



Photo Courtesy of OHSU

# David Huang

## Optical Coherence Tomography (OCT)

U.S. PATENT NO. 5,321,501: Method and apparatus for optical imaging with means for controlling the longitudinal range of the sample

U.S. PATENT NO. 5,459,570: Method and apparatus for performing optical measurements

**Inducted in 2025** Born: Feb. 8, 1964

### Primary Connections:

- International Ocular Circulation Society: President Emeritus
- GoCheck Kids: Co-founder and Board Member, 2011-present
- Oregon Health & Science University: Director of Research and Associate Director of the Casey Eye Institute; Director, Center for Ophthalmic Optics & Lasers (COOL Lab); Professor of Ophthalmology and Biomedical Engineering; 2010-present
- University of Southern California: Associate Professor of Ophthalmology, Associate Professor of Biomedical Engineering and Chair in Corneal Laser Surgery, 2004-10
- Cleveland Clinic Foundation: Associate Staff in Refractive Surgery, Cornea and Biomedical Engineering, 1998-2004

### Education:

- Massachusetts Institute of Technology: B.S., Electrical Engineering and Computer Science, 1985; M.S., Electrical Engineering and Computer Science, 1989; Ph.D., Medical Engineering and Medical Physics, 1993
- Harvard Medical School: M.D., 1993

### Key Memberships/Awards:

- Lasker-DeBaKey Clinical Research Award, 2023

David Huang, James Fujimoto and Eric Swanson invented a revolutionary method for imaging the internal structures of body tissue with unprecedented detail called optical coherence tomography (OCT). OCT has significantly advanced ophthalmology, where it is especially useful for examining retinal tissue. It also is being applied in cardiology and across a variety of fields.



**Full Bio:** <https://www.invent.org/inductees/david-huang>

### Things You Should Know:

- Huang was born in 1964 in Chiayi, Taiwan.
- His father, a physician, and his mother, a teacher, moved the family to the U.S. when he was 12.
- As a child, Huang excelled academically and was particularly adept in mathematics and science.
- Huang has received awards including the 2017 Russ Prize, the 2022 National Medal of Technology and Innovation, and the 2023 Lasker-DeBaKey Clinical Medical Research Award, each of which he shared with James Fujimoto and Eric Swanson.
- He is a member of the National Academy of Engineering and the National Academy of Medicine.
- Huang is credited with developing OCT angiography (OCTA), an extension of OCT that was commercialized by Optovue, now part of Visionix.
- "I've become an opportunity seeker at the intersection of things," he says. "I tend to look for areas where it's relatively unexplored because people are unaware of opportunities on the clinical or the technical side, which I have a unique perspective on because I keep up with both areas."
- Huang has 44 U.S. patents.