



ARTIFICIAL BIOLOGY, ROBOTICS & ART

Call for interest to participate in the Artificial Biology, Robotics, and Art (ABRA) Workshop Series.

ABRA is calling for applications to participate in a series of international transdisciplinary workshops between September 2021 and June 2023. Students ***enrolled in Doctoral or Master's programmes in Aalto University*** are invited to apply for 2 placements. The material, travel and accommodation costs of the workshops in Denmark and Hungary and the material costs of the workshop in Finland will be covered by the project. In the case that you are not selected for one of the funded placements, but are able to cover your own costs please contact us directly to participate. We are happy to have this option available.

What is ABRA?

ABRA (Artificial Biology, Robotics, and Art) is an Erasmus+ consortium project for developing transdisciplinary education in arts, robotics, artificial biology, and sustainability. Through hands-on workshops and training, teachers and students tackle the skill-gaps within these disciplines while also addressing sustainability and climate goals. In this entanglement, new questions and new solutions are expected to be generated. The partners in the project are Aalborg University, Aalto University, Trento University, and the Institute of Advanced Design Studies (ADES). Read more about ABRA: <https://www.abra-hub.net/>

The workshops

Through a series of three hands-on workshops (Denmark, Finland, Hungary), students will be introduced to practices that bridge the arts and sciences, specializing in artificial biology (University of Trento), robotics (Aalborg University), and art, architecture, sound media (Aalto University), for enhanced sustainability (Institute of Advanced Design Studies). Students will work in mixed student-teacher/mentor groups and will continue working, sharing and learning together throughout

the ABRA workshop-series. The basic idea is that one brings one's own perspective and field specific expertise to share with the work group.

Roadmap

- 1) The week of 9th-15th January 2022 - Denmark (Aalborg University, ADES): 1st Workshop in *soft robotics and sustainability*.
- 2) TBA summer of 2022 ^[1] (5 day intensive) - Finland (Universities of Aalto & Trento): 2nd Workshop in *artificial biology, fluidic devices and art*.
- 3) TBA June 2023 (5 day intensive) - Hungary (ADES) : 3rd Workshop in *hybrid knowledge*;

Workshop in *soft robotics* in AAU, Denmark in January 2022

The 1st workshop will be held in *soft robotics* at Aalborg University, Denmark, in collaboration with ADES; to investigate sustainability in relation to the design of robots. Groups will be introduced to the technology and hands-on design of soft robots, while integrating sustainability into their designs. The workshop will include lectures, interaction design, digital fabrication, hands-on robot construction, and project-idea development.

Workshop in *fluidic devices* in Aalto University, Finland in summer 2022

The 2nd workshop will be held in *fluidic devices* at Aalto University, Finland, in collaboration with Trento University; building upon the first workshop, the 2nd workshop will investigate custom fluidic designs from the perspectives of artificial biology, architecture, media (sound) and art. The groups will be introduced to the principals and understandings of science to be adapted into artistic practice and design. The workshop will include lectures, hands-on training within the biology laboratory and 3D printing workshop, along with further development of projects.

Workshop in *hybrid knowledge* in ADES, Hungary in June 2023

The 3rd workshop will be held in *hybrid knowledge* at the Institute of Advanced Design Studies, Hungary; focusing on creating and integrating narratives intended for the wider public which describe objects and installations of art and design born from transdisciplinary arts and science research and practice. The goal is to create a new language for transdisciplinary work which defines and interprets the relevance of scientific knowledge that led to the particular outcome and the values of sustainability narrated within the design. This final workshop will be followed by the symposium and exhibition of the group's experiments and projects.

Application process

Candidates can apply by completing the online application at [ABRA Workshop Series Application Form](#) . The application deadline is November 15th, 2021. Qualified candidates will be asked for an online interview conducted in English to complete the application process. The students will be selected based on their motivation and capacity to contribute and work with the integration of artistic and scientific perspectives and practices.

*Funded participants are required to follow the entire workshop-series resulting in a group work that will be exhibited in Budapest in summer 2023. Therefore it is necessary for participants to remain students throughout the project (eligibility: master's students who began studies in the fall of 2021 and doctoral candidates enrolled until at least summer 2023). Students should also be able to

allocate time for continued work on the group projects between the intensive workshops. There are no other prerequisites to join the programme.

*Please make note that the workshops will predominantly be held in labs and material workshops.

The applicants from Aalto University:

The selected applicants will be granted study points (ECTS) that will be under 'Project'-module (in the Department of Art) /// Department of Architecture /// Department of Media. 3 credits will be granted at the end of each workshop, amounting to a total of 9 credits for the entire workshop series and exhibition.

What to expect:

You will gain a lot of knowledge and hands-on practice across the different disciplines.

You will be able to work on a project (with a group) that will be exhibited in Budapest, Hungary.

You will gain a great international network with peers and experts in the aforementioned fields.

You will gain study credit and paid travel to Denmark and Hungary.

Aalto faculty team:

Laura Beloff (Department of Art) – Associate Professor // laura.beloff@aalto.fi

Pia Fricker (Department of Architecture) – Professor of Practice // pia.fricker@aalto.fi

Koray Tahiroğlu (Department of Media) – Academy Research Fellow // koray.tahiroglu@aalto.fi

[1] The information will be announced by the end of 2021.

