

[Editorial] Open Publishing in Engineering

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August 30, 2016

Openness is a cultural trait. It has been argued that open societies promote better quality of life [1]. Science and engineering have a long tradition of offering solutions based on natural and built processes to improve quality of life and bring prosperity. There are around 30,000 science and engineering journals available today, with a majority based on a business model that has proven successful. With some variation, this model comprises four steps: authors submit their papers, peers review these anonymously, then, if accepted, rights are transferred to the publisher, and readers pay in order to consume the final product. Some claim this subscription-based journal model is needed to assure the quality of what goes into the specialized press [2].

But today there is growing uneasiness with this model due to a variety of reasons. The primary issues with the traditional subscription-based journal model come down to finances. Researchers and the public alike want access to the products of research. Unfortunately, in the traditional model they must pay for this access, either directly to the publisher per article or indirectly through a subscription fee paid by a university or library. In many instances, the public has already paid for this research through government funding using their tax dollars. Coupled to this is the fact that the majority of the work of producing a final, peer-reviewed piece of scholarship is conducted on a voluntary basis by academics and other researchers themselves. Furthermore, most of those involved in the peer-review process, from the reviewers to some editors, also volunteer their efforts. This all occurs at a time when distribution costs are trending towards zero as enabled by the internet—while academic publishers post substantial profit margins [3]. Overall, the creation of new web-based technologies has driven the cost of academic publishing down significantly in recent years and will likely continue to do so as the landscape of academic publishing evolves [4]. These are some of the issues that have helped the Open Access (OA) movement gain steam. OA publishing has the ability to advance the field of engineering by providing fair access to engineering knowledge to engineers in developing nations or others without institutional access to the field's published works [5]. Furthermore, OA articles provide access to wider readership through both greater academic access and wider media coverage [6]. In fact, OA articles in engineering fields are cited 1.51–1.54 times more frequently than similar non-OA articles [7][8].

The Journal of Open Engineering (TJOE) is being launched amidst this scenario. OA publishing is in a state of rapid growth and it is estimated that the number of OA journals will surpass that of subscription-based journals somewhere in 2018 [9]. Engineering deserves open access in its own right, and TJOE pushes that boundary by using open, post-publication peer review and by asking authors to submit work that is truly open and reproducible through the dissemination of all associated artifacts. Here we include educational resources; design, computational, and experimental research; and humanitarian outcomes. TJOE is following a growing trend of making science and engineering more transparent to the public. It does that using [PubPub](#), a technology that facilitates the whole publishing workflow in a single online platform, from the initial preprint submission, through peer-review, and finally curation in the journal where articles are versioned and evolve as long as interest allows. Readers, writers, reviewers, and editors can all engage in open dialog to create results with greater applicability, a prized goal of any engineering project. This is all done while charging no fees to either the authors or the readers in alignment with our goal of making engineering as open and accessible as possible.

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