Call for applications

Art-Science/Technology Residency

The Centre for Social Studies (CES) – Associate Laboratory - University of Coimbra (Portugal), opens a call for applications for an Art-Science/Technology Residency, in the research facilities of VTT and Biomensio, Finland, in the project "BIOASSEMBLER - Integrating bio-inspired assembly into semiconductor manufacturing technology for biosensors" (GA 101070589), funded by the European Commission - European Health and Digital Executive Agency (HADEA) under the Horizon Europe Programme, with the participation of CES coordinated by Rita Campos.

CES provides a stimulating intellectual environment in the domain of social sciences and humanities. The project is part of the research line 4 Risk(s), Ecologies, Health, whose objective is to promote an integrated approach to risks and threats and their impacts on the ecosystem and human and non-human well-being, building a dialogue with socially robust approaches and interventions designed from responsible research and innovation tools and procedures, involving methodologies and analytical frameworks for the prediction, mitigation and adequate recovery from risks. This integrated approach incorporates climate change, health transformations and emergencies, (bio)surveillance and social control as the main factors, proposing sustainable, ecological and equity-based alternatives for production and consumption, healthcare and social well-being, and relying on collaborative and participatory methodologies.

I. Project Description

The BioAssembler project's unique contribution is to bring together microelectromechanical systems (MEMS) sensors and biotechnology in a novel bio-inspired self-assembly process. The project comprises an interdisciplinary team of scientists and researchers aiming to develop this technology for scalable manufacturing of silicon-based label-free multiplex biosensors in semiconductor fabrication platforms. BioAssembler 's objective is to produce bio-intelligent enabling technologies for rapid and massively parallel integration of biomolecules onto silicon wafers.

The potential of silicon-based MEMS for biosensing has become evident in recent decades and has opened the door to the development of bioanalytical applications. However, the production facilities' high initial investment costs have been a bottleneck in access to suitable MEMS systems. The BioAssembler project aims to close this gap by lowering the cost and the barriers to accessing MEMS manufacturing platforms, allowing this technology to transition from mainly academic research projects to mass production and commercial applications.

The project will highlight the advantages of recombinant antibodies over traditional, animal-based antibody reagents. One of the most significant contributions of this project is to reach high-level and large-scale applications using animal-free detection reagents. This project inaugurates a new generation of point-of-care testing and diagnostics with the potential for versatile multiplexed analysis with faster reaction.

Furthermore, the project has a sustainability component that must be emphasized. Mitigating the effects of climate change requires the emergence of innovative bio intelligent solutions, whilst considering the consequences of those new technologies in the economic and social environment. The transition of the

semiconductor manufacturing industry in the EU and the creation of new sustainable value chains demands an adequate impact assessment that engages the perspectives of several civil society actors potentially affected by it.
The project's commitment towards an open science model aims to attract the interest of a more informed society that can play an essential role in balancing the technological, economic, and social ecosystems in pursuing a mass sustainable MEMS biosensor production.

II. Work plan/ Mandatory requirements
The BioAssembler project is seeking to commission an artistic production to communicate the processes and results of a new biosensor manufacturing technology being developed within the project.

The artistic production will result from an art-science residency at the premises of two BioAssembler partners, VTT and Biomensio, in Finland, and will be presented on site and online on the project and partners' websites.

This artistic production should:
. Translate the scientific and social impacts of the novel technology;
· Create excitement and interest for science and technology;
. Promote a social dialogue around the development and uses of biosensor technology;
· Inspire new generations of scientists.

The artist's willingness to learn in depth about the technology and dialogue with the BioAssembler team to apply the concepts is fundamental to the development of the artistic production.

The artistic production must be suitable to be presented both on site and online. The artist can use a variety of media and forms. Examples of media include, but not limited to textiles, paint, wood, metal, and photography. A wide variety of forms for the artistic production will also be considered, including performative arts, freestanding sculpture, photography, among others.

III. Budget
The BioAssembler's budget for this residency is 12.000€ (applicable VAT included). The budget includes all costs associated with the project, including but not limited to artist's design fees, travel, materials, production costs, documentation, transportation, and installation of the artistic production (if applicable).

IV. Eligibility
The project is open to all artists, age 18 and over, regardless of race, colour, religion, national origin, gender, age, military status, sexual orientation, marital status, or physical or mental disability.

V. Timeline
November 19, 2023: Deadline for application.
December 2023: Selection Panel meets (online) to review applications and choose finalists.

January 12, 2024: Finalists (online) interviewed.
January 22, 2024: Artist selected.
May-June 2024: Selected artist visits VTT and Biomensio facilities and interact with BioAssembler researchers.
September 2024: Artistic production finished and shared with the BioAssembler team.

The BioAssembler team reserves the right to change the art-science residency timeline.

VI. How to Apply
Artists interested in this art-science residency must prepare and submit the following:
1. Letter of Interest. The letter should be no more than one page in length and should explain the artist's interest in the residency.
2. Updated resume. The updated CV should be no more than five pages in length, highlighting previous work related to the dialogues between art and science.
3. Portfolio of the artist's work. Ten photographs or videos illustrating the artist's work should be sent in separate file(s) with accompanying information (date, location, title, context).
4. References. A list of at least three professional references that have an intimate knowledge of their work and working methods. The list must include complete addresses and telephone numbers.
5. Optional. The artist may include up to three selections of support materials such as reviews, news articles, and other related information.

Artists interested in being considered should submit the following materials by November 19, 2023, at 5:00 p.m. (GMT) via email to Rita Campos at info@bioassembler.eu

If you have any questions or need any additional information, please use the same email contact.

VII. Selection Process
The Selection Panel consisting of the BioAssembler coordinator, Petri Saviranta, the Dissemination, Exploitation and Communication Work Package Coordinator, Rita Campos, and the Coordinator of BioAssembler team at Biomensio, Anna Spehar, will review all artist submissions and select artists to be interviewed for the commission. The Panel reserves the right to invite other BioAssembler team members to review and comment on the applications.

Applications will be evaluated according to its relevance to the project's goals as follow:
a) Letter of interest – 20%
b) Demonstrated previous work – 30%
c) Demonstrated previous experience with art & science projects – 30%
d) Excellent communication skills, including written expression and public presentations, in English – 10%
e) Capacity for teamwork, initiative, autonomy, and availability to undertake national (within Finland) and international travel – 10%

Applicants will be selected based on the documents submitted. The best-positioned applicants will be invited for an online interview, meant to assess the applicant's potential in contributing to the project's communication goals and his/her motivation in developing an artistic production related to the project's thematic areas.

Each of the two methods of selection applied will have a rating of 50% in the final classification. The Selection Panel will meet again to select the artist in January 2024.

The Selection panel reserves the right not to select any candidate.

VIII. Confidentiality
The artist will have to sign a confidentiality agreement regarding the work developed in BioAssembler and all the work developed by VTT and Biomensio.

IX. Communication of Results
All candidates will receive the results by email. The meeting minutes of the selection panel will become available publicly. After the communication of results, applicants have 10 working days to present a redress to the evaluation and the result by email.

ADDITIONAL COMMENTS
Equality of opportunities:
CES abides by the national law that regulates the prevention, prohibition and fighting against discrimination on the grounds of racial and ethnic identity, colour, nationality, family background, and territory of origin (Law nº 93/2017, 23 August).

Data protection:
By submitting your application, you are agreeing with the use of your personal data by CES administrative services for the sole purpose of the current call, namely to be contacted directly by CES services and allow the communication of results as in point n. of this call. CES abides by the principles of GPDR.

Contact:
Centro de Estudos Sociais
Colégio S. Jerónimo, Apartado 3087
3000-995 Coimbra, Portugal