

OPEN HARDWARE FOR THE COMMON GOOD

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ABSTRACT FOR THE PLENARY LECTURE

Open science practices are becoming the norm in academia, and are encouraged by funders, the scientific community, and academic service providers. Open hardware is an essential pillar of open science, because there is little chance of reproducing an experiment without having thorough access to the necessary methods and equipment. But, making hardware blueprints accessible is an area of contention because of the historical path of the knowledge transfer practices and conflicts that are still unresolved.

Beyond academia, open hardware has the potential to radically transform science, education, and society by facilitating collaborative innovation and democratizing access to technology. It can massively accelerate the transition of an invention into a useful product, and simultaneously reduce costs and promote sustainable practices.

In this talk, from the perspective of an academic researcher, I will reflect on the relation and contention between developing open-source hardware and the three major pillars of contemporary research universities: 1- education, 2- research, and 3- knowledge transfer. I will present an overview of opportunities and dilemmas that open science poses for the academic community on taking each of these roles, and explore some options for resolving potential conflicts.

Keywords: collaboration, education, innovation, knowledge transfer, open hardware, open science, research.