



March 15-16, 2019

La Fonda, Hotel, Santa Fe, New Mexico, USA

PRELIMINARY PROGRAM

FRIDAY, MARCH 15, 2019	
SESSION I	OPTICAL AND NEURAL CONTRIBUTION TO VISION I Moderator, Raymond Applegate, OD, PhD
9:00 - 9:15 AM	From Wavefronts to Vision: Can optical measurements predict the perceived appearance of single points of light? Larry Thibos, PhD
9:15 - 9:30 AM	Binocular Vision TBD
9:30 - 9:45 AM	Free paper TBD
9:45 - 10:00 AM	Coordinate System for Wavefront Sensing and Wavefront Correction Ray Applegate, OD, PhD
10:00 - 10:15 AM	Open Discussion
10:15 - 10:35 AM	Coffee Break
SESSION II	BINOCULAR VISION AND VIRTUAL (AUGMENTED) REALITY Moderator: Geunyoung Yoon, PhD
10:35 - 11:30 AM	TBD
11:15 - 11:30 AM	Open Discussion
SESSION III	EVOLUTION OF WAVEFRONT TECHNOLOGY: PAST, PRESENT AND FUTURE. Moderator: Geunyoung Yoon, PhD
11:30 - 11:45 AM	Ocular Wavefront Sensing Dan Neal, PhD
11:45 - 12:00 PM	Ocular Imaging TBD
12:00 - 12:15 PM	Ophthalmic Laser Technology & Refractive Surgery Ronald Krueger, MD
12:15 - 12:30 PM	Corneal Biomechanics William Dupps, MD, PhD
12:30 - 12:45 PM	Wavefront From Science to Hype to Reality an Industry Perspective George Pettit, PhD



12:45 – 1:00 PM	Open Discussion
1:00 – 2:00 PM	Luncheon
SESSION IV	ADVANCES IN EXTENDED DEPTH OF TECHNOLOGY Moderator: Geunyoung Yoon, PhD
2:00 – 2:15 PM	EDOF Bifocal vs Varifocal vs Multifocal vs Small Pupil Arthur Bradley, PhD
2:15 – 2:30 PM	Pseudophakic Dysphotopsia Scott MacRae, MD
2:30 – 2:45 PM	Subjective Quality of a Multifocal IOL in the Eye of a Scientist James Schwiegerling, PhD
2:45 – 3:00 PM	Visual Simulation of Presbyopic Correction Susana Marcos, PhD
3:00 – 3:15 PM	Open Discussion
SESSION V	CORNEAL BIOMECHANICS Moderator: William Dupps, PhD
3:15 – 3:30 PM	Cornea Physiology - Mechanics TBD
3:30 – 3:45 PM	Imaging Ultrastructure of Cornea James Jester, PhD
3:45 – 4:00 PM	Advanced Biomechanical Corneal Models Geunyoung Yoon, PhD
4:00 – 4:15 PM	Nonlinear Corneal Crosslinking James Jester, PhD
4:15 – 4:30 PM	Open Discussion
6:30 PM	20 th Wavefront Congress Reception and Dinner

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SATURDAY, MARCH 16, 2019	
SESSION VI	ADAPTIVE OPTICS IN VISION AND OPHTHALMOLOGY Moderator: Michael Mrochen, PhD
8:30 – 8:45 AM	AO Retinal Imaging David Williams, PhD
8:45 - 9:00 AM	AO Vision Simulation Pablo Artal, PhD



9:00 – 9:15 AM	AO Imaging Based Vision Science TBD
9:15 – 9:30 AM	Free Paper TBD
9:30 – 9:40 AM	Free Paper
9:40 – 9:50 AM	Open Discussion
9:50 – 10:10 AM	Coffee Break
SESSION VII	OPTICAL AND NEURAL CONTRIBUTION TO VISION II Moderator: Geunyoung Yoon, PhD
10:10 - 10:25 AM	Optical and Neural Contribution to Visual Performance Susana Marcos, PhD
10:25 - 10:40 AM	Optical and Neural Contribution to Visual Performance Geunyoung Yoon, PhD
10:40 - 10:55 AM	Free Paper TBD
10:55 - 11:10 AM	Free Paper TBD
11:10 - 11:15 AM	Open Discussion
SESSION VIII	NOVEL APPLICATIONS OF CONTACT LENSES Moderator: Jason Marsack, PhD
11:15 – 11:30 AM	New Findings in Myopia Development / Control David Berntsen, OD, PhD
11:30 – 11:45 AM	Wavefront-guided Contact Lenses Jason Marsack, PhD
11:45 – 12:00 PM	Light Transmission Control with Contact Lenses TBD
12:00 – 12:15 PM	Sports Vision – A Primer in Visual Performance Enhancement Fred Edmunds, PhD
12:15 – 12:30 PM	Open Discussion
12:30 – 1:45 PM	Luncheon
SESSION IX	NEW WAVES FOR ADVANCED VISION CORRECTION Moderator: Ronald Krueger, MD
1:45 - 2:00 PM	fs Laser Induced Refractive Index Change Len Zheleznyak, PhD



2:00 - 2:15 PM	Accommodative IOLs Adrian Glasser, PhD
2:15 - 2:30 PM	Human Tissue Onlays and Inlays Michael Mrochen, PhD
2:30 - 2:45 PM	Light Adjustable IOLs Pablo Artal, PhD
2:45 - 3:00 PM	Next Wave of SMILE in the U.S.: Myopic Astigmatism Correction TBD
3:00 – 3:15 PM	Registered, Tissue Bridge Free Corneal Lenticules Hong Fu, PhD
3:15 – 3:30 PM	Open Discussion
SESSION X	BIG DATA AND ARTIFICIAL INTELLIGENCE FOR OPHTHALMOLOGY Moderator: Ray Applegate, OD PhD
3:30 – 3:45 PM	TBD TBD
3:45 – 4:00 PM	Eye Models Based on Large Population Data Jos Rozema, PhD
4:00 – 4:15 PM	Open Discussion
SESSION XII	FREE PAPERS Moderator: Ron Krueger, MD
4:15 – 4:30 PM	Vision Behavior Monitoring – Why do patient questionnaires fail for presbyopia patient evaluations? Michael Mrochen, PhD
4:30 – 4:45 PM	Optical, Neural, and Noise Contributions to Ricco’s Law for Detecting Black Holes Larry Thibos, PhD
4:45 – 5:00 PM	Customizing corneal Laser Surgery for Therapeutic Applications Samuel Arba Mosquera, PhD
5:00 PM	Voting & Awards END