



## Index of Lectures and Events

### Sunday, 5 August

#### 08:45 – 12:15 The State of the Art in Adaptive Optics

- 08:45 – 08:55 Welcome (Quirrenbach, UCSD)
- 08:55 – 09:55 AO for vision science (Roorda, U Houston)
- 10:15 – 11:15 AO for clinical applications (Williams, U Rochester)
- 11:15 – 12:15 AO for astronomy (Max, UCSC)

#### 13:45 – 17:35 MEMS I

- 13:45 – 14:35 Introduction to optical MEMS (Olivier, LLNL)
- 14:35 – 15:35 How to design a MEMS mirror (Helmbrecht, UCB) \*
- 16:05 – 16:45 Packaging and electronics (Krulevitch, LLNL)
- 16:45 – 17:35 Metal deformable micro-mirrors (Bierden, Boston Micromachines)

### Monday 6, August

#### 08:45 – 12:25 MEMS II

- 08:45 – 09:30 Membrane deformable mirrors (Mansell, Intellite)
- 09:30 – 10:15 MEMS for vision science (Doble, U Rochester) \*
- 10:45 – 11:35 Alternative technologies (Olivier, LLNL)
- 11:35 – 12:25 MEMS: Future trends and challenges (Muller, UCB)

#### 12:25 Lunch

#### 13:45 – 15:45 Science with AO

- 13:45 – 14:15 Confocal AO for vision science (Donnelly, U Houston) \*
- 14:15 – 14:45 AO data from the Air Force AEOS telescope (Bouchez, Caltech) \*
- 14:45 – 15:15 Active Galactic Nuclei (Lacy, LLNL) \*
- 15:15 – 15:45 AO observations of the Galactic Center (Hornstein, UCLA) \*

#### 16:15 – 17:45 Education

- 16:15 – 16:45 CfAO education efforts (Kaisler, UCLA) \*
- 16:45 – 17:15 COSMOS – vision class (Porter, U Rochester) \*
- 17:15 – 17:45 COSMOS – astronomy class (Hinkley, UCSC) \*

### Tuesday, 7 August

#### 08:45 – 12:15 Image processing I

- 08:45 – 09:35 Theory of image processing (Puetter, UCSD)
- 09:35 – 10:25 The zoo of deconvolution algorithms (Christou, UCSC)
- 10:25 – 10:50 Break outside of Merrill Dining Hall
- 10:50 – 11:25 Super Resolution (Milanfar, UCSC)
- 11:25 – 12:15 Processing of retinal images (Bartsch, UCSD)



Sponsored by the Center for Adaptive Optics

# Summer School on Adaptive Optics

4-10 August, 2001  
UC Santa Cruz  
Santa Cruz, California

**13:45 – 17:15 Computer labs: Baskin Engineering #015 and #109**

15:00-15:20 Break outside of Baskin Engineering Rm. #109

**17:15 Dinner**

## Wednesday, 8 August

**08:45 – 12:15 Mathematical modeling of wavefronts**

08:45 – 09:45 Basis functions for wavefront representation (Gavel, LLNL)

09:45– 10:45 Mathematical modeling of Kolmogorov turbulence (Veran, Herzberg Inst.)

11:15 – 12:15 AO measurements for simulations of vision (Barsky, UCB)

**14:00 – 24:00 Excursion to Lick –**

## Thursday, 9 August

**08:45 – 12:25 Image processing II and PSF estimation**

08:45 – 09:35 PSF estimation from wavefront sensor data (Veran, Herzberg Institute)

09:35 – 10:25 The role of the PSF for wavefront measurements. in the eye (Klein, UCB)

10:45 – 11:35 Blind deconvolution (Christou, UCSC)

11:35 – 12:25 The PIXON method (Puetter, UCSD)

**14:00 – 17:30 Computer labs: Baskin Engineering #015 and #109**

## Friday, 10 August

**08:45 – 12:15 Simulations and Tomography**

08:45 – 09:45 Tomographic wavefront sensing (LeLouarn, UCSC)\*

09:45 – 10:45 AO for 30m telescopes (Dekany, Caltech)

11:15 – 12:15 Atmospheric simulations (LeLouarn, UCSC) \*

**13:15 – 16:45 Measuring the Eye**

13:15 – 14:00 Commercial AO testbeds for vision (Wilks, LLNL) \*

14:00 – 16:45 Demo, open end: Have your eyes measured (Roorda, U Houston)