



Nature and society facing the Anthropocene
challenges and perspectives
for landscape ecology

SHORT COURSE

WEDNESDAY JULY 3rd 2019

Università degli Studi di Milano-Bicocca

ECO-ACOUSTICS

Principles, methods, technologies and applications to environment ecological survey and monitoring

Course presentation

Eco-acoustics, a novel ecological discipline offers a broad range of theoretical and applied topics in the field of acoustic field survey and monitoring of ecological processes like environmental complexity, resilience, biodiversity across a broad range of spatial and temporal scale. Environmental and anthropogenic sounds are particularly efficient proxies to describe ecological and behavioural patterns and processes of landscapes at different level of human intrusion and manipulation (e.g. wild areas, rural and urban landscapes, freshwater and marine scapes).

We intend to illustrate the fundamentals of eco-acoustics (e.g., Acoustic adaptation Hypothesis, Acoustic Niche Hypothesis, Acoustic Communities Hypothesis, Acoustic Habitat Hypothesis, Structure of Soundscapes, Acoustic Events), in terrestrial and aquatic environment associated to the concepts of complexity, uncertainty, and environmental information. Examples of application of eco-acoustics multiscale approach and discussion on comparative techniques will be provided, as well.

Technologies and evaluation metrics (Acoustic Complexity Indices) will be illustrated. In particular the functioning and performance of the SoundscapeExplorer [terrestrial] digital recorder will be brought to the attention.

The Acoustic Complexity Indices (ACI), Eco-acoustic Event Detection and Identification and the fractal structure of soundscapes will be described in details and complete exercises will be offered on individual PC station.

Time

To be confirmed

Number of participants

Minimum 10, maximum 40

Cost per participant

€ 30.00

Info & Contacts

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Detail of organizer(s)

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