RDA - Reproducibility Interest Group Charter

This interest group seeks to advance and enable reproducibility in research based on or producing datasets that require code. Our goals are to build bridges with the many RDA external efforts addressing reproducibility, doing so in coordination with the other RDA Working and Interest Groups where appropriate. Our efforts may also produce Working Groups that can develop recommendations and solutions. This Group follows the broad definition of reproducibility stated by Turing Way in order to provide an inclusive framework for discussions.

User scenario(s) or use case(s) the IG wishes to address

At the 20th Plenary in Gothenburg, Limor Peer and Tom Honeyman co-organized a well-attended session on Computational Reproducibility: What's Next for RDA? in which the question of reinstating the Reproducibility IG was posed to the community. A primary goal of the session was to gauge the interest in computational reproducibility and in an Interest Group on the topic among RDA members. We also invited a distinguished panel of speakers to share their work on reproducibility outside RDA as a way of mapping the landscape and illustrating the potential role the IG can play as a mechanism for bridging between these and related RDA efforts.

As we summarized in the notes, the conversation indicated that there appears to be value in establishing a coordinating function within the RDA, likely through reestablishing the historical Reproducibility IG; that there are many external efforts, and RDA internal efforts that need to be taken into consideration; and that if there was a clear point of entry into RDA activities around reproducibility, it would be much easier to align RDA efforts with external efforts.

Objectives

Our primary areas of focus regarding reproducibility are:

1. Provide a forum for a holistic discussion of RDA developments around data and code relating to Reproducibility including:
    a. the identification and adoption of community-determined definitions on 'reproducibility', including its value, limitations, and applicability within various research domains;
    b. the persistent linking and availability of data and code (via repositories or other mechanisms) used in the generation of published research results, with the publication itself;
    c. the development, encouragement, and adoption of metadata standards for data and code, especially for those linked to publications;
    d. the development, encouragement, and adoption of data and code publication, authorship, and citation practices, especially for those linked to publications;

2. Identify and discuss the development and adoption of relevant tools, workflows, and computational infrastructure.
3. Develop a research agenda aimed to increase the reliability of the scientific record and reduce irreproducibility and informed by current advances, challenges, and prominent areas of interest relating to reproducibility, for example, FAIR principles, open science, data integrity, research assessment, metascience, and artificial intelligence.

Participation

The Reproducibility Interest Group is open to all RDA members to participate. This group will aim to interact with a variety of stakeholders to cover the technical, practical and social aspects of reproducibility. Key RDA stakeholders are RDA IGs/WGs that have an interest in reproducibility and it's promotion, including (but not limited to):

- Software Source Code IG
- Metadata IG
- Data Versioning IG
- Evaluation of Research IG
- Engaging Researchers with Data IG
- FAIR4RS WG
- CURE-FAIR WG

The group will also liaise with groups outside of RDA where it will be beneficial to include other stakeholders or viewpoints in our activities and discussions. The Reproducibility Interest Group chairs are either members or chairs of the most relevant RDA groups list above, which will facilitate cross-group communications and allow the chairs of this group to stay abreast of the working in key areas.

UN Sustainable Development Goals (SDGs)

SDG9 "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation"
Improving computational reproducibility improves the resilience of research infrastructure. Open ways of working and the infrastructure that enables it promote an inclusive culture in the conduct of research.
SDG16 "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels"
Open and reproducible analysis of research breaks down the barrier between research and broader society. It demonstrates in greater detail and with greater transparency how the research findings were arrived at. Greater transparency enables greater trust in Science as an Institution. It also enables not just the uptake of findings of research more broadly, but the broader adoption and critique of how those research findings were arrived at.

Outcomes

The Reproducibility Interest Group will act as a bridge between internal and external efforts around reproducibility. It will be deemed successful if it is able to facilitate conversations that generate interest in addressing reproducibility challenges, which may lead to the development of Working Groups to produce tools, products, or community recommendations in the reproducibility landscape. In addition, the Interest Group will be considered a success if it encourages diverse discussions around reproducibility at future conferences by hosting panels with guests of varied perspectives on reproducible research.

Mechanism

Limor Peer, Tom Honeyman, Mandy Gooch, and Lauren Cadwallader are prepared to act as interim co-chairs to lead the process.

Our intention is to focus on bridging communities, and so an important part of keeping the group relevant will be to cycle the co-chairing of the group to bring new stakeholder group perspectives. The default frequency of the group will be annual meetings, targeting either the in-person or fully virtual session for the year depending on the co-chair leading the coordination for the next session.

Throughout the year, the mailing list and other functions of the RDA platform will serve primarily as a knowledge exchange point and also as a bridging point for external efforts to get in contact with members of the group.

Timeline

A tentative timeline is given below, subject to change.
Kickoff meeting at 21st RDA Plenary (October 2023):

- Discuss focus areas and RDA-external target communities,
- Continue to establish overlap with other RDA Interest and Working Groups;
- Establish the IG's means of communication / meeting schedule
- Identify topic for next plenary

Lists By 22nd Plenary:

- Establish reciprocal relationships with external efforts in the same topic
- Establish rolling chairs roster

Potential Group Members

In addition to co-chairs:

	First Name	Last Name	Email	Affiliation
1	Etienne	Roesch	e.b.roesch@reading.ac.uk	University of Reading / UKRN
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4	Kim	Hartley	kimberley.hartley@alliancecan.ca	ReSA & Digital Research Alliance of Canada
5	Philippe	Bonnet	phbo@itu.dk	IT University of Copenhagen
6	Andrew	Treloar	andrew.treloar@ardc.edu.au	ARDC
7	Birgit	Schmidt	bschmidt@sub.uni-goettingen.de	University of Göttingen
8	Agata	Bochynska	agata.bochynska@ub.uio.no	University of Oslo
9	Wolmar	Nyberg Åkerström	wolmar.n.akerstrom@uu.se	ELIXIR / NBIS, SciLifeLab
10	Alice	Allen	aallen@ascl.net	ASCL
11	Alexander	Struck	alexander.struck@hu-berlin.de	Cluster of Excellence Matters of Activity
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24	Sabrina	Granger	sabrina.granger@inria.fr	Inria, Software Heritage

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