



# **The Vision Science Theme**

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# **Goals of Vision Science Theme**

- **Develop Novel Ophthalmic Instruments**
- **Advance Vision Science**
- **Increase Accessibility of AO to Scientists and Clinicians**
- **Demonstrate the Value of Adaptive Optics for Eye Care**
- **Educate**

# **Develop Novel Ophthalmic Instruments Equipped with AO**

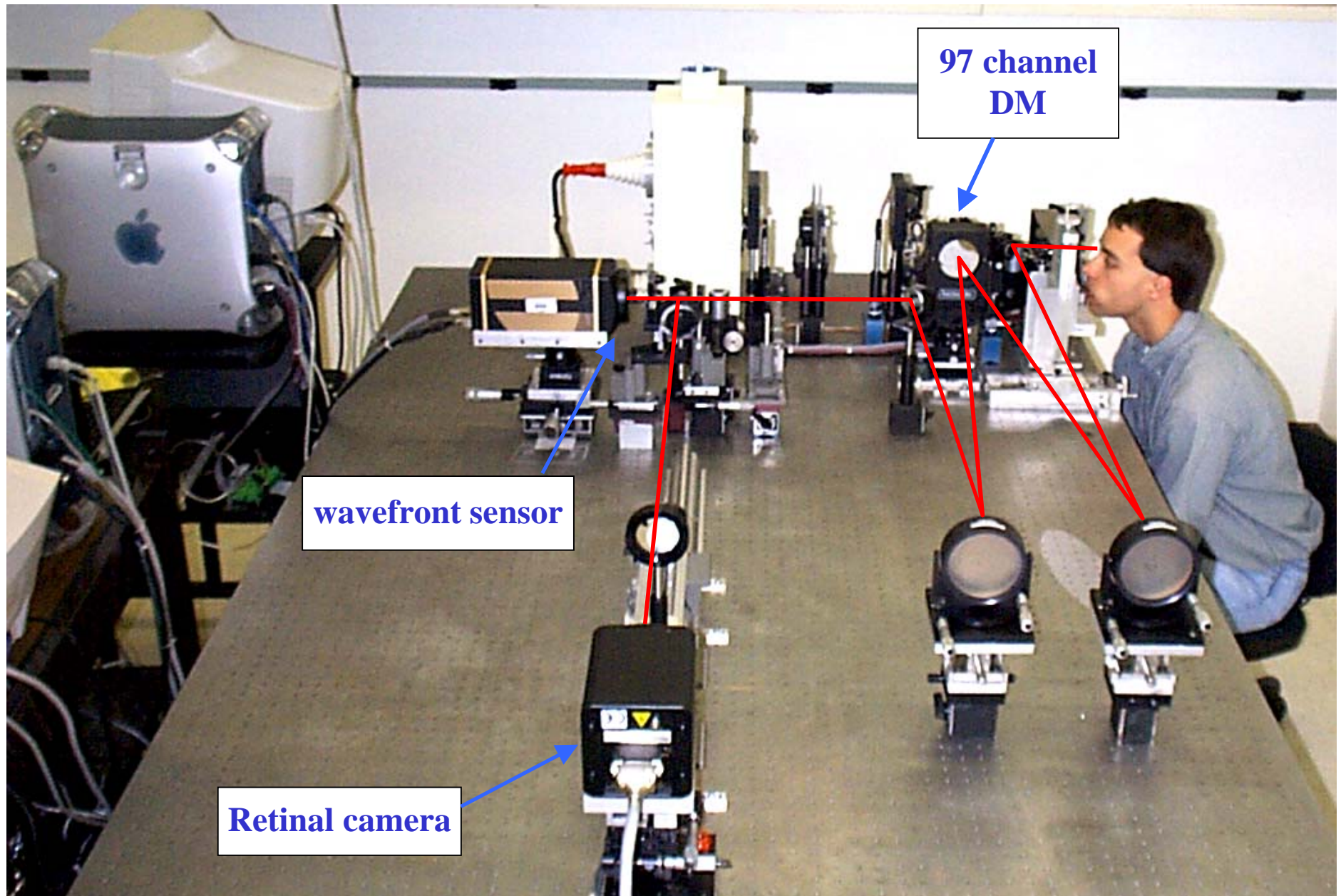
**Adaptive Optics Ophthalmoscope  
University of Rochester**

**Adaptive Optics Scanning Laser Ophthalmoscope  
University of Houston**

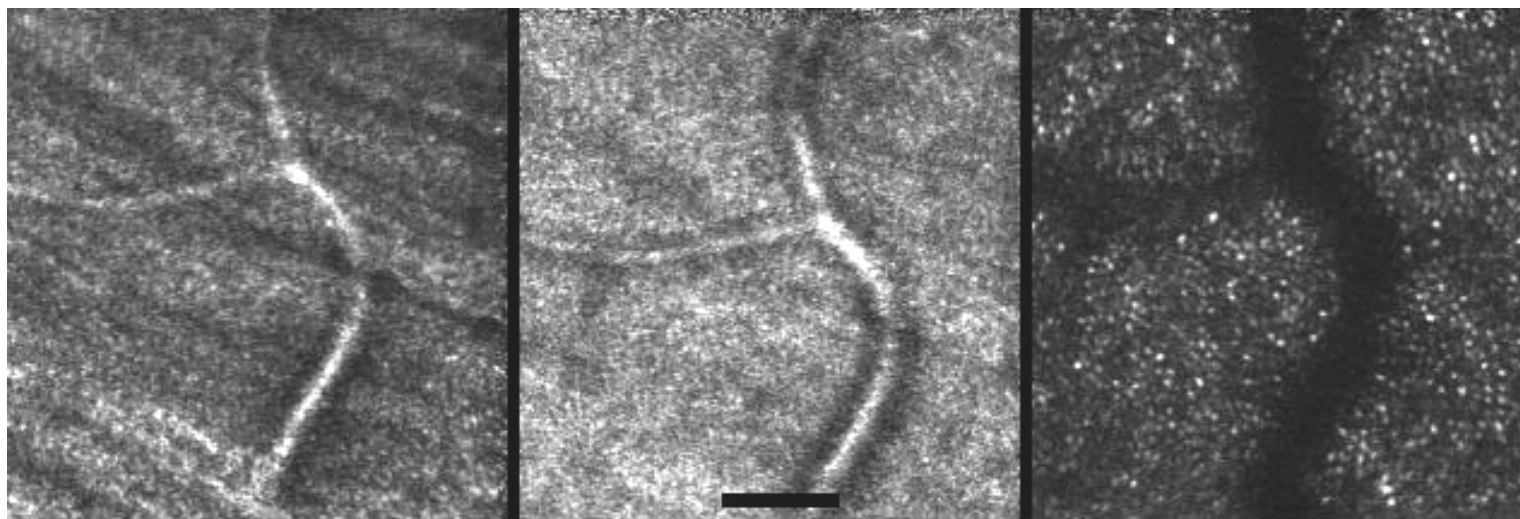
**Coherence Gated Retinal Camera  
Indiana University**

**Adaptive Optics Phoropters  
Lawrence Livermore National Laboratories**

# Rochester 2nd Generation Adaptive Optics System

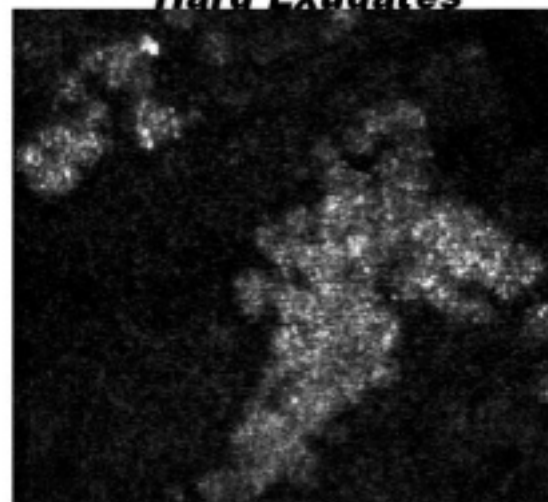
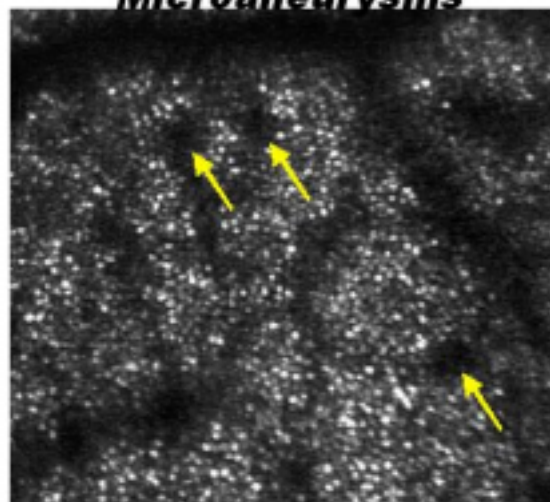


# Houston Adaptive Optics Scanning Laser Ophthalmoscope



**Microaneurysms**

**Hard Exudates**



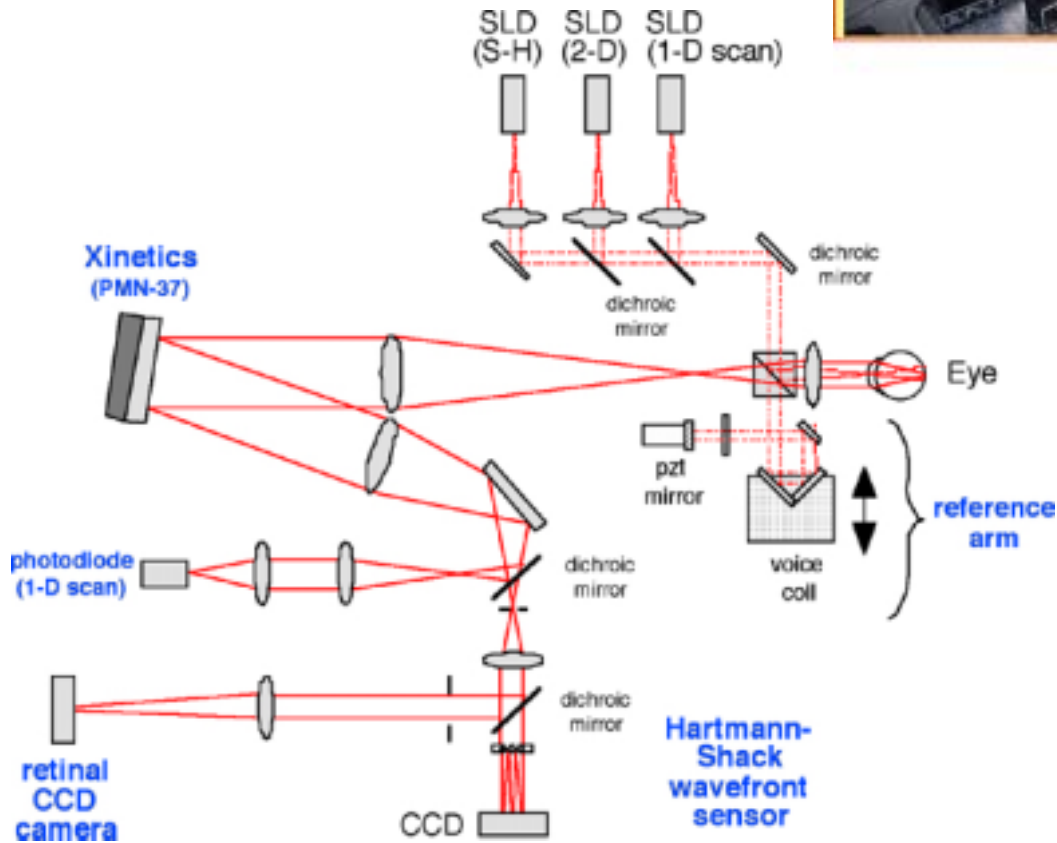
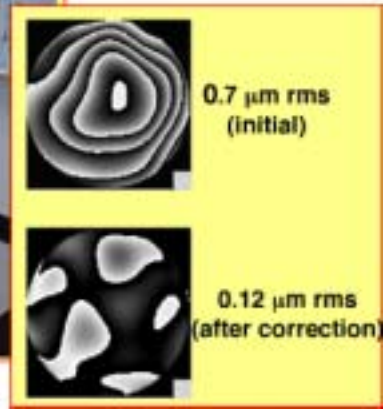
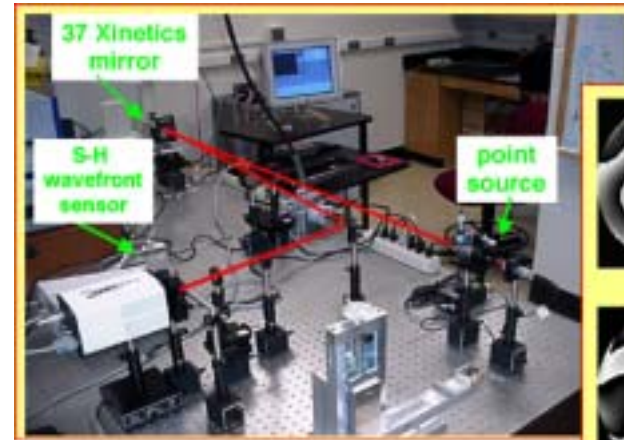
*2.5 deg nasal*

*100  $\mu$ m*

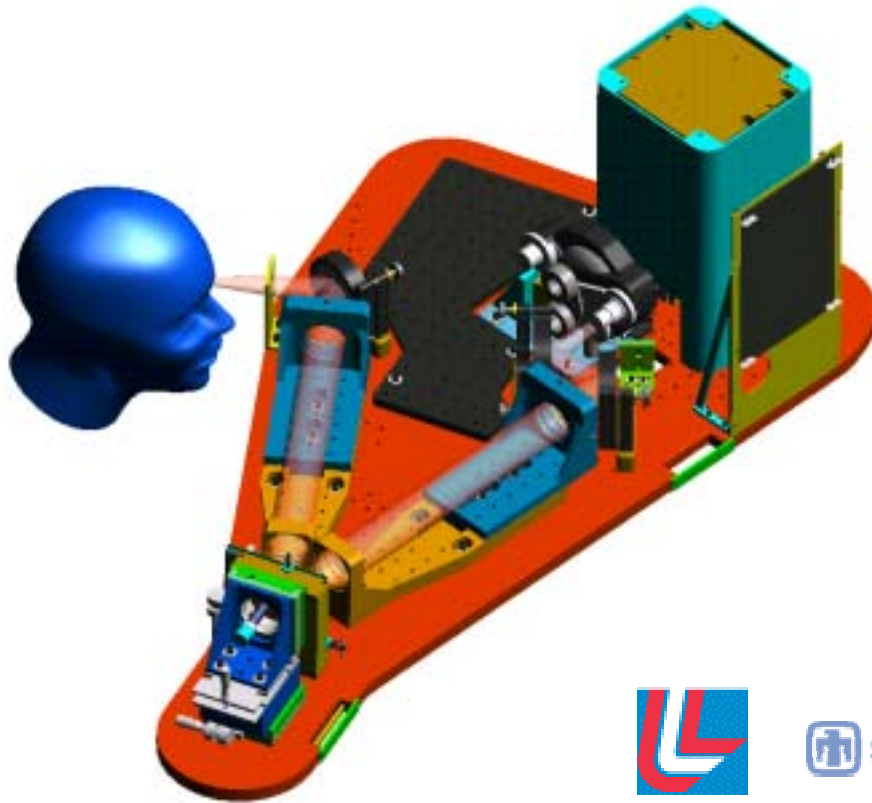
*2.5 deg temporal*

# AO Coherence Gated Camera

Don Miller  
Indiana University



# MEMS Adaptive Optics Phoropter



 Sandia National Laboratories

UNIVERSITY OF ROCHESTER



# Center for Adaptive Optics: MEMS Mirrors for Vision Applications

