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THE FRENCH AEROSPACE LAB

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To Whom It May Concern

Subject: Letter of Support for the fairSIM project

I am writing this letter to strongly support the continued development of the fairSIM project lead by Dr. Marcel Müller. FairSIM combines a free (GNU Public License) and open-source software suite for the reconstruction of images acquired in Structured Illumination Microscopy (SIM) and a set of freely available SIM datasets along with their fairSIM reconstructions.

Our team is internationally recognized as a leader in Adaptive-Optics, a technique for the real-time compensation of aberration of high resolution optical instruments. We develop Adaptive-Optics (AO) systems and their associated post-processing techniques for astronomy, for defense, for laser communications and for retinal imaging and surgery.

We are currently working on transposing and adapting SIM for in-vivo retinal imaging of human patients in order to bring both optical sectioning and super-resolution to full-field AO-corrected retinal imaging. To this aim, we have developed an image reconstruction method and associated software that is dedicated to retinal imaging. The availability of the fairSIM open data and reconstruction software has been instrumental in our ability to test, validate, and improve our retina-oriented reconstruction software with experimental data. We are grateful for the availability of all the abovementioned resources and believe that the fairSIM project has and will have a strong impact on the spreading of the SIM technique, on its refined understanding and on its further improvement and extensions.

Best regards,

Dr. Laurent Mugnier
Senior Research Scientist, ONERA