

## **OPEN CALL: Mobility from Finland to Chile 2024**

This open call offers **Research Internships related** to the field of **Smart Wearables** at the School of Design at the Universidad Católica de Chile (PUC).

Students will also have the chance to take courses if they are interested.

### **I. Target Candidates**

The training mobility program is open to bachelor, master, and doctoral students who are currently enrolled at Aalto University.

Requirements: Background either in Engineering or Design.

- Skills and knowledge in at least one of the following: **Textiles, Industrial Design, Programming, or Machine learning.**
- Experience in Smart Textiles and/or Wearable Technology will be preferred.
- Bachelor students must have completed the first half of their studies.
- English skills are mandatory.
- Spanish is preferable and suggested.

### **II. Internships:**

The following internships will be offered for a period of 3 months between August and December 2024. The credits for the internship will be transferred from PUC to Aalto.

The research topics follow an interdisciplinary approach and aim to contribute to developing Smart Wearables from different disciplines and perspectives.

Students can suggest a project preference from the ones presented above:

#### **Project Title: "Tramares, weaving -biobased- reefs"**

#### **Leading researcher: Carolina Pacheco**

The project proposes the iteration of the work "Tramares, weaving reefs" made by crochet technique by a group of elderly people from the central coast of Chile. This work was developed from the collaboration between the Faculty of Mathematics, the Millennium Nucleus NUTME and the Research Department of the Pontificia Universidad Católica of Chile, which aimed to raise awareness about the importance of the mesophotic reefs in Chile through the co-creation of these weavings.

As a continuation of this initiative, we seek to replicate the sample incorporating a new materiality more in line with the nature of the project. This will be done through the creation and weaving of filaments derived from marine organisms as

a replacement for wool in crochet knitting. Precisely, cords will be created from the extrusion of sodium alginate gels, a polysaccharide found in the cell wall of brown algae, to be used as an input to weave the same reef patterns. In this way, we seek to incorporate an organic component from the sea, which would support the discussion about the role of marine organisms in the ecosystem and their relevance in the marine environment of our country.

**Project Title: Textile tree shelter**

**Leading researcher: José Allard**

In the field of ecological reforestation, the use of tree shelters or tree protectors has become essential when introducing species into the terrain.

The challenge is to study, develop, and test a foldable tubular textile structure for a tree shelter. The objective is for this protector to biodegrade in situ, minimizing the environmental impact caused by conventional plastic protectors, which are typically made of polypropylene.

To validate the effectiveness of textile tree protectors, several variables must be considered. These include the structural and material resistance of the developed textile, its ability to withstand different weather conditions, ensure proper protection and plant growth (taking into account humidity, temperature, light, air, etc.), resistance to animals, ability to repel predators, and other requirements such as cost, production and logistic. Additionally, it is important for the protector to biodegrade in situ without harming the environment after 2 to 5 years of use.

## **II. Funding**

Students coming from Finland to Chile will receive:

- 1500 euros max. for travel costs (e.g., flights, visa application fees, insurances)
- 700 euro/month monthly allowance

## **IV. Application process**

Students interested in the training program should:

- Consult their study supervisor if applicable and inform them of their intention to apply.
- Submit CV, transcript, letter of intention (1 page max), and optional portfolio (5 projects max) to Yu Xiao (yu.xiao@aalto.fi) **by March 8th.**

## **V. Selection process**

The call will select two students for the period between August - December 2024. Aalto University conducts the initial screening of candidates. A final selection is then made after an online interview together with PUC. Candidates will be ranked based on their motivations and academic performance.

## **VI. Notification**

Successful candidates will be notified shortly after the final selection process through the contact person at Aalto University. After that, the student coordinators at PUC will assist with administrative issues (e.g., admission letter for visa application, student accommodation, and study credit transfer).

Notification will be made by the **end of March, 2024**.

## **Contact**

Finland: Yu Xiao [yu.xiao@aalto.fi](mailto:yu.xiao@aalto.fi)

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