University of Genova

Department of Earth, Environmental and Life Sciences

Doctorate Course in Earth and Environmental Science and Technology

Università degli Studi di Genova

STAT

Dottorato in Scienze e Tecnologie per l'Ambiente e il Territorio

Curriculum in biology applied to agriculture and the environment

Research Theme n. 5

Titolo (Italiano) Aereomicologia: la valutazione dei requisiti della qualità dell'aria, tramite la determinazione della concentrazione di inquinanti microbiologici fungini. Title (inglese) Aeromycology: the assessment of air quality requirements by determining the concentration of fungal microbiological pollutants.
Tutor (name and email) and eventual co-tutor Mirca Zotti mirca.zotti@unige.it
Program description including the formation program abroad (Inglese) Aeromycology is a branch of aerobiology that studies the presence of fungal spores in the air, both indoors and outdoors, and their potential implications for human and plant health, as well as the preservation of artifacts and food. Through a polybasic approach, the research will aim to evaluate the diversity of fungi in the samples collected and analyze some of their functional traits (such as xerotolerance, thermophily, PGPF), biodeterioration activity on materials, and pathogenicity. The samples may also be collected using specifically equipped drones. During the project, the candidate will spend a period of 6 month abroad within a framework of collaboration with international research group such as Westerdijk Fungal Biodiversity Institute (Holland) and Institute for Natural Sciences and Technology in the Arts (Austria).
Financial support: Tutor's research grants
Tutor's publications (max 3) Crawford, I, Bower, K, Topping, D, Di Piazza S, Massabò D, Vernocchi, V, Gallagher, M. Towards a UK Airborne Bioaerosol Climatology: Real-Time Monitoring Strategies for High Time Resolution Bioaerosol Classification and Quantification. Atmosphere. 2023, 14(8), 1214 Canonica L, Cecchi G, Capra V, Di Piazza S, Girelli A, Zappatore S, Zotti M. Fungal Arsenic Tolerance and Bioaccumulation: Local Strains from Polluted Water vs. Allochthonous Strains. Environments - MDPI, 2024, 11(1), 23 Di Piazza S., Houbraken J., Meijer M., Cecchi G., Kraak B., Rosa E., Zotti M. 2020. Thermotolerant and thermophilic mycobiota in different steps of compost maturation. Microorganisms, 2020, Open access 8(6) 880: 1-9.