

# DATA FAIRNESS

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INTERNATIONAL SUMMER SCHOOL

for Environmental &  
Earth Science Infrastructures:

*theory and practice*

LECCE

1-5 JUL

2019



UNIVERSITÀ  
DEL SALENTO





INTERNATIONAL SUMMER SCHOOL

Data FAIRness in Environmental  
& Earth Science Infrastructures:  
*theory and practice*

LECCE  
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During a five day summer school, leading scientists will be addressing the contemporary debate on the Data FAIRness in the Environmental and Earth Science and on the different approaches adopted by research infrastructures.

[www.lifewatch.eu/iss-data-fairness](http://www.lifewatch.eu/iss-data-fairness)

**Dates:** 1<sup>st</sup> July – 5<sup>th</sup> July 2019

**Location:** Lecce, Italy

**Contacts:**

Nicola Fiore - LifeWatch ERIC; nicola.fiore[at]lifewatch.eu  
Zhiming Zhao - University of Amsterdam; z.zhao[at]uva.nl

## Get ready for the Summer School

You are invited, together with other students, to give a short (5 minutes) talk to introduce your background and expectations towards the summer school. Please use the template for preparing your talk. If you have any questions, please feel free contact Nicola or Zhiming.

We have also prepared some pre-course material, please find the time read to them before the summer school. Please bring your own laptop with you to join exercise and practical sessions.

## During the Summer School

### SCHEDULE

Morning Session (MS1) 09.00–10.30

Coffee Break 10.30–11.00

Morning Session (MS2) 11:00–12:30

Lunch 12.30–14.00

Afternoon Session (AS1) 14.00 – 15.30

Coffee Break 15:30 – 16.00

Afternoon Session (AS2) 16.00 – 17.30

### STRUCTURE

The school will be organized in front lessons and workshop sessions. The main modules are:

DATA MANAGEMENT in a nutshell

- to be FINDABLE
- to be ACCESSIBLE
- to be INTEROPERABLE
- to be REUSABLE

The summer school will use the ENVRI training platform for all modules to accompany participants in the learning process and enabling the access to its resources and products.

## DAY 1 | 01 July 2019

### MS 1 | DATA MANAGEMENT in a nutshell

Welcome & round table introduction

General introduction for data management (Zhiming Zhao)

- data lifecycle, data management, RI, ENVRI, and other introductions
- short introduction to key ENVRI services

FAIR-introduction (Margareta Hellström)

- short introduction to the concepts

### COFFEE BREAK

### MS 2 | STUDENTS' INTRODUCTION

Students' short presentations (5' each)

- student will present 1)previous practice, 2)desired course project idea, 3)candidate project.

### LUNCH

### AS 1 | TO BE FINDABLE

Data Curation and preservation (José Maria Garcia)

- data lifecycle, data management, RI, ENVRI, and other introductions
- short introduction to key ENVRI services

### COFFEE BREAK

### AS 2 | TO BE FINDABLE

FAIR- introduction (Margareta Hellström)

EXERCISE

- Practices via certain example portals (ICOS Carbon Portal, Zenodo, etc.)

### +++REQUIRED KNOWLEDGE+++

Read up on PIDs (suggested reading before school)

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## DAY 2 | 02 July 2019

### MS 1 | TO BE ACCESSIBLE

From FAIR Principles to FAIR Implementations (Erik Schultes)

- FAIR Principles Explained -> Implementation Choices -> Assessments
- FAIR Data Stewardship Planning (DS Wizard)
- Interactions: Materials / exercise / ORCID exercise
- Evaluators

### COFFEE BREAK

### MS 2 | TO BE ACCESSIBLE

The Cataloguing process & related technologies (Zhiming Zhao)

### LUNCH

### AS 1 | TO BE ACCESSIBLE

FAIRness analysis exercise (Barbara Magagna, Margareta Hellström)

Data management plan (Margareta Hellström)

### COFFEE BREAK

### AS 2 | TO BE ACCESSIBLE

Data management plan (Margareta Hellström)

### 20:00 | WELCOME DINNER | Tbc

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## DAY 3 | 03 July 2019

### MS 1 | TO BE INTEROPERABLE

Ontology use (Clement Jonquet)

- General introduction (ontology, metadata vocabularies, mappings)
- Ontology selection and recommendation
- Describe your ontology with standard metadata vocabularies
- Ontology used inside
- Align your ontology with the rest of the world
- Semantic annotation
- Work with ontology repositories (NCBO BioPortal, AgroPortal) APIs (REST & SPARQL)

### COFFEE BREAK

### MS 2 | TO BE INTEROPERABLE

Ontology use (Clement Jonquet)

- Exercise

### LUNCH

### AS 1 | TO BE INTEROPERABLE

Semantic search and Cross Catalogue search (Pier Luigi Buttigieg)

### COFFEE BREAK

### AS 1 | TO BE INTEROPERABLE

Semantic search and Cross Catalogue search (Pier Luigi Buttigieg)

- Exercise
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## DAY 4 | 04 July 2019

### MS 1 | TO BE RE-USABLE

Provenance (Barbara Magagna)

### COFFEE BREAK

### MS 2 | TO BE RE-USABLE

Data use: scientific workflow, policies, licenses, things on e-Infrastructure

- Scientific workflow, policies, licenses (Nicola Fiore)
- e-infrastructures and other related technologies (Zhiming Zaho)

### LUNCH

## AS 1 | TO BE RE-USABLE

*Taverna, workflow, workflow provenance (Nicola Fiore)*

## COFFEE BREAK

## AS 2 | TO BE RE-USABLE

*Provenance exercise (Barbara Magagna)*

**20:00 SOCIAL DINNER | Palazzo Belsanti**

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# DAY 5 | 05 July 2019

## MS 1 | STUDY CASES & WRAP UP

*Students' presentation of study cases  
WRAP-UP*

## COFFEE BREAK

## MS 2 | EVALUATION

*Presentation of the course project (team based)  
Report of the course (individual)*

## LUNCH BOXES

