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Behavioural manipulation as an alternative to the use of paraffin oil in greenhouse whitefly control

Valeria Fattoruso, researcher at RELACS' partner University of Trento presents her findings at international conference in Japan

Valeria Fattoruso is a young researcher at the [University of Trento](#) and affiliated to [Fondazione Edmund Mach](#), two of the [RELACS project partners](#). She is investigating environmentally sound solutions to control the population of the greenhouse whitefly. To date, this is mainly done by using paraffin oils. However, by making use of the specific behaviour of the greenhouse whitefly more sustainable solutions can be thought of.

The basis of Valeria's research is to understand the behaviour of the target species. Thus, the whitefly's mating behaviour and vibrational communication are at the heart of her research. Understanding both will allow her to develop techniques of behavioural manipulation. These will interfere with the everyday activities (e.g. feeding and mating) of the insect and avoid infestation of plants.

If you are interested in the results of Valeria's research that will be published later this year, visit the [RELACS project website](#) and read about the latest project developments.



Picture 1: Bioacoustic laboratory at Fondazione Edmund Mach (Photo: Sabina Avosani, Fondazione Edmund Mach)

The greenhouse whitefly

The greenhouse whitefly (*Trialeurodes vaporariorum*) is one of the most harmful insect pests prevalent all around the world. Due to its ability to infest hundreds of different plant species, it can have devastating effects on agricultural production. Its infestation can result in the transmission of viruses and mould growth, especially in greenhouse crops.



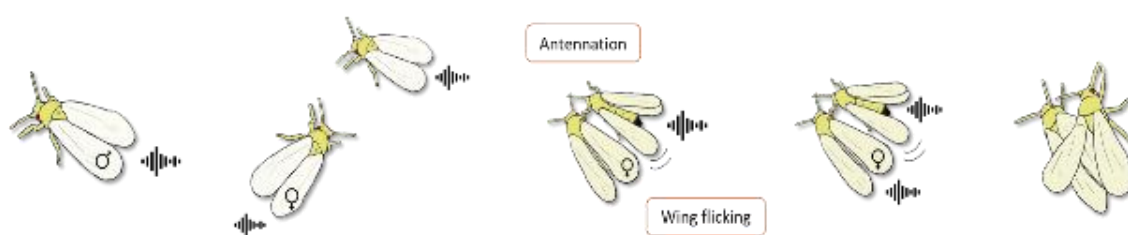
6th Annual Meeting of the Society for Bioacoustics

After having worked on this research for one year, Valeria presented her very promising first research results at the [6th Annual Meeting of the Society for Bioacoustics](#) in Tsukuba, Japan within the framework of the RELACS project.

This international conference took place from 20 to 22 November 2019. It welcomed international students and researchers in the areas of basic and applied bioacoustics research in animals and humans.

VIBRATIONAL COMMUNICATION OF THE GREENHOUSE WHITEFLY

Trialeurodes vaporariorum (WESTWOOD) (HOMOPTERA: ALEYRODIDAE)



“Knowing the behavior of pests is crucial to develop ecofriendly control strategies”

Figure 1: Slide presenting the mating behavior of the greenhouse whitefly (Valeria Fattoruso)

About this news story and RELACS

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RELACS: 'Replacement of Contentious Inputs in Organic Farming Systems' (RELACS) builds on results of previous research projects and takes far-advanced solutions forward. As a system approach to sustainable agriculture, organic farming aims to effectively manage ecological processes whilst lowering dependence on off-farm inputs. The RELACS partners will evaluate solutions to further reduce the use of external inputs and, if needed, develop and adopt cost-efficient and environmentally safe tools and technologies.

Project website: www.relacs-project.eu

Social media: Facebook (RELACSeu) & Twitter (@RELACSeu)

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