UNIVERSITÀ
DI PARMA

DIPARTIMENTO DI SCIENZE
CHIMICHE, DELLA VITA E DELLA
SOSTENIBILITÀ AMBIENTALE

AVVISO DI SEMINARIO

Aula Riunioni, Cascina Ambolana
13 settembre 2019 ore 12:00

Dr. Martin Wilkes

Assistant Professor – Centre for Agroecology, Water and Resilience
Coventry University

"Making the most of existing data on species' occurrences, traits and genes"

Dr. Alex Laini
Tel. 0521.905696 - E-mail: alex.laini@unipr.it

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Making the most of existing data on species' occurrences, traits and genes

In recent years, environmental, ecological and genetic data have been increasingly shared in global repositories. There are now >1 billion species' occurrence points recorded in the Global Biodiversity Information Facility (GBIF), and >1.7 million sequences publicly available in the Barcode of Life Database (BOLD). The Open Tree of Life (OTL) contains >2.6 million tips in its synthetic phylogenetic tree. High-resolution climate (e.g. WorldClim) and other environmental data are openly available and readily integrated into large-scale statistical models. This opens up new opportunities for ecological research at large scales that, until now, have not been fully seized.

By combining openly available environmental data and species' occurrence, trait and genetic records with computational modelling, I will introduce a new analytical framework for quantifying biodiversity-environment relationships at large (continental to global) scales. I will demonstrate its application with a case study on freshwater macroinvertebrates, a model group in basic and applied freshwater ecology. Subsequently, I will discuss present capabilities and recommend future directions in macroecology using open data.

Parco Area delle Scienze 11/A, Campus ● I-43124 Parma
Tel 0521 905631
Sito internet: http://scvsa.unipr.it/it
PEC DipScienzeCVSA@pec.unipr.it
Codice Fiscale e Partita IVA 00308780345