Open and Reproducible Research

According to UNESCO, open science

> is the movement to make scientific research and data accessible to all. It includes practices such as publishing open scientific research, campaigning for open access and generally making it easier to publish and communicate scientific knowledge. Additionally, it includes other ways to make science more transparent and accessible during the research process. This includes open notebook science, citizen science, and aspects of open source software and crowdfunded research projects.
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> The many advantages of this movement include:
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> - Greater availability and accessibility of publicly funded scientific research outputs;
> - Possibility for rigorous peer-review processes;
> - Greater reproducibility and transparency of scientific works;
> - Greater impact of scientific research.

As The Center for Open Science says,

> Openness and reproducibility are core values of scholarship. Scholarly claims become credible via transparent communication of the supporting evidence and the process of acquiring that evidence. This way, independent observers can evaluate the quality of evidence for supporting the claim. By making the evidence and the process of acquiring it transparent, others can confirm that the provided evidence is consistent with the claim, or reproduce independent evidence using the same process. Ultimately, scholarly research is a public good. Anyone should be able to examine the content of the evidence (open data), the process by which it was obtained (open workflows), and the outcomes that were observed (open access).

To this end, our research group:

- uses open-source and reproducible tools;
- communicates our findings and methods through open-access channels;
- communicates findings of public relevance through appropriate channels

This page describes, at a high level, our procedures and philosophies concerning open and reproducible science. Our standard set of tools is documented elsewhere, and familiarization with them will be part of the onboarding process. Alternative tools can be