

WORKSHOP

Applying bioinformatics and data science competency frameworks to ELIXIR Training

4-5-6 April 2018

Amsterdam Science Park Congress Centre, Amsterdam

Dates:

Workshop dates: 5-6 April 2018 plus an optional seminar on the afternoon of April 4 2018

Note: there will be an optional seminar on Wednesday April 4 Afternoon 2018 (14.30-16.30). You can register separately for that through the registration form, see further below

Venue: Amsterdam Science Park Congress Centre, Science Park 123, 1098 XG Amsterdam. Information about logistics and travel can be found [in this PDF file](#).

Organizers:

Celia van Gelder (DTL/ELIXIR-Netherlands), Gabriella Rustici (University of Cambridge, ELIXIR-UK), Vera Matser (BioExcel), Allegra Via (ELIXIR-Italy).

Website with registration form: <https://www.eventbrite.co.uk/e/applying-bioinformatics-and-data-science-competency-frameworks-to-elixir-training-registration-43087835877> . Registration is free of charge.

Description

Much work is currently being done in *developing* and *applying* competency frameworks, both in bioinformatics and in data science. In the context of the ELIXIR Training, we aim to build on the existing expertise in this area and, together with the training stakeholders, to derive a proper implementation strategy.

This international workshop will bring together individuals from organisations and projects who have expertise in defining and in applying competency bioinformatics and data science frameworks in their own organisations. In a series of interactive sessions, we will build on the existing knowledge and work towards the following workshop goals:

- Identify competency frameworks that are relevant to the ELIXIR user community and learn about successful implementation examples of these frameworks
- Further define the relevant “personas” we are targeting with (ELIXIR) training
- Extract from the existing work a set of core competencies and sets of KSAs (knowledge, skills and abilities) that can subsequently be used:
 - to map courses in TeSS, the ELIXIR Training Portal
 - to build a curriculum for a one-week Advanced Bioinformatics Workshop (which will be part of the CODATA RDA Research Data Science Summer school series)

- o to set the first steps towards defining routes through a specific set of courses (learning paths)

Target audience

Individuals working in training and education who are interested in learning the state of the art about bioinformatics and data science competency frameworks and their application to date.

Concept schedule

version March 12 2018

Note: registration is possible for all individual days, please see the registration form for more information.

Day 0, Wednesday April 4, 2018

14.30-16.30 hours

Seminar:

Designing effective instruction and interpretable assessment
by **Allegra Via (CNR-IBPM, ELIXIR-Italy)**

Bloom's taxonomy is a 6-level hierarchy of progressively more complex cognitive functioning, from the simplest ("memorization") to the most complex ("evaluation/judgment"). Samuel Messik articulated three important criteria for evaluating the effects of instruction which can be very useful in general for learning outcome development and structuring the learning experience. This seminar will discuss Bloom's taxonomy, Messik's criteria and learning outcomes, and how essential they are to the design of effective instruction and interpretable assessment.

Biography Allegra Via

Allegra Via has a background in theoretical physics and works as scientific researcher in bioinformatics at the Institute of Molecular Biology and Pathology (IBPM) of the National Research Council (CNR, Rome, IT). She is adjunct professor in Bioinformatics at Sapienza University of Rome and at the University of Bologna, Italy. In 2003, she got her PhD at the University of Rome "Tor Vergata", where she also worked six years as postdoc. In 2009 she moved to the Sapienza University as assistant professor, and, since January 2014, she is the ELIXIR Italy Training Coordinator. She's involved in the design, organisation and delivery of bioinformatics training courses, in Train the Trainer activities, and collaborates with other ELIXIR's nodes on many training-related initiatives. She has a long track record of academic teaching. Her main research interests include protein structural bioinformatics, protein structure and function prediction and analysis, and protein interactions. She also increasingly works in the field of learning, teaching and assessment. She's a member of the Global Organisation of Bioinformatics Learning, Education and Training (GOBLET) and a Carpentry Instructor and Instructor trainer.

Workshop Day 1, Thursday April 5 2018

- 9.30 Registration & Coffee
- 10.00 *Opening & Introduction* (Celia van Gelder, DTL/ELIXIR-NL)
Examples of implementation of competency frameworks
- *Implementing a competency-based training strategy for biomolecular researchers with high computational needs* - Vera Matser (BioExcel)
 - *ISCB competencies and their implementation in H3ABioNet* - Nicola Mulder (Computational Biology Division, University of Cape Town, H3ABioNet PI)
 - *Mapping bioinformatics competencies to University of Cambridge trainings* - Gabriella Rustici (University of Cambridge)
 - *Application of EDISON Data Science Framework (EDSF) for customisable Data Science curricula development* - Yuri Demchenko (University of Amsterdam, EDISON project)
 - *The curriculum of the CODATA-RDA Research Data Science Summer School* - Hugh Shanahan (Royal Holloway University of London)
- 13:00 Lunch
- 14:00 *A critical look at competencies* (Allegra Via, CNR-IBPM, ELIXIR-Italy)
- 15:00 Target Personas for Training
Introduction
Break out session 1: Defining / working on the Personas
Sticky exercise part 1
- 17:45 Closing
- 19:30 Dinner in Amsterdam

Workshop Day 2, Friday April 6 2018

- 9.30 Sticky exercise part 2
Break out session 2
Reporting back and wrapping up from break out sessions
- 13:00 Lunch
- 14:00 Designing: what functionalities are needed in the portal
- 15:00 Towards Learning Paths
- *Learning Paths in the ERUDITE portal* - John van Horn (University of Southern California, BD2K Training Coordination Center)
 - *Workflows in TeS* - Niall Beard (ELIXIR-UK, University of Manchester)

16: 30 Closing

More information?

Please contact Celia van Gelder (DTL/ELIXIR-NL, celia.van.gelder@dtls.nl) if you need more information.