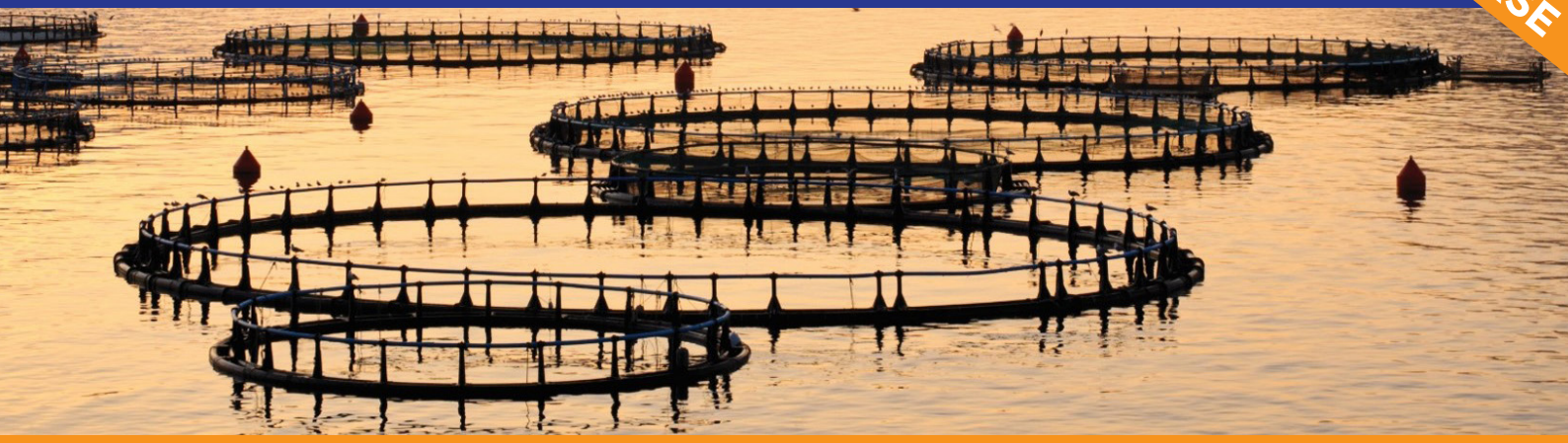
AQUA EXCEL 2020

AQUAculture infrastructures for EXCELlence in European fish research towards 2020

FACE-TO-FACE TRAINING COURSE: INTRODUCTORY BIOINFORMATIC COURSE TO SEQUENCING DATA PROCESSING

FREE TRAINING COURSE

DATE: 26-30 AUGUST 2019
LOCATION: INSTITUTE OF AQUACULTURE, UNIVERSITY OF STIRLING, SCOTLAND, UK



COURSE DESCRIPTION

Bioinformatics is a must-have skill required in every modern research lab. This course will explore the fundamentals of bioinformatics analysis. The participants will be provided with end-to-end hands-on training, along with an introduction to basic concepts, in using popular tools. Participants will gain an understanding of bioinformatics analysis in the context of aquaculture research. The key learning objectives are for participants to understand the utility of NGS for a range of aquaculture-related objectives and bioinformatics pipelines for NGS data, and to gain knowledge of specific pipelines for RADseq and RNAseq protocols.

COURSE CONTENT

Training will be provided through blended learning elements such as lectures, practical exercises and a mini industry seminar. Lecture topics will include:

- Unix/Linux command system and basic scripting
- Sequence alignment (genomic and transcriptomic)
- Variation calling (SNP)
- RNA-Seq expression measurement
- 16S metagenomics
- Genome assembly with short and long reads
- Marker development (GBS/RAD-Seq)

TARGET AUDIENCE

The target audience is primarily students and lab researchers who want to be introduced to bioinformatics concepts and analysis. This course is not an advanced course for bioinformatists, but rather a starter course for researchers that want to have a better understanding of their data, gain more insights or to plan experiments better and maximise the analytics output.

Required competence level: basic knowledge of molecular biological methods.

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COURSE ORGANISERS

University of Stirling (UoS) (United Kingdom) with support from INRA (France).

COURSE TUTORS

Name: Dr Michaël Bekaert
Position: Senior Lecturer in Bioinformatics
Organisation: Institute of Aquaculture (UoS)
Contact details:
michael.bekaert@stir.ac.uk

Dr Michaël Bekaert, senior lecturer in bioinformatics and genomics, is working extensively on the genomics of fish (cyprinids, salmonids, cichlids), mussels, sea lice, pathogenic bacteria and viruses, and SNP-based genetic mapping in aquaculture. Dr Bekaert has been involved in cloud-based software solutions for next generation diagnostics in infectious diseases. More recently, Dr Bekaert has addressed questions of genetic diversity, genome assembly, and marker discovery in farmed fish.

Name: Christophe Klopp
Position: PF Bioinformatics
Organisation: MIAT INRA
Contact details:
christophe.klopp@inra.fr

Christophe Klopp currently works at the Department of Applied Mathematics and Informatics, French National Institute for Agricultural Research. Christophe leads a group of bioinformaticians providing services to INRA, biologists working in animal genomics and co-leads the local bio-informatic Genotoul platform. These teams develop software packages, train biologists and take part in research projects.

PRACTICAL INFORMATION

Location: Institute of Aquaculture, University of Stirling, Scotland, UK
Date: Monday 26 August 2019 – Friday 30 August 2019
Application deadline: 21 June 2019
Language of instruction & material: English
Fees: Course attendance is FREE, thanks to European Commission Horizon 2020 funding. Participants are expected to pay for their own travel, subsistence and accommodation.
Maximum Participants: 25

REGISTRATION

Official registration forms and additional course information can be found on the AQUAEXCEL^{2020} website at: https://aquaexcel2020.eu/training-courses/upcoming-training-courses-apply-now

Note: Please do not make travel arrangements unless you have received official confirmation of selection.

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