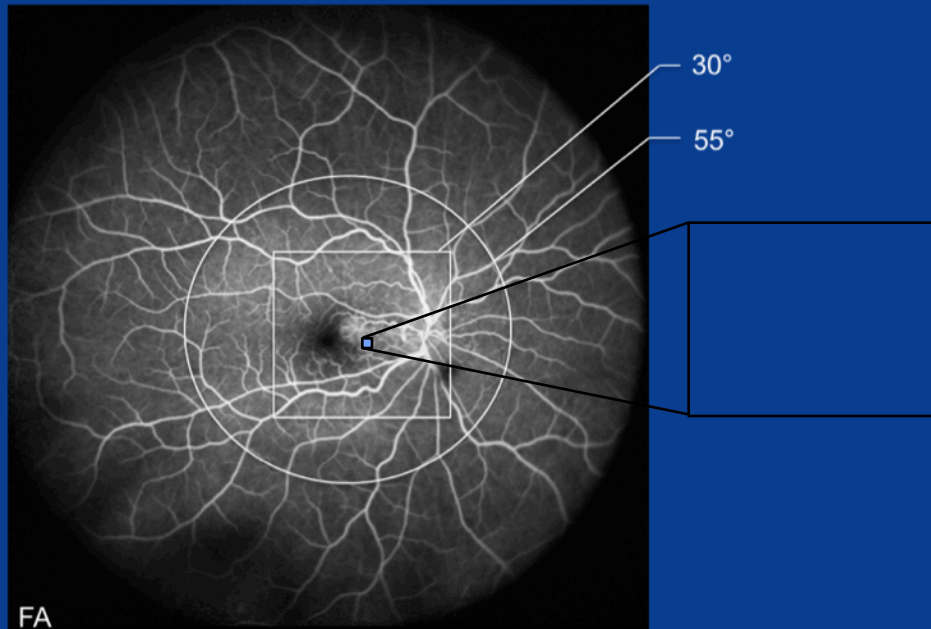# Dirk-Uwe Bartsch
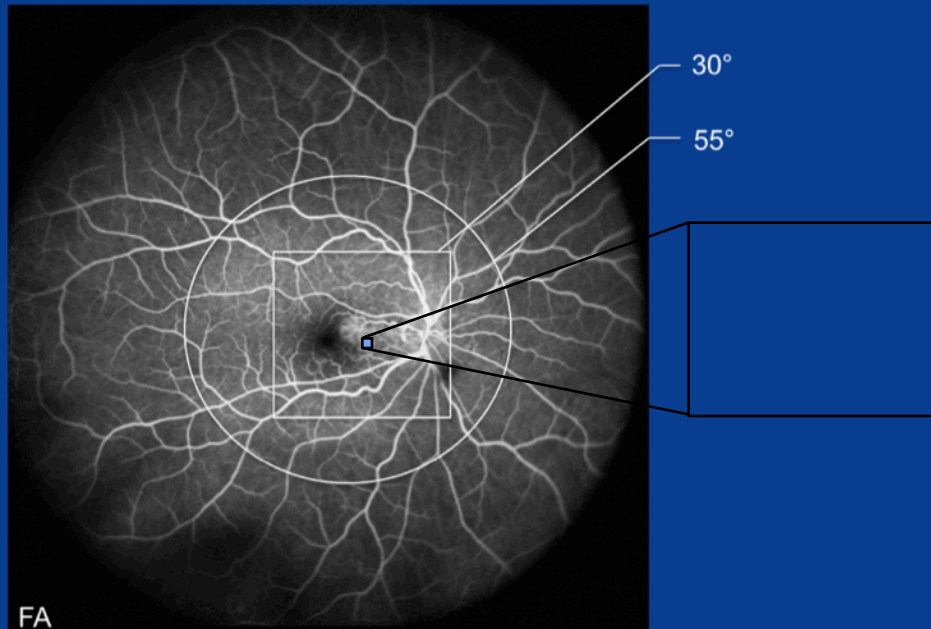## UCSD Dept of Ophthalmology

- Typical field of view is 30° to 55°, wide-field is up to 100°
- High-resolution is 1°x1°
- We record 200-300 video sequences, 3 channels
- Each video sequence has ~150 frames
- Problem: eye motion during image recording
- Human finds artifact-free image
- Other images are aligned to artifact-free image by cross-correlation using CUDA
- 20 hours of processing for one patient exam

Dirk-Uwe Bartsch
UCSD Dept of Ophthalmology

FA

30°
55°

AOSLO

Goals after SDSC Summer Institute

- Use CUDA or HPC cross-correlation to find video frame without motion artifact
- Automate image averaging
- Automate image montage
- Reduce processing time from 20 hours to minutes without need for human interaction
- Increase clinical utility of this research device