

More than meets the eye

Imagine being able to see beyond the limitations of the human sight, to witness every detail with unmatched clarity. This is what Adaptive Optics allows to do.

This breakthrough technology revolutionized vision research and ophthalmology research. It corrects optical aberrations caused by the eye. It has drastically improved the capacity to study the eye, as well as the accuracy of laser surgery and the capacity to detect diseases.

> **AO-FIO** Flood Illumination Ophthalmoscopy

High temporal resolution Large field of view High pixel rate Low distortion

AO-SLO Scanning Laser Ophthalmoscopy Axial sectioning of the retina High lateral spatial resolution High contrast Disease diagnosis

AO-OCT Optical Coherence Tomography Cross-sectional imaging Improved lateral resolution Reduced speckle size Disease diagnosis

AO-LSO Line Scanning Ophthalmoscopy Reduced system complexity Moderate field of view High frame rate Disease diagnosis "I believe that Adaptive Optics in retinal imaging will be a game changer. There are currently a multitude of research instruments globally and we have been on this line of research for a long time. It began with only a few labs which had the possibility and knowledge to use Adaptive Optics and now it is spread."

Zoran Popovic, Senior Optical Engineer at Profundus



"Adaptive Optics scanning ophthalmoscopy has become an effective imaging technique for observing microscale structural and functional changes in the retina, facilitating the identification of diseases that cause irreversible blindess and allowing the evaluation of novel treatments"

Dr. Vyas Akondi, Assistant Professor at IISER Berhampur



Credits: Phillip Bedggood, University of Melbourne



DM 97-08

SH-CMOS

Bertin Alpao Vision Science related products

Deformable Mirrors

DM 57-15 DM 69-15 DM 97-08 HS/LS* DM 97-15 HS/LS* Shack-Hartmann Wavefront Sensors SH-CMOS

Software Control

ALPAO Core Engine

*Options: HS - High Stability / LS - Large Stroke



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