eScience Center Fellowship Programme 2022: Call for applications

January 2022
eScience Center Fellowship Programme 2022
Call for applications – deadline April 11, 2022

The Netherlands eScience Center is looking for researchers who have the ambition to promote or improve the use of research software within their organization or discipline. We invite them to apply and become an eScience Center Fellow. Applications are open for individuals from all levels and disciplines, from any Dutch university (including University Medical Centres) or research institute affiliated with NWO or KNAW (see appendix A).

About the eScience Center
The Netherlands eScience Center is the national centre for innovative software solutions in academic research. It was established in 2012 as an independent foundation and receives its funding from NWO and SURF. The eScience Center aims to bridge the gap between digital technologies on the one hand and scientific and scholarly inquiry on the other. Its vision is to establish a robust research community, in which all investigators in all domains can exploit advanced digital technologies and research software to answer research questions, keeping the Netherlands at the forefront of cutting-edge international research.

The eScience Center employs more than fifty Research Software Engineers or RSEs. As experts in digital technologies and methodologies, they may be seen as the equivalents of postdocs, assistant and associate professors and top-level technicians at universities.

Purpose of the Fellowship Programme
The eScience Fellowship Programme is aimed at members of the academic research community who are passionate to act as ambassadors for the use of research software. Research software can be any piece of code, script, package, tool, library, or programme written for the purpose of being used in research. The Fellowship Programme supports those who want to promote or improve the awareness and use of research software within their institute or academic community.

Each Fellow is expected to carry out a project to this end within the duration of their Fellowship (12 months). Any project related to improving awareness or use of research software will be
considered. Applicants are welcome to use the Fellowship to boost existing initiatives that fit the purpose of the programme. Examples of ideas that can be part of a project are (but are not limited to):

- Creating a tutorial around a research software package developed in-house.
- Creating a series of videos on good research software practices.
- Inviting speakers on the topic of sustainable research software for an interactive seminar.
- Running a hackathon where researchers can improve the reusability of their research software and exchange ideas.
- Setting up a discipline-specific community to exchange expertise about digital tools within the applicant’s field.
- Increasing the visibility and awareness of research software in the applicant’s field.
- Increasing the visibility and wellbeing of researchers who write code in any way.
- Webifying, digitizing or developing an open tool that would improve research in applicant’s field.

Fellows will contribute to the visibility and use of research software at their home institutions and/or in their disciplines. During the runtime of the Fellowship, they are also part of the eScience Center community. Fellows will be able to join activities at the eScience Center and draw on its expertise on research software to stimulate the advancement of digital research in their home institutions and within their respective disciplines.

Benefits of becoming an eScience Center Fellow

eScience Center Fellows are ambassadors for research software at their own institution or network. Being selected for the programme is a sign of recognition of the Fellow’s talent and potential and will increase the visibility and network of the Fellow. The eScience Center Fellowship programme is inspired by international counterparts such as the Software Sustainability Institute (SSI) Fellowship Programme, Open Life Science (OLS), and the BIDS Data Science Fellowship Program; these programmes have demonstrably furthered the careers of their Fellows, and we expect the same from this programme.

Fellows will also be invited to participate in a series of events aimed at networking with other eScience Center Fellows and with eScience Center personnel.
The eScience Center will support the Fellows to ensure the successful completion of their projects. Candidates can apply for one of two different types of support for their project plan:

- The first is a personal budget of €5,000 towards project costs. This budget can be used to cover expenses and consumables. For example, Fellows will be able to use this personal budget to invite (international) speakers, to attend (international) workshops or pay for venue hire and consumables.
- The second type of support is to have a personal budget of €3,000 towards expenses and consumables, and to request 36 hours of expertise from eScience Center employees in addition. These hours can be used to request expert consultancy, event organisation, or teaching.

On top of that, a Fellow will:

- Have access to special interest groups (SIGs) meetings at the eScience Center. The Center has a few different SIGs where employees meet to share and learn about different topics. There are SIGs on data analytics, Machine Learning, Natural Language Processing, software sustainability, pedagogy, soft skills and more.
- Be assigned, when relevant, to one of the four sections at the eScience Center, based on their application: (1) Social Sciences and Humanities, (2) Natural Sciences & Engineering, (3) Life Sciences and (4) Environment & Sustainability. Fellows will have the opportunity to join the section meetings that take place about once a month, to hear about developments in eScience in the section they are connected to. We strive to have an equal balance across all sections.
- Be offered a workshop that will help them improve their skills to reach a wide audience in the research community. This workshop will be organized in collaboration with the Software Sustainability Institute (SSI), Open Life Science (OLS) and/or organized by CSCCE (the Center for Scientific Collaboration and Community Engagement).
- Have a point of contact at the eScience Center, who meets with the Fellow on a regular basis to discuss their project, and connects them with relevant people (at the eScience Center or externally) that can help them make their project a success.
- Have the opportunity to reach a wider audience through the eScience Center network. For example, there may be opportunities to publish relevant blog posts on the eScience Center website, or Fellows are invited for presentations at eScience Center events.
Meet three times a year (if possible in person) in an informal setting with other Fellows for borrels and dinners, to exchange experiences and expand their network.

Be listed on the eScience Center website as an eScience Center Fellow.

Who can apply?
Applicants must be affiliated with a Dutch university (including University Medical Centres) or research institute affiliated with NWO or KNAW (see appendix A). Additionally, applicants should be passionate about research software and be able to act as an ambassador for research software.

An applicant for the Fellowship programme could be:
- A researcher who focuses on the application of research software as part of their research,
- or, a developer who writes tools for researchers,
- or, a research software engineer who supports the work of researchers with software,
- or, an advocate for best practices in software use for their research domain,
- or, an individual in a facilitator role or leadership role in projects or organizations that make use of research software.

Not sure if you are eligible to apply? Attend our information event on February 22, 2022 to find out more, or reach out to the Fellowship coordinators at fellowship@esciencecenter.nl

Application procedure
1. Written application
   This part of the application consists of a plan, which the applicant will implement in alignment with the Fellowship Programme goals. The application text (in English) must be submitted using the form under “Downloads” on this page.

   The plan should include:
   - Personal information of the applicant: Name, title of their project, affiliation, demographic information
   - A proposal for a plan that improves the state of research software (max 1500 words including references). This must include
     - A reflection on the awareness and/or use of research software in the academic community, discipline, or field of the Fellow.
- A motivated description of the objectives of the proposed plan.
- A description of the plan.
- A justification of why the applicant is well situated to execute the plan.

- A timeline for the project plan, running for 12 months from the start of the Fellowship, starting June 2022 until end of May 2023.
- A budget plan, outlining how the personal budget will be used. Depending on the choice of support type, this should contain the following:
  - A personal budget of €5,000; in this case the plan should outline the expenses and consumables the budget will cover in the form of declared costs, OR
  - A personal budget of €3,000 + 36 hours of eScience Center expertise (“in-kind support”): in this case the plan should outline the expenses and consumables the budget will cover in the form of declared costs. In addition, the plan should outline how 36 hours of eScience Center employee time will be used. It should be clear from the project plan that these expertise hours are directly relevant to the proposed project. Hours can be used at different times throughout the project, or all at once, for several eScience Center employees simultaneously (as long as the total employee hours add up to 36). For a list of topics in which the eScience Center has employees with expertise, see appendix B.

Given the maximum available budget for this call, we expect to grant 20 Fellows, irrespective of the selected support type.

In light of the COVID-19 pandemic, making travel and in-person events not always feasible, we of course welcome plans that include online-based activities as well.

2. Personal interview
Shortlisted applicants will be invited to participate in a 15-minute (online) interview. During the interview, candidates will briefly explain their Fellowship plan and how they expect it will impact the state of research software in their field. The internal review committee will have the opportunity to ask clarifying questions and discuss with the applicant their reflection on the state of research software. Applicants will be assessed on their communication and collaboration skills, as well as how passionate they are about the topic and their ability to inspire others.
The interviews will be recorded and temporarily stored, and only used internally for assessment purposes.

The interviews will take place on May 9 and May 10, 2022, between 10:00 and 16:00. If you are interested in becoming an eScience Center Fellow, save the date!

Application review procedure
Applications will be reviewed by an Internal Review Committee (IRC), consisting of members of the eScience Center. The IRC will select based on their assessment of feasibility and impact of the project, and on their assessment of the applicant’s potential of being a suitable ambassador for research software. Based on the recommendations from the IRC, the eScience Center Directors’ Team will grant the Fellowship projects.

When and how to apply?
Applicants should apply using the form under “Downloads” on this page. The deadline for submission of proposals is: April 11, 2022, 14:00 CET. Full proposals must be submitted in PDF to fellowship@esciencecenter.nl.

Information event
To inform interested applicants of the specific aims of this call for proposals, as well as the role and expertise of the eScience Center, an online information event will be organized on Tuesday February 22, 2022 (14:00-16:00).
Appendix A - Eligible organisations

1. Universities
   Erasmus Universiteit Rotterdam
   Open Universiteit Nederland
   Protestantse Theologische Universiteit
   Radboud Universiteit Nijmegen
   Rijksuniversiteit Groningen
   Technische Universiteit Delft
   Technische Universiteit Eindhoven
   Theologische Universiteit Apeldoorn
   Theologische Universiteit Kampen
   Universiteit Leiden
   Universiteit Maastricht
   Universiteit Twente
   Universiteit Utrecht
   Universiteit van Amsterdam
   Universiteit van Tilburg
   Universiteit voor Humanistiek
   Vrije Universiteit Amsterdam
   Wageningen Universiteit en Researchcentrum

2. University Medical Centers (UMCs)
   Amsterdam UMC (locaties: AMC en VUMC)
   Erasmus MC
   Leiden UMC
   Maastricht UMC+
   Radboud UMC
   UMC Groningen
   UMC Utrecht

3. KNAW Institutes
   Hubrecht Instituut voor Ontwikkelingsbiologie en Stamcelonderzoek
   Huygens ING
   Internationaal Instituut voor Sociale Geschiedenis (IISG)
Koninklijk Instituut voor Taal-, Land- en Volkenkunde (KITLV)
Meertens Instituut
Nederlands Herseninstituut
Nederlands Instituut voor Ecologie (NIOO)
NIOD Instituut voor Oorlogs-, Holocaust- en Genocidestudies
Nederlands Interdisciplinair Demografisch Instituut (NIDI)
Westerdijk Fungal Biodiversity Institute

4. NWO Institutes (NWO-I)
AMOLF - Physics of Functional Complex Matter
ARCNL - Advanced Research Center for Nanolithography
ASTRON - Netherlands Institute for Radio Astronomy
CWI - Centrum Wiskunde & Informatica
DIFFER - Dutch Institute for Fundamental Energy Research
Nikhef - Nationaal instituut voor subatomaire fysica
NIOZ - Koninklijk Nederlands Instituut voor Onderzoek der Zee
NSCR - Nederlands Studiecentrum Criminaliteit en Rechtshandhaving
SRON - Netherlands Institute for Space Research
Appendix B - eScience Center Expertise

The eScience Center has the following expertise areas:

Software Quality
- developing workflow technologies: setting up an optimal and reproducible workflow
- improving software practices: robust programming to enable reuse
- advancing software sustainability: embedding software in the open science community

AI
- machine learning: using data to train computer models
- image processing: understanding patterns in images and video
- analytics
- big data analytics: exploring large volumes of complex data
- text analysis: understanding patterns in texts
- visualization: creating images to drive interpretation

Data Processing
- databases: making data accessible and searchable
- real-time data analysis: processing sensor data ultra-fast
- interoperability and linked data: interconnecting data sets

Computing
- exploiting hardware accelerators: increasing speed at lower cost
- high performance computing: increasing computational scale
- cloud computing: easily accessing computing power
- combining simulations: replicating complex systems

Community Building
- knowledge of and connections within academic landscape in the Netherlands
- ability to set up academic networks on a national scale

Teaching
- organising and running workshops on version control and introductory programming skills
• organising advanced workshops in advanced digital methodologies, such as parallel programming in Python, advanced software development skills and GPU programming
• lesson development in advanced digital skills, software development and domain-specific methods
• knowledge of pedagogical skills and application of these in a (virtual) classroom setting where digital skills are taught