

- **Full title:** How FAIR is your software? – An introduction to FAIR software and hands-on tutorial
- **Length:** half-day (3 hours plus breaks)
- **Abstract:**

In this tutorial, we will introduce the FAIR principles and how these principles can be applied to software. We will also show how Research Software Developers can check the FAIRness of their software using *howfairis*. In addition, using *fairtally*, we will set up a workflow that monitors FAIRness of a collection of software which may be interesting for keeping track of compliance at organization level.

- **Intended audience:** Introductory
- **Prerequisite knowledge or skills required for attendees:**
- **Previous offerings of the tutorial:** We will give this tutorial for the first time
- **Detailed contact information of all presenters:**
 - **Name:** Faruk Diblen (main contact)
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 - **Name:** Jurriaan Spaaks
 - **Affiliation:** Netherlands eScience Center
 - **E-mail:** j.spaaks@esciencecenter.nl
 - **ORCID:** <https://orcid.org/0000-0002-7064-4069>
- **Brief biography for each presenter**
 - **Faruk Diblen:** Faruk Diblen is a Senior Research Software Engineer at the Netherlands eScience Center. He is currently leading a team which focuses on software quality and software sustainability. Faruk has experience in medical imaging, scientific visualization, big data, and cloud computing. He was involved in various European and national projects. He gave courses and workshops about open science, reproducibility, essential skills, and research software best practices.
 - **Abel Soares Siqueira:** Abel Soares Siqueira is a Senior Research Software Engineer at the Netherlands eScience Center. Since 2010, he has been involved in workshops and training camps like Software Carpentry and teaching essential skill courses. Since 2020, he has focused that creative energy on producing YouTube videos (<https://www.youtube.com/AbelSiqueira>), primarily about the Julia language. Abel has extensive experience in optimization and numerical algorithms.
 - **Jurriaan Spaaks:** Jurriaan Spaaks is a Senior Research Software Engineer at the Netherlands eScience Center. He is one of the main contributors of the Citation File Format which was recently adopted by GitHub. Besides contributing to many open-source projects, he played an active role on projects related to Open science, FAIR software, and software metrics. In addition, Jurriaan gave numerous workshops and tutorial on these topics.

How FAIR is your software? – An introduction to FAIR software and hands-on tutorial

Motivation

FAIR is an acronym for Findable, Accessible, Interoperable and Reusable. It is a set of principles to make data and software publicly available, usable, and reproducible. Although the term has been around for many years, it has been mostly applied for data. Recently, the application of FAIR principles on software became particularly important as research software plays increasingly critical roles in doing science.

The Netherlands eScience Center has introduced five recommendations website (<https://fair-software.eu>), which guides Research Software Developers (RSEs) on actions that can be taken to make research software more FAIR. These recommendations are currently endorsed by several research organizations (<https://fair-software.eu/endorse>) and getting adopted by wider research software communities. In addition to this website, a group of RSEs from the Netherlands eScience Center developed a set of tools that can check compliance of research software with these five recommendations.

In this tutorial, we will introduce the FAIR principles and how these principles can be applied to software. We will also show how Research Software Developers can check the FAIRness of their software using *howfairis*. In addition, using *fairtally*, we will set up a workflow that monitors FAIRness of a collection of software which may be interesting for keeping track of compliance at organization level.

Brief outline of the topics to be covered

1. Introduction to FAIR and FAIR Software principles
2. Hands-on session: Check FAIRness of your software using *howfairis*
3. Wrap-up and ask for feedback

Detailed agenda of the tutorial

- Introduction to FAIR and FAIR Software principles – 60 mins
- Break
- Hands-on session: Using *howfairis* to check FAIRness of your software - 60 mins
- Hands-on session: Using *fairtally* to monitor FAIRness of software in your organization - 30 mins
- Break
- Discussion and feedback - 30 mins

Links to related resources

- <https://zenodo.org/record/6258366>
- <https://fair-software.eu/>
- <https://github.com/fair-software/howfairis>

- <https://github.com/fair-software/fairtally>

Type of support materials to be supplied to attendees

None

Requirements for online conference system

None