



## BioMedaqu Summer School no. 4 Webinar 'Data mining in Aquaculture and Biomedicine' 22-23-24 February 2021

**Organizer:** Clara Boglione (Università di Roma Tor Vergata)

The BioMedaqu Project ([https://www.gigabiomedaqu.uliege.be/cms/c\\_4430156/en/gigabiomedaqu](https://www.gigabiomedaqu.uliege.be/cms/c_4430156/en/gigabiomedaqu)) is an European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie (MCSA-ITN) grant agreement No 766347 with the aim of creating an innovative expertise combining research in skeletal biology of aquaculture fish species with that in biomedical models and humans.

In the frame of BioMedaqu Project, the University of Rome Tor Vergata organizes a training course on the most adequate procedures for analysing data obtained in skeleton biology research. During the 2<sup>nd</sup> BioMedAQU summer school (held in September 2019) a preliminary course on theory and application of basic analyses to data set on skeletal anomalies inspected in farmed and model fish was offered to the participants.

This 4<sup>th</sup> BioMedAQU summer school is intended to offer advanced theoretical and applied bases on the main analytical tools necessary for analysing and interpret data obtained from anatomical, behavioural, biomolecular and genetic analyses carried out in Aquaculture and Laboratory. The webinar covers the following topics: multivariate data analyses, functional genomics, Artificial Neural Networks, Geometric Morphometrics, experimental analysis of behaviour.

**Target group:** The course is directed to PhD students, researchers or professionals from the industry interested in skeletal anomalies in reared and/or model fish.

**Location:** Due to the containment measures for SARS CoV 2 outbreak, classes will be will be online on platform Lifesize [Requires Google Chrome version 73 or higher (Windows/macOS); version 78 or higher (Android)].



## Provisional Programme (hour: CET)

### Monday 22<sup>nd</sup> February

- 9:00-11:00 M. Scardi (University of Rome Tor Vergata) - *Overview of the modern applications in the field of multivariate data analyses (theory)*
- 11:00-11:30 Coffee break
- 11:30-13:00 M. Scardi (University of Rome Tor Vergata) - *Overview of the modern applications in the field of multivariate data analyses (theory)*
- 13:00-14:00 Lunch
- 14:00-16:00 M. Scardi - *Examples of application of multivariate data analyses*
- 16:00-17:00 to be confirmed - *Behavioural Data Analysis*

### Tuesday 23<sup>rd</sup> February

- 9:00-11:00 F. Ferrè (University of Bologna Alma Mater Studiorum) - *Systems biology approaches: Bioinformatics methods for Functional genomics (RNAseq; R/Python/Galaxy)*
- 11:00-11:30 Coffee break
- 11:30-13:00 F. Ferrè (University of Bologna Alma Mater Studiorum) - *Systems biology approaches: Bioinformatics methods for Functional genomics (RNAseq; R/Python/Galaxy)*
- 13:00-14:30 Lunch
- 14:30-17:00 F. Ferrè (University of Bologna Alma Mater Studiorum) - *Examples of application of Galaxy*

### Wednesday 24<sup>th</sup> February

- 9:00-11:00 M. Scardi (University of Rome Tor Vergata) - *Theoretical basis and limits of the application of Artificial Neural Networks(ANNs)*
- 11:00-11:30 Coffee break
- 11.30-13.00 M. Scardi (University of Rome Tor Vergata) - *Examples of application of ANNs*
- 13:00-14:30 Lunch
- 14:30-17:00 C. Costa (CIGR-CREA) - *Geometric morphometrics and image analysis for fish grading: theory and case studies applications*

### Practical Information

**Registration.** Participation at the course is free of charge, but registration is compulsory. The registration deadline is the 14<sup>th</sup> February 2021. You are invited to request your registration by filling in and sending the BioMedaqu Registration Form. As soon as you register you will receive additional information on the definitive programme and participants list.

Registration form and request for further information, email: [boglione@uniroma2.it](mailto:boglione@uniroma2.it); [se.lee@uliege.be](mailto:se.lee@uliege.be).



# BIOMEDAQU

## 4<sup>th</sup> SUMMER SCHOOL: 'Data mining in Aquaculture and Biomedicine'

Please complete all sections of this form and email it to [boglione@uniroma2.it](mailto:boglione@uniroma2.it) and [se.lee@uliege.be](mailto:se.lee@uliege.be) by the 14<sup>th</sup> February 2021

### Registration Form

**Date:** February 22<sup>nd</sup>-23<sup>rd</sup>-24<sup>th</sup>, 2021

**Location:** Webinar on Platform Lifesize [Requires Google Chrome version 73 or higher (Windows/macOS); version 78 or higher (Android)].

Contact details	
<b>Title:</b>	
<b>Surname:</b>	
<b>First Name(s):</b>	
<b>Gender:</b>	
<b>Email:</b>	
<b>Telephone:</b>	
<b>Organization name:</b>	
<b>Address of your organizations:</b>	
<b>What is your main research/job interest?</b>	
<b>What is your experience with data mining? (never applied; basic; intermediate; high)</b>	
<b>Are you interested to attend the full course or only in specific dates?</b>	
<b>How /where did you find this course?</b>	