

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

CHARME / EMBnet / NETTAB 2016 Workshop

Reproducibility, standards and SOP in Bioinformatics

October 25-26, 2016, Rome, Italy



16th Workshop on Network Tools and Application in Biology



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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 exploitation

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2001
CORBA and XML:
towards a bioinformatics
integrated network environment,
Genova



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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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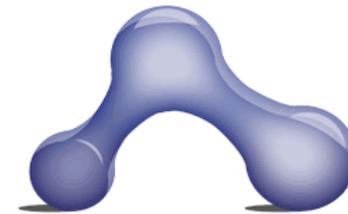
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2007

**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



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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



Our Keynote Speakers



Barend MONS



**The future:
partly FAIR, partly Cloudy**



Chris Evelo



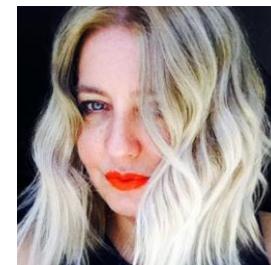
**And then magic happens...
(about linking different types of data and
what is needed to make that work)**



Jacques van Helden



**Ensuring
reproducibility and portability of
NGS analysis workflows**



Susanna A Sansone



**How to create awareness,
inform and educate**



BITS 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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