

CALL FOR PROJECT SUBMISSIONS FOR MASTER STUDENTS OF ZHDK

for

**artists-in-labs Master Series Residencies in the
Spring Semester 2026**

as part of the Minor

Art & Science

In the spring semester 2026, the artists-in-labs program (AIL) offers four residencies at the intersection of art and science in cooperation with the Master Transdisciplinary Studies (MTR) and the Minor Art & Science. The residencies are situated in research institutes in the Zurich area.

Interested MA students of all departments of ZHdK may apply with a project idea in the context of these research groups:

- **Cellulose and Woods Materials Laboratory (Empa) – Material Science**
- **Urban Energy Systems Laboratory (Empa) - Engineering**
- **Phytopathology Group (WSL) – Biodiversity**
- **Forest Growth and Global Change Group (ETH) – Forest Ecology**

Applications for these residencies are open for:

Master's students from all ZHdK departments and specializations

The following conditions apply:

- The Master Series residency is an integral part of the minor in *Art & Science*; enrolment in the minor must be completed by **8 May 2025** at the latest

Duration of the Residencies: January and February 2026

APPLICATION DEADLINE: 28 April 2025

PLEASE SEND YOUR APPLICATIONS VIA THE ONLINE APPLICATION FORM. YOU CAN AD YOUR PORTFOLIO AND CV IN ONE PDF-FILE (MAX. 15 MB). Video files should be linked in the PDF (to sites such as vimeo.com, youtube.com etc.).

The application may be written in German or English.

If your application is shortlisted, we will invite you to a preliminary interview.
The preliminary interviews will take place on **Friday, 2 May 2025.**

If you have any questions, you are welcome to contact the AIL-team via ail.program@zhdk.ch

BACKGROUND

The artists-in-labs residencies *Master Series 2026* offer the unique opportunity to a total of four MA-students of ZHdK to exchange and work during 2 months in January and February 2026 with researchers of the **Cellulose and Woods Materials Laboratory (Empa)**, **Urban Energy Systems Laboratory (Empa)**, the **Phytopathology Group (WSL)** or the **Forest Growth and Global Change Group (ETH)** and to develop an artistic or design project.

About the residency:

- The residency's unique setting opens up the possibility for a transdisciplinary dialogue that is brought about by juxtaposing concepts and procedures, cultural knowledge and backgrounds
- The residency offers the student significant time and space to develop a project and to critically reflect as well as to explore a range of scientific topics, methods and technologies
- During the residency the student will be immersed in the research and developing his/her project alongside scientists of the team
- It will be possible to further develop the project into the master thesis in consultation with the head of the Master degree programme or the head of specialisation
- There will also be a coordinator at each research group available to the artist for more general issues
- Mentoring will be provided by the project management (AIL/MTR/Minor Art & Science) to reflect and facilitate the process.

RESIDENCY 1: Cellulose and Woods Materials Laboratory (Empa)

Group head: Dr. Gustav Nyström (Link: <https://www.empa.ch/web/s302>)

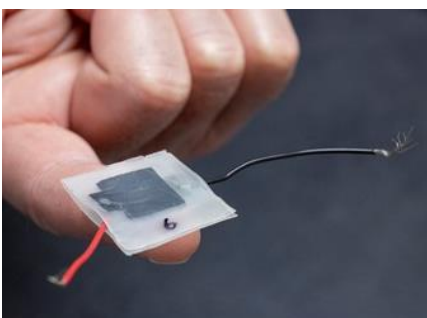
The Cellulose and Wood Materials Lab is part of Empa, the Swiss Federal Laboratories for Materials Science and Technology. Empa is an interdisciplinary research institute of the ETH Domain and is based in Dübendorf, on the outskirts of Zurich.

Empa aims to conduct cutting-edge materials and technology research. Material science brings together chemistry, physics, and engineering. This specialist area deals with the development and research of materials of all kinds. The technologies and experimental procedures are an important part of the research. Chemical, physical and biological factors determine the properties of a material. Whether transparent or reflective, heavy, or light, durable, or decomposable, conductive, or insulating: the composition and structure of the material are decisive. These properties in turn have an influence on its processing and therefore on its use in everyday life. Empa's research and development activities focus on meeting the requirements of industry and the needs of society, and thus link applications-oriented research to the practical implementation of new ideas in the areas of nanostructured, "smart" materials and surfaces, energy, sustainable building and environmental technologies as well as medical technology and solutions for personalized medicine.

The Cellulose and Wood Materials Laboratory aims to understand naturally existing structures in wood-based resources and tailor interactions between renewable polymers, nanoparticles and colloids. The major goal of this work is to find energy efficient routes to build high performance materials contributing to a sustainable future. To this end, the lab collaborates with researchers and industry together addressing important technological challenges.

The lab's approach is to combine existing wood architectures with controlled assembly of extracted wood components into new sustainable high-performance materials and value-added technological products. One tool of specific interest for tailored biomaterial functionality is the use of fungi or enzymes, as living organisms or biologically active substances to modify the material properties. This biologically inspired functionalization allows the researchers to modify the physical material properties as well as to tailor the bulk and surface towards specific functionality. Part of the developed materials are also demonstrated under real life conditions in the module Vision Wood in Empa's large scale project NEST.

Among the current research topics are Cellulose Biohybrids (for applications such as printed cellulose materials or green batteries), Fungal and Enzymatic Biogengineering (for applications such as improving the acoustic properties of violins, fungal bio-batteries or protection against microbial degradation) or WoodTec (machine learning, weathering protection or adhesive bonding).



RESIDENCY 2: Urban Energy Systems Laboratory (Empa)

Head of Laboratory: Dr. Georgios Mavromatidis (Link: <https://www.empa.ch/web/s313>)

The Urban Energy Systems Laboratory is part of Empa, the Swiss Federal Laboratories for Materials Science and Technology. Empa is an interdisciplinary research institute of the ETH Domain and is based in Dübendorf, on the outskirts of Zurich.

Empa aims to conduct cutting-edge materials and technology research. Material science brings together chemistry, physics, and engineering. This specialist area deals with the development and research of materials of all kinds. The technologies and experimental procedures are an important part of the research. Chemical, physical and biological factors determine the properties of a material. Whether transparent or reflective, heavy, or light, durable, or decomposable, conductive, or insulating: the composition and structure of the material are decisive. These properties in turn have an influence on its processing and therefore on its use in everyday life. Empa's research and development activities focus on meeting the requirements of industry and the needs of society, and thus link applications-oriented research to the practical implementation of new ideas in the areas of nanostructured, "smart" materials and surfaces, energy, sustainable building and environmental technologies as well as medical technology and solutions for personalized medicine.

The Urban Energy Systems Laboratory focusses on the development of methods, strategies and solutions to transform buildings, neighbourhoods and cities into energy efficient and decarbonized systems. With its research the lab seeks for solutions that significantly contribute to reaching national and global emission targets. Its core competences lie in the modelling, design and assessment of building and urban systems with focus on energy hubs, multi-energy grids, and integration of renewable energy and storage systems.

The strategy is:

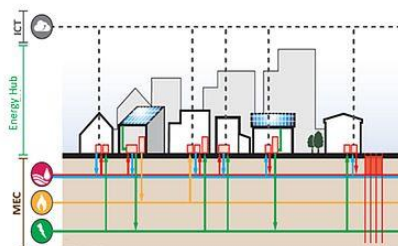
- to develop innovative building energy systems and technologies,
- to design relevant numerical models and analysis techniques for assessing the optimal integration, design and operation of multi-energy systems from building to district and higher scales, and
- to test and implement the developed strategies through demonstration in close collaboration with research and industry partners.

Building Energy Systems and Technologies



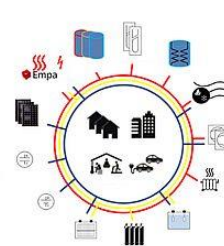
- Decentralized Energy Systems
- Building Efficiency
- Energy management
- Storage systems

Multi-Energy Systems



- Energy hub
- Multi-energy grids
- Network convergence
- Retrofitting strategies

Demonstration



- Technology integration
- Operational schemes

RESIDENCY 3: Phytopathology Group (WSL)

Head of Group: Dr. Simone Prospero (Link: <https://www.wsl.ch/en/about-wsl/organisation/research-units/forest-health-and-biotic-interactions/phytopathology/>)

The Phytopathology Group is part of the Federal Institute for Forest, Snow and Landscape Research WSL and is based on its own campus in Birmensdorf, a few bus stations away from Zurich.

As the leading Swiss research institute for terrestrial environmental systems, WSL performs research at the national and international level that aims to benefit the environment and society in Switzerland and beyond. WSL researcher address global challenges driven by land use change, climate change, biodiversity loss, altered biogeochemical cycles, and urbanisation, as well as their interactions.

In phytopathology, native and exotic pathogens of forest and ornamental trees and shrubs are researched in changing environments. Phytopathology contributes to research that studies the effect of biotic factors (insects and fungi) on forest health and develops the scientific basis for protecting the forest against potential pests and pathogens. Researchers conduct surveys on the emergence of forest pests and diseases, advises forestry services on forest protection issues, and assists the federal government and cantonal authorities with measures to combat pests and pathogens. WSL's infrastructure includes a modern diagnostic laboratory and a high-security plant protection laboratory, so that alien organisms can be dealt with appropriately.

Another focus is on studying the effect of biotic (alien species) and abiotic disturbances (wind damage, climate change), as well as cultivation, on invertebrate fauna and the interactions between them and their host trees.

The research pursues the following goals, among others: To understand the biology of pathogen populations at different spatial and temporal scales. To develop and improve methods to control fungal diseases, with particular emphasis on biological control with parasitic viruses. To identify potentially invasive pathogens and the threats they can cause in a new ecosystem. To develop and apply modern diagnostic methods for tree pests and pathogens. To lay the foundations for supporting the federal and cantonal authorities in the prevention and containment of quarantine pathogens.



RESIDENCY 4: Forest Growth and Global Change Group (ETH)

Head of Group: Prof. Dr. Andreas Rigling (Link: <https://usys.ethz.ch/en/people/profile.andreas-rigling.html>)

The Forest Growth and Global Change Group is part of the Professorship of Forest Ecology at the Swiss Federal Institute of Technology ETH. The ETH is situated in the centre of Zurich, with an additional campus on Höggerberg.

The Professorship of Forest Ecology aims to advance the scientific understanding of the structure, functioning and long-term dynamics of forest ecosystems, and to provide evidence-based decision support for sustainable forest management regimes in the face of global change.

Methodologically, the Professorship employs a combination of advanced statistical and rigorous dynamic modeling approaches with field-based analyses (e.g., forest inventories, dendrochronology) to test hypotheses on processes in near-natural and managed forest ecosystems. Its research has a focus on temperate forests (nemoral and boreal biome) and their equivalents on elevational gradients in mountain areas such as the European Alps (colline to subalpine).

The Professorship maintains close links with forest practitioners and forest policymakers at the national and sub-national level with the goal of mutual learning, encompassing both traditional and formal knowledge.

The Forest Growth and Global Change Group studies the dynamics of forest ecosystems as affected by abiotic and biotic factors and its impacts on forest management. The main focus lies on ecosystems' adaptation to, resistance against and resilience after environmental changes with a special focus on climate change. Specifically, also the legacy effects of past land use on today's forest dynamics are studied.

System analyses in forest ecosystem research need to consider different disciplines on varying spatial and temporal scales. Hence, they are never single-disciplinary and require integrative approaches combining the advantages of different research concepts. The Group is interested in bridging natural sciences with socio-economy and integrate stakeholder knowledge into research concepts. Inter- and transdisciplinary research is challenging and effortful but the Group is convinced that solving nowadays problems in the context of environmental change requires holistic initiatives.



Project management ZHdK

The *Master Series 2026* residencies are curated and supervised by **the artists-in-labs program in cooperation with the Master Transdisciplinary Studies/Minor Art & Science.**

About the artists-in-labs program

- Since 2003, the artists-in-labs program (AIL) has been facilitating artistic research by way of long-term residencies for 62 artists in 22 scientific laboratories and research institutes in Switzerland and worldwide (as of 2023)
- It is part of the Zurich University of the Arts (ZHdK) and promotes sustainable transdisciplinary and cross-border collaborations as well as the development of new knowledge by providing artists with an opportunity to critically engage with the sciences and their experimental and aesthetic dimensions
- This includes explorations of the site of the laboratory, as well as a range of scientific topics, methods and technologies. Publications and short documentary films record the processes and results of these collaborations and offer reflections on them
- All the collaborations the AIL produces are presented at various national and international exhibitions, symposia and workshops, making it possible to share findings and ideas, and to provide accessible discussions and aesthetic experiences to our students, peers and to the public.
- Since AIL's beginning the integration of its projects into the ZHdK and at the same time the integration of the ZHdK into its projects has been an important part of the work of the artists-in-labs program: Artists present their projects at the university or invite students to visit the labs, students take part in exhibitions, debate with the artists in seminars or develop ideas in workshops.

www.artistsinlabs.ch/en / [vimeo](https://www.vimeo.com/artistsinlabs) / [instagram](https://www.instagram.com/artistsinlabs) / [facebook](https://www.facebook.com/artistsinlabs)

About the Master Transdisciplinary Studies:

- Since 2007, the Master Transdisciplinary Studies (MTR) has been offering students with an artistic, creative and/or academic practice the opportunity to analyse and utilize the potential of artistic and aesthetic strategies for their own interests and planned projects.
- The programme acts as a hinge between different disciplines in art and design, science and society.
- It enables students to position themselves in cooperative constellations, to encounter different questions and problems critically and reflectively, and to develop new methods and formats for dealing with them that go beyond disciplinary constrictions.
- The profile of the programme is based on the teaching and research focus of the ZHdK, the competence profiles and work perspectives of the students as well as the possible connections in the professional field.

mtr.zhdk.ch