EarthArXiv - A preprint server for the Earth and Planetary Sciences

Christopher Jackson

London, United Kingdom (c.jackson@imperial.ac.uk)

A 'preprint' is a version of a scholarly paper that precedes publication in a peer-reviewed journal; a 'preprint server', such as the community-led, volunteer-ran EarthArXiv, is an online platform purpose-built to host preprints. A preprint may represent the same manuscript as submitted to a peer-reviewed journal, although other content, which may currently be difficult to publish (e.g. datasets), can also be uploaded and, if appropriate, explicitly linked to the associated manuscript. In this way, preprints thus provide access to important scholarly content that would otherwise be lost.

Preprints are an effort to address several aspects of the traditional publication system that may be considered, given the technological benefits of the internet, somewhat antiquated. For example, they can speed up dissemination, utilisation, and citation of scholarly outputs, and can also help build your network and may facilitate establishment of new collaborations; this may be particularly beneficial for ECRs and/or researchers moving into new areas. Furthermore, because they are timestamped and receive a DataCite-minted DOI, preprints provide an undeniable record of priority and 'ownership', which all but eliminates the chance of being "scooped". Preprints also allow for no-cost publishing, are Open Access (OA) on submission, and are indexed by Google Scholar and discoverable by web-tools such as Unpaywall.

Despite being new to many if not most Earth Scientists, preprints have been in use for >20 years. For example, the original, Cornell-ran preprint server, ArXiv, which covers, amongst other things, Physics, Mathematics, and Computer Science, hosts >1.3 million preprints. Furthermore, several new preprint servers (e.g. BioRxiv, PsyArXiv, Paleorxiv) have recently been launched in many branches of the physical and social sciences, with many more in the pipeline. Major funders (e.g. German Science Foundation (DFG), Wellcome Trust, Medical Research Council, Cancer Research) now encourage preprint submission in support of grant applications; preprints may thus inform grant review process and academic advancement at all levels of experience. In fact, some major US-based academic institutions actively encourage job applicants to include preprints in support of their applications. Major publishers, such as Nature, also actively encourage the use of preprints to help enhance the quality of research they receive and may ultimately publish, and AGU have recently announced their intention to launch their own Wiley-supported preprint server, ESSOAr. We should also add that EarthArXiv, like several other preprint servers, also hosts and can thus act as a repository for 'postprints' (i.e. published articles), helping facilitate (Green) OA and meeting the needs of the many researchers who lack an institutional and/or national scholarly publications repository.

Sounds too good to be true, right? In this PICO presentation, we will present an overview of the rapidly expanding world of preprints and preprint servers in general, and EarthArXiv in particular, outlining the positives and negatives, and answering some of the FAQs. We actively encourage audience participation and feedback during this presentation as we, as a community of academics, seek to improve EarthArXiv and the broader community acceptance and usage of preprints.