



COST Action FA1305 'EU Aquaponics Hub' unites a heterogeneous group of scientists, researchers and SMEs from across the EU and around the globe to better understand the state of knowledge in aquaponics in Europe and around the world and to facilitate innovation and education in this field of sustainable fish and vegetal food production.

COST FA1305 Funded Short-Term Scientific Mission (STSM) Interactive Aquaponics Computer Game

The University of Iceland and the associated SMEs Svinna-verkfraedi Ltd and Samrækt Ltd are focused on aquaponics research, aquaponics education and developing commercial aquaponics in Iceland.

Aquaponics provides a sustainable source for fish and vegetable production using the same water by balancing the needs of the fish as well as the plants so that both products are optimised for production and are of premium quality, so that they can be sold at market. Various aspects within the systems require balance, including water quality (pH, TDS, fertilizer levels), food quantities, water and air temperature, pest control, etc. The requirement to provide optimum growing conditions for animals as well as vegetables within the same system is complex and provides a unique opportunity for school children to learn, through aquaponics, about chemistry, water quality, animal husbandry and fish welfare, nutrition, horticulture, maths, etc. In fact, having a live or a virtual aquaponics system provides an interesting way for school children of all ages to learn within the STEM (science, technology, engineering and mathematics) subjects. Whether one has a real built system or, in this case, a virtual one, the need to maintain healthy fish and plants provides the student with a stimulating and fun way to learn. This STSM thus focuses on the development of an interactive aquaponics computer game which can be played to grow healthy fish and plants (to make a virtual profit) by balancing the nutrient cycles and other key aspects which makes aquaponics work sustainably.

We are looking for a PhD student or early career postdoctoral researcher (less than 8 years since the award of the PhD) with the appropriate skills in computer game development, who is motivated to assist in the development of this interactive not-for-profit computer game. The STSM will be hosted by the Faculty of Civil and Environmental Engineering, University of Iceland, and the successful applicant will be invited to stay at our facilities at the Iceland Ocean Cluster in Reykjavik and visit our aquaponics pilot unit at the greenhouse farm. The applicant should have the computer gaming knowledge and skills as well as graphic skills to build this computer game. The successful candidate will work with staff at the University of Iceland who will provide the necessary aquaponics information and data for the game.

The Short Term Scientific Mission (STSM) will be for the duration of 4 weeks starting in the period November 2016 – January 2017. Applicants should have the necessary skills in interactive computer game development; knowledge of TypeScript is preferred, but JavaScript will suffice. A maximum grant of EUR 2500 will be awarded as a contribution towards the cost of travel, board and lodging. This is based on a daily allowance of EUR 66 for food and accommodation (total subsistence allowance EUR 1980). The contribution towards travel costs will depend on the country of provenance of the successful applicant. The University will help with finding accommodation.

The grant will be paid after the successful completion of the STSM. Applicants must be affiliated to an Institution located in a COST country participating in this Action: Belgium, Bosnia and Herzegovina, Croatia, Czech Republic, Denmark, Finland, France, former Yugoslav Republic of Macedonia, Greece, Hungary, Iceland, Ireland, Israel, Italy, Malta, Netherlands, Norway, Poland, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom. According to COST regulations, STSMs are intended to facilitate scientists going to an institution or laboratory in another country; applicants from institutions in Iceland are therefore ineligible. The nationality of the candidate is not a bar to eligibility.

Applicants should send the following documents to Dr. Ragnheidur Thorarinsdottir, Faculty of Civil and Environmental Engineering, University of Iceland, rith@hi.is by 30th September 2016 including the following:

- CV (max 2 pages)
- Letter of motivation
- List of publications