

# Stanford

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## Bartłomiej Kowalski

Software Dvlpr 3, Ophthalmology Research/Clinical Trials

### SUPERVISORS

- Alfredo Dubra

### Bio

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#### BIO

I am a senior software engineer in the Dubra Lab at The Byers Eye Institute, where I work on developing novel ophthalmic imaging instrumentation for improving the understanding, diagnosing and management of eye disease.

My interest in computer science started early in life and led me to obtain master's degree at Czestochowa University of Technology (Poland). After graduating, I contributed to the advancing of spectral domain optical coherence tomography (OCT) and pioneering of swept-source OCT for retinal imaging as part of Canon Ophthalmic Technologies (Poland). This work resulted in two commercially successful instruments, the Xephilio OCT-A1 and the Xephilio OCT-S1, which are sold worldwide.

My current work focuses on innovations that allow the translation of Adaptive Optics Ophthalmoscopy from a research tool into a mature technology that improves eye care.

### EDUCATION AND CERTIFICATIONS

- Master degree, Czestochowa University of Technology (Poland) , Computer science (2010)

### Publications

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#### PUBLICATIONS

- **Correction of non-uniform angular velocity and sub-pixel jitter in optical scanning** *Optics Express*  
Kowalski, B., Akondi, V., Dubra, A.  
2022; 30 (1): 112-124
- **Hybrid FPGA-CPU pupil tracker.** *Biomedical optics express*  
Kowalski, B., Huang, X., Steven, S., Dubra, A.  
2021; 12 (10): 6496-6513
- **Dynamic wavefront distortion in resonant scanners** *Applied Optics*  
Akondi, V., Kowalski, B., Dubra, A.  
2021; 60 (36): 11189-11195
- **Novel microscopic foveal pit pathology in multiple sclerosis revealed with adaptive optics ophthalmoscopy**  
Hargrave, A., Sredar, N., Razeen, M. M., Khushzad, F., Yarp, J., Leishangthem, L., Tomczak, A., Kipp, L., Han, M., Kowalski, B., Dubra, A., Moss, H.

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- **Dynamic distortion in resonant galvanometric optical scanners** *Optica*  
Akondi, V., Kowalski, B., Burns, S. A., Dubra, A.  
2020; 7 (11)
- **Wavefront distortions in an oscillating resonant galvanometric optical scanner** *Computational Optical Sensing and Imaging*  
Akondi, V., Kowalski, B., Sredar, N., Dubra, A.  
2020: JW2A. 48
- **Non-confocal quad-detection adaptive optics scanning light ophthalmoscopy of the photoreceptor mosaic**  
Sredar, N., Kowalski, B., Razeen, M. M., Steven, S., Dubra, A.  
ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2018