

# Whole eye optical coherence tomography scanner

## Value proposition

Optical Coherence Tomography (OCT) is an Optical imaging technique that provides 3D images of the subject of interest. OCT systems have been widely used to scan eyes for medical purposes. However, commercial OCT systems only image one portion of the eye, the anterior or the posterior. While certain research OCT systems have been described for imaging both the anterior and the posterior of the eye, they have limited fields of view.

## Technology

Researchers at Duke have designed and demonstrated an OCT system that is capable of simultaneous imaging both the anterior and posterior eye with sufficient field of view to see the full anterior chamber and the macula and optic nerve within one acquisition. This device was designed size wise to be readily used in an ophthalmic clinic; an alternative portable handheld variant is also being demonstrated.

## Advantages

- Imaging in both the anterior and posterior eye, with sufficient field of view, in one acquisition.
- Can be readily used in ophthalmic clinics
- Hand-held variant is also available

## Publications

- [Ultra wide-field swept-source optical coherence tomography for peripheral eye disease \(Invest. Ophthalmol. Vis. Sci., 2015\)](#)
- US Patent Application # 15/582,992

# Duke

## LICENSING & VENTURES

### Duke File (IDF) #

T-004903

### Inventor(s)

- Kuo, Anthony
- Izatt, Joseph
- McNabb, Ryan

### College

School of Medicine (SOM)

### For more information please contact

Koi, Bethany  
919-681-7552  
[bethany.koi@duke.edu](mailto:bethany.koi@duke.edu)

## Patents

Patent Number: 10,694,939

Title: WHOLE EYE OPTICAL COHERENCE TOMOGRAPHY (OCT) IMAGING SYSTEMS AND RELATED METHODS

Country: United States of America

Patent Number: 10,694,939

Title: WHOLE EYE OPTICAL COHERENCE TOMOGRAPHY (OCT) IMAGING SYSTEMS AND RELATED METHODS

Country: United States of America