

08:30 09:00 Registration

09:00 09:05	5 Jos Rozema - University of Antwerp (Belgium)	Welcome
09:05 09:30	25 Carina Koppen - University of Antwerp (Belgium)	*****

Session 1: Refractive error and wavefronts

09:30 09:45	15 Jorge Ares - University of Zaragoza (Spain)	A study about the relation between virtual subjective refraction, objective refraction, and real subjective refraction
09:45 10:00	15 Jan-Willem Beenakker - Leiden University Medical Center (Netherlands)	ZOSPpy, a Python package for optical simulations
10:00 10:15	15 Diana Gargallo - University of Zaragoza (Spain)	A study about Jackson cross cylinder test reliability by means of retinal image simulation
10:15 10:30	15 José Manuel González-Méijome - University of Minho (Portugal)	Bridging physiological optics and visual physiology in myopia control research
10:30 10:45	15 Mateusz Jaskulski - Indiana University (USA)	Optical characterisation of two novel myopia control spectacle lenses
10:45 11:00	15	Discussion

11:00 11:30 30 Coffee break

Session 2: Optical coherence elastography

11:30 12:00	30 Kirill Laren - University of Houston (USA)	Dynamic optical coherence elastography (OCE) and Brillouin spectroscopy for ocular biomechanics
12:00 12:15	15 Matteo Frigelli - University of Bern (Switzerland)	Optical coherence elastography assessment of mechanical and refractive changes induced by different corneal cross-linking protocols
12:15 12:30	15 Sabine Kling - ETH Zurich / University of Bern (Switzerland)	High-resolution optical coherence elastography of the human lens in vivo
12:30 12:45	15 Vahoura Tahsini - University of Bern (Switzerland)	Characterization of the mechanical contribution of the capsule of crystalline lenses using optical coherence elastography
12:45 13:00	15	Discussion

13:00 14:00 60 Lunch break

Session 3: Corneal optics

14:00 14:30	30 Alejandra Consejo - University of Zaragoza (Spain)	The hidden secrets of corneal tomography
14:30 14:45	15 Iñaki Blanco - University of Minho (Portugal)	Linear fitting of biconic surfaces for corneal modelling
14:45 15:00	15 Diana Gargallo - University of Zaragoza (Spain)	Measuring contact lens base curve radius using a clinical OCT: an in-vitro study
15:00 15:15	15 Sharon Francis - University of Antwerp (Belgium)	Contact lens mask to block the most aberrated pupillary regions in keratoconic eyes
15:15 15:30	15 Masoud Mehrjoo - SCHWIND eye-tech solutions (Germany)	Automatic segmentation of corneal cuts in OCT images
15:30 15:45	15	Discussion

15:45 16:00 15 Coffee break

Session 4: Visual function

16:00 16:15	15 Pilar Casado - University of Zaragoza (Spain)	The effect of stimulus background luminance on temporal contrast sensitivity
16:15 16:30	15 Jorge Lasarte Sanz - Technological University Dublin (Ireland)	Design of a holographic stereoacuity test
16:30 16:45	15 Joan Goset Maldonado - Polytechnical University of Catalunya (Spain)	Cognitive impairment in patients with post-COVID condition: correlations between eye movements metrics and the Stroop Color and Word neuropsychological test
16:45 17:00	15	Discussion

Session 10: Posters

17:00 18:00	60 Jorge Ares - University of Zaragoza (Spain)	RGP contact lens fluorogram visualization with 3D printed sclero-corneal surfaces.
	Diana Gargallo - University of Zaragoza (Spain)	A comparison between measurements of actual lens position with two optical biometers: Lenstar LS 900 and Anterior
	Diana Gargallo - University of Zaragoza (Spain)	Effect of rotation and axial shift of toric intraocular lenses analyzed by means of numerical ray tracing
	Pilar Casado - University of Zaragoza (Spain)	Visual motion perception in a young university population
	Tanya Evans - University of Johannesburg (South Africa)	Astigmatic power of the crystalline lens surfaces derived from ocular biometry (Part 2)
	Cristina Rovira Gay - Polytechnical University of Catalunya (Spain)	Objective assessment of the effects of a vision therapy protocol on adults with typical binocular vision

Valldeflors Vinuela Navarro - Polytechnical University of Catalunya (Spain)
Saeed Zahabi - Wroclaw University of Science and Technology (Poland)

Immersive virtual reality intervention for post-COVID-19 condition: An eye movement pilot study.
An optomechanical model of the human eye for deducting the properties of the biological tissues

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Session 5: OBERON hackathon pitches

08:30	08:45	15	OBERON group 1	Pitch
08:45	09:00	15	OBERON group 2	Pitch
09:00	09:15	15	OBERON group 3	Pitch
09:15	09:30	15	OBERON group 4	Pitch
09:30	09:45	15		Deliberation jury
09:45	09:50	5		Award ceremony

Session 6: Corneal biomechanics

10:00	10:30	30	Cynthia Roberts - The Ohio State University (USA)	Evolving stress distribution in keratoconus and prediction of progression from a single tomographic map
10:30	10:45	15	Magdalena Asejczyk - Wroclaw University of Science and Technology (Poland)	Corneal dynamic analysis and its correlation with blood pulsation
10:45	11:00	15	Benedetta Fantaci - University of Zaragoza (Spain)	Computational optics for finite-element corneal modelling
11:00	11:15	15	Elena Redaelli - University of Zaragoza (Spain)	Analysis of the influence of keratoconus mechanical properties, dimension and position on the outputs of Corvis
11:15	11:30	15		Discussion

11:30 12:00 30 Coffee break

Session 7: Crystalline lens and IOL biomechanics

12:00	12:15	15	Ali Dahaghin - Wroclaw University of Science and Technology (Poland)	Opto-mechanical simulations of crystalline lens wobbling during gaze change in accommodated eyes
12:15	12:30	15	Liyong Feng - Johnson & Johnson (Netherlands)	Modeling the sensitivity of the accommodative amplitude to the orientation of zonular fibers
12:30	12:45	15	Kehao Wang - Beihang University (China)	Influence of zonular fibres on lens accommodation assessed by a pre-stressed eye model
12:45	13:00	15	Lin Ye - Anglia Ruskin University (United Kingdom)	The effect of lens shape, zonular insertion and finite element model on simulated stretching of the lens
13:00	13:15	15		Discussion

13:15 14:00 45 Lunch break

Session 8: Crystalline lens and IOL optics I

14:00	14:30	30	Sasha Goncharov - University of Galway (Ireland)	Crystalline lens models of today and tomorrow
14:30	14:45	15	Tanya Evans - University of Johannesburg (South Africa)	Astigmatic power of the crystalline lens derived from ocular biometry
14:45	15:00	15	Conor Flynn - University of Galway (Ireland)	Calculation of the paraxial parameters of a GRIN lens with analytical ray-tracing
15:00	15:15	15	Veronica Lockett Ruiz - Consejo Superior de Investigaciones Científicas (Spain)	Effect of crystalline lens geometry on the intracapsular accommodation mechanism
15:15	15:30	15	Rafael Navarro - Consejo Superior de Investigaciones Científicas (Spain)	Effect of the inner curvature gradient on crystalline lens performance
15:30	15:45	15		Discussion

15:45 16:00 15 Coffee break

Session 9: Eye modelling

16:00	16:15	15	Fabian Debowy - Anglia Ruskin University (United Kingdom)	How the source of the refractive error can influence image quality
16:15	16:30	15	Arezoo Farzanfar - University of Antwerp (Belgium)	Estimating the biometric contributions to variations in refractive error in premature and full-term children
16:30	16:45	15	Hosna Ghaderi - University of Antwerp (Belgium)	SyntEyes OBM: higher order statistical model for biomechanical analyses
16:45	17:00	15	Jos Rozema - Universty of Antwerp (Belgium)	How similar are male and female eyes ?
17:00	17:15	15		Discussion

18:00 19:30 Social programme: City walk

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Session 11: Crystalline lens and IOL optics II

08:30	08:45	15	David Atchison - Queensland University of Technology (Australia)	Change in refractive errors with changes in IOL parameters
08:45	09:00	15	Sarah Hershko - University of Antwerp (Belgium)	Influence of straylight on driving performance in young adults
09:00	09:15	15	María Mechó García - University of Minho (Portugal)	Spherical aberration and accommodative lag in young adults.
09:15	09:30	15	Ebrahim Safarian - Consejo Superior de Investigaciones Científicas (Spain)	Variability in wavefront changes during sustained reading and recovery in presbyopic eyes
09:30	09:45	15	Michael Simpson - Simpson Optics LLC (USA)	Intraocular lens tilt, the pupil, and simple eye models
09:45	10:00	15		Discussion

10:00 10:15 15 Coffee break

Session 12: Modern digital methods

10:15	10:30	15	José Manuel González-Méijome - University of Minho (Portugal)	Algorithm-assisted refraction: preliminary perspectives from different clinical application paradigms.
10:30	10:45	15	Mateusz Jaskulski - University of Murcia (Spain)	Mobile app for tele-monitoring potential changes in myopia and presbyopia
10:45	11:00	15	Norberto López Gil - University of Murcia (Spain)	Mobile app for detecting early cataract
11:00	11:15	15	Aina Turull Mallofré - Polytechnical University of Catalunya (Spain)	Prediction of the spherical subjective refraction from accommodation data
11:15	11:30	15		Discussion

Closing

11:30	12:00	30	Sasha Goncharov - University of Galway (Ireland)	The ideas that shaped the design of the Extremely Large Telescope (ELT)
12:00	12:05	5	Jos Rozema - Universty of Antwerp (Belgium)	Closing
12:05	12:10	5	Magdalena Asejczyk - Wroclaw University of Science and Technology (Poland)	VPO 2024 - Wroclaw (Poland)