

July 30, 2017


To Whom It May Concern:

I am a PhD Student at the Department of Plant Sciences, University of Cambridge, United Kingdom. In my research I routinely use high-end microscopes for tracking expression of fluorescent developmental markers in plants, both in space and time. Observations of this type are extremely useful for understanding developmental mechanisms and exploring commercial potential of genetic engineering in variety of plant species.

Unfortunately, such observations can be only collected in well-funded laboratories, which have access to costly microscopy facilities. Nevertheless, I believe that it is possible to reduce the cost of the optical equipment, required for cutting edge biological research, by exploiting low cost consumer optics and cameras, in combination with the advances in 3D printing and parametric design. Bringing the cost of research equipment down would allow researchers and public labs around the world to contribute and participate in the coming biological revolution.

I am currently developing an open-source modular 3D-printable opto-mechanical kit, which aims to provide a framework for designing parametric open-source optical modules and devices, designs of which can be shared online and used for distributed manufacturing. Therefore, I am highly interested in collaborating with Fernan Federici in the context of the Millennium Institute for Integrative Systems and Synthetic Biology (MISSB) project and working together towards democratizing imaging equipment. I would be keen on visiting Chile to participate as an instructor in one of the workshops proposed by this application. This would be a great opportunity for exchange of experience and resources.

Sincerely,



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