

# EUNIS 2019: NeIC's CodeRefinery Project Abstract

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## Keywords

Coderefinery, NeIC, software engineering, git, GitHub

## 1. Summary

CodeRefinery is a project with the ambition of teaching researchers Git (a version control system) collaborative tools like GitHub, and good practices for dealing with source code and data. Large focus is placed on reproducibility, maintainability and sustainability in developing scientific software. The project has given 13 workshops across the Nordic region over a two-year period with several hundred participants in total. The project have learned that there is strong need for software engineering skills across a wide range of scientific disciplines. This paper discusses experiences of the CodeRefinery project.

## 2. CodeRefinery EXTENDED ABSTRACT

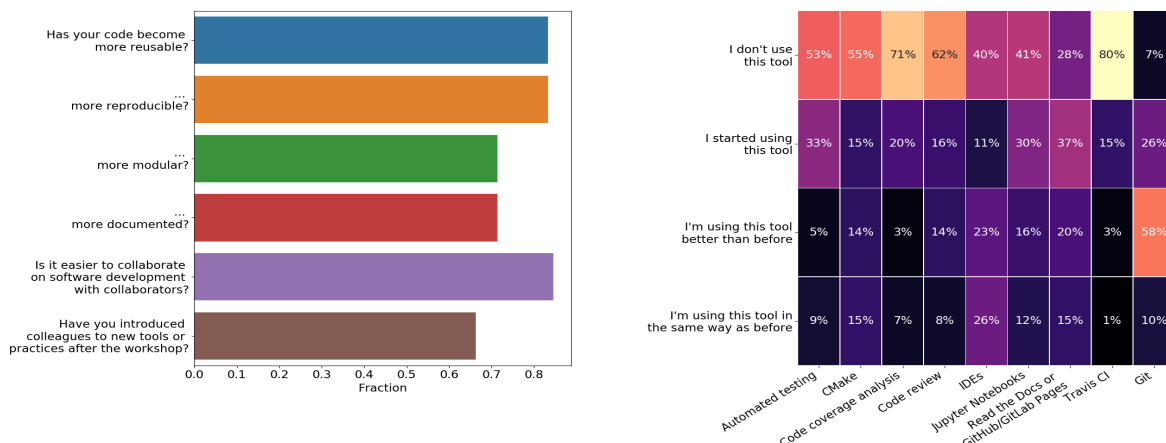
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The Nordic e-Infrastructure Collaboration (NeIC) launched the CodeRefinery in late 2016 with team members from all Nordic countries. CodeRefinery aims to develop lesson material and offer workshops in common software practices, especially how to collaborate with others when working with software source code and data. The target audience was researchers primarily at academic institutions in the Nordic region, in particular Post Docs and PhD-students.

When the first phase of the project ended in September 2018, the project had organized thirteen 3-day workshops across the Nordic region (Denmark, Norway, Finland, Sweden and Iceland) with more than 400 participants altogether.

The workshops were very well received. Not only have they provided an opportunity for researchers to improve their software skills, but participants have also reported that they transfer the new skills to their colleagues. The workshop contained lessons for the individual (how do you track your changes), for the group (how do you cooperate when submitting/proposing code changes), and for the community (how do you share your work with others).

### 3. Long-term impact



The long-term impact of CodeRefinery workshops was measured through a post-workshop survey which was sent out to all former participants 3-6 months after attending a workshop. The two graphs above show how former participants use various software development tools after attending a workshop (left), and how their code and collaboration with colleagues has changed (right). These results are based on 92 survey responses obtained to date -- 49% of which are graduate students, 18% postdocs, 14% researchers, 8% assistant/associate/full professors and 9% other occupations (e.g staff scientists, scientific programmers).

### 4. AUTHORS' BIOGRAPHIES



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**Thor Wikfeldt** works as Application expert at the PDC Center for HPC at KTH. He has a PhD in chemical physics. He enjoys teaching, working at the interface between HPC and academic research and interacting with talented scientists during CodeRefinery workshops.