaboration (writing, video, audio, visuals) as well as a brief report.

Selected artists will further be expected to:

- Create an artistic outcome in compliance with the production grant (max. CHF 25'000)

EVALUATION

Eligible proposals submitted before the deadline will be evaluated by a jury of experts jointly appointed by the AMI and Pro Helvetia.

The tandem proposals will be evaluated according to the following criteria:

- Aesthetics, originality, and innovative character of the proposed concept
- Definition of the artistic research at the interface of art and science
- Clear link to the research topic selected at the AMI Lab
- Quality and potential of the collaboration

COVID-19

We are committed to minimising the spread of COVID-19 and thus put in place health and safety measures. Individual adjustments will be made whenever necessary.