CHARME / EMBnet / NETTAB 2016 Workshop

Reproducibility, standards and SOP in Bioinformatics

October 25-26, 2016, Rome, Italy

Welcome to the joint

CHARME / EMBnet / NETTAB 2016

Workshop

Welcome in Rome

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Reproducibility, standards and SOP in Bioinformatics

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16th Workshop on

Network Tools and Application in Biology

NETTAB

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Different locations in Italy
Innovative focus themes
Major research groups involved

Focus

The most innovative and promising
ICT technologies
and their application in Bioinformatics

Goals

show and demonstrate technologies,
train on their adoption and use,
support their exploitement

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2001

CORBA and XML:
towards a bioinformatics integrated network environment, Genova

myGrid

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2005

Workflows management:
new abilities for
the biological information overflow,
Napoli

Taverna Workbench presented

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2006

Distributed applications, **Web Services**, Tools and GRID Infrastructures for Bioinformatics, Cagliari

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2007

A **Semantic Web** for Bioinformatics: Goals, Tools, Systems, Applications, Pisa

SWAT4LS

Semantic Web Applications and Tools for Life Sciences workshop series

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2009

Technologies, Tools and Applications for **Collaborative and Social** Bioinformatics Research and Development, Catania

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2013

Semantic, Social and Mobile

Applications for Bioinformatics and Biomedical Laboratories, Venezia

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2016

Reproducibility, standards and SOP

in Bioinformatics,

Roma

EMBnet

elixir

GOBLET

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Bioinformatics methods, algorithms, tools, applications for reproducibility of computational experiments, including:

- Trends in **open science**, Open access journals, Open source practices
- **Data FAIR-ness**

- Bioinformatics **standards for models and data**
- Standard operating procedures (**SOP**) in bioinformatics
- Good **programming practices** for reproducibility
- **Role of workflow management systems and ontologies** in reproducible research
- Automatic **tools for tracking the provenance** of data, analyses, and results

- Computational tools supporting **automatic production of research papers**
- Tools, practices, and dissemination **platforms for** ensuring **reproducibility**
- The role of **cloud computing** in reproducible research

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Our Keynote Speakers

Barend MONS

The future:
partly FAIR, partly Cloudy

Chris Evelo

And then magic happens…
(about linking different types of data and what is needed to make that work)

Jacques van Helden

Ensuring
reproducibility and portability of
NGS analysis workflows

Susanna A Sansone

How to create awareness, inform and educate

BITS

BITS Lecture

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Our Guest Speakers

Reza Salek

Data sharing, standards and workflows in Metabolomics: towards reproducibility in Metabolomics

Peter McQuilton

BioSharing
Mapping the landscape of Standards, Databases and Data policies in the life, biomedical and environmental sciences

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Special Session on Education and Training

Teresa K Attwood

Allegra Via

- **GOBLET: Working towards FAIR bioinformatics training**
  Celia van Gelder, DTL/ELIXIR-NL, The Netherlands
- **Reproducibility and standards: the ELIXIR Training Platform perspective**
  Patricia Palagi, Swiss Bioinformatics Institute, Switzerland
- **CHARME, a new initiative for standards training**
  Kristina Gruden, National Institute of Biology, Slovenia
- **Data Science Skills for Life Science Research and Industry**
  Andrea Manieri, Engineering Ingegneria Informatica Spa, Italy
- **Using virtual machine (VM) images in training to increase reproducibility: ideas from the VM&Cloud EXCELERATE workshop**
  Eija Korpelainen, CSC, Finland

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Panel Discussion

- **Challenges in the training arena in the context of reproducibility and standards in bioinformatics**

  Erik Bongcam-Rudloff, SLU, Sweden &
  Sarah Morgan, EBI, United Kingdom

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