



18th International Myopia Conference

September 4-7, 2022

Rotterdam - The Netherlands

Final Program

SATURDAY 3th SEPTEMBER

18:30 - 20:00

WELCOME RECEPTION

Willem Burger Foyer
Sponsored by Johnson & Johnson
VISION

SUNDAY 4th SEPTEMBER

7:00 - 8:00

EARLY MORNING RUN

Run activity through the heart of Rotterdam

9:00 - 9:10

OPENING CEREMONY

Willem Burger Zaal

9:10 - 10:30

MYOPIA AROUND THE WORLD

Willem Burger Zaal

Moderators Caroline Klaver, Xiangui He

9:10 Prevalence of Myopia Among Public Schoolchildren in Brazil
Patricia Ioschpe Gus



9:20 The impact of uncorrected myopia on school-aged children,
evidence from Kosovo
Eva Lazuka-Nicoulaud

9:30 Estimates of myopia prevalence in UK 4-5 year olds from
a large database of school vision screening
Dr Rakhee Shah

9:40 Prevalence of myopia in the current young generation in the Netherlands
Caroline Klaver

9:50 Epidemiology of premyopia among children aged 6-8 in Shanghai
Xiangui He

10:00 Following Prevalence of Myopia in a Large Swiss Military Cohort
over the Last Decade - Where is the European "Myopia Boom"?
Leila Eppenberger

10:10 Improving population-level myopia monitoring via mixture
distributions
Tim Fricke



10:20 From hyperopic reserve to myopia: a narrative review
Ian Morgan

10:30 - 11:00

BREAK

Juriaanse Foyer, Van der Mandele Zaal & Grote Zaal

CONTINUED

SUNDAY 4th
SEPTEMBER

11:00 - 12:30		EXPERIMENTAL MODELS & MECHANISMS	Willem Burger Zaal
		<i>Moderators Beerend Winkelman, Scott Read</i>	
11:00	Regional variations in human macular choroidal thickness changes in response to blue light stimulation of the optic nerve head	Scott Read	
11:10	Investigating myopia control using ChromaBlur	Xu Cheng	
11:20	Myopia can be controlled by intervention in scleral endoplasmic reticulum stress	Shin-Ichi Ikeda	
11:30	RNA-Seq Analysis Reveals an Essential Role of the Tyrosine Metabolic Pathway and Inflammation in Myopia-Induced Retinal Degeneration in Guinea Pigs	Ling Zeng	TRAVEL GRANT RECIPIENT
11:40	A comparison of indoor and outdoor light exposures	Marcel Lucassen	
11:50	Role of VEGF secreted from Retinal Pigment Epithelium in Choriocapillaris and Axial Length Maintenance	Yan Zhang	TRAVEL GRANT RECIPIENT
12:00	Change in visual performance with multifocal contact lenses through a fixed pupil size	Augustine Nti	TRAVEL GRANT RECIPIENT
12:10	Peripheral blur orientation provides the eye with a cue for the sign of defocus	Len Zheleznyak	

12:30 - 13:30 LUNCH *Juriaanse Foyer, Van der Mandele Zaal & Grote Zaal Foyer*

12:40 - 14:10

HOYA
FOR THE VISIONARIES

SPONSORED SESSION HOYA

Van der Weelde Zaal

New insights to advance Myopia Management – Treatment goal, clinical outcome of DIMS among European children, combination treatment and RPR
Hoya is proud to present internationally rewarded practitioners and researchers in the Symposium to present new insights to support successful myopia management in practice. Dr. Hakan Kaymak will speak about the specific goal of myopia therapy and share the real-life data with the MiYOSMART in his clinic in Germany. Dr. Andrea Lembo presents a comparison of myopia control in Italian children with MiYOSMART spectacles, atropine, and combined MiYOSMART/atropine. Prof. Carly Lam explains how the myopia control effect is influenced by baseline relative peripheral refraction in children wearing MiYOSMART spectacle lenses over 6 years.

13:00 - 14:25

SG
SIGHTGLASS
VISION

SPONSORED SESSION SIGHTGLASS VISION

Van der Vorm/Plate/ Van Rijckevorsel & Ruys Zaal
The Science Behind Diffusion Optics Technology

CONTINUED

SUNDAY 4th
SEPTEMBER

13:30 - 14:30	POSTERS	Feestzaal
	MYOPIA AROUND THE WORLD EXPERIMENTAL MODELS NEAR WORK AND BINOCULAR VISION PUBLIC HEALTH	
14:30 - 15:30	KEYNOTE SPEAKER	Willem Burger Zaal
	Moderator Christine Wildsoet Josh Wallman Memorial Lecture / Zeiss Young Investigator Award Myopia control and prevention: from life style to low concentration atropine Jason C.S. Yam, Chinese University of Hong Kong	
15:30 - 16:30	MYOPIA MANAGEMENT STRATEGIES	Willem Burger Zaal
	Moderators Jan Roelof Polling, Trine Møldrup Jakobsen	
15:30	Global trends in myopia management attitudes and strategies in clinical practice – 2022 International Myopia Institute Update James Wolffsohn	
15:40	Practitioners' Perception on Myopia Management Practice in China Monica Jong	
15:50	Descriptive statistical comparison of interventions for myopia control – a new analysis Paul Gifford	
16:00	The Future of Clinical Trials of Myopia Control Mark Bullimore	
16:10	Management of myopia in a Danish Hospital setting Trine Møldrup Jakobsen	
16:30 - 20:00	SOCIAL DISCOVER DELFT TOUR	

MONDAY 5th
SEPTEMBER

7:50 - 8:35



SPONSORED SESSION OCULUS

Van der Vorm/Plate/Van Rijckevorsel @ Ruys Zaal

Master Myopia in Clinical Practice

How to perform myopia management in clinical practice based on latest research knowledge is introduced by 3 international experts: Prof Sankaridurg, Dr Paune and Dr Kaymak will present insights on their research and how to use it in daily practice.

8:50 - 10:30

IMAGING & BIOMETRY 1

Willem Burger Zaal

Moderators Audrey Chia, Li Lian Foo

- | | |
|-------|--|
| 8:50 | The Refractive Mechanism Map: application of a biometric definition of refractive error in myopia research
<i>Ian Flitcroft</i> |
| 9:00 | Comparison of Superficial and Deep Retinal Layer Thickness Ratios for Diagnosing Glaucoma in Low and High Myopia
<i>Rachel Chong</i> |
| 9:10 | Association of optic disc abnormalities with refractive error and OCT measurements in myopic children
<i>Audrey Chia</i> |
| 9:20 | Comparing the orientations of fibers of the peripapillary sclera of healthy volunteers and high myopia patients with polarization-sensitive optical coherence tomography
<i>Joy Willemsse</i> |
| 9:30 | Two-years evolution of two-dimensional peripheral refraction in children
<i>Zhenghua Lin</i> |
| 9:40 | Eye growth patterns measured with refractive error or axial length
<i>Sander Kneepkens</i> |
| 9:50 | Predicting cycloplegic refraction from noncycloplegic parameters in Chinese young adults and children
<i>Yunyun Sun</i> |
| 10:00 | Deep Learning System to Predict the 5-year Risk of High Myopia using Fundus Imaging in Children
<i>Li Lian Foo</i> |
| 10:20 | Novel imaging and deep learning techniques for assessing myopia
<i>Leopold Schmetterer</i> |



10:30 - 11:00

BREAK

Jurjaanse Foyer, Van der Mandele Zaal @ Grote Zaal Foyer

CONTINUED

MONDAY 5th
SEPTEMBER

11.00 - 12:30		ANIMAL MODELS	Willem Burger Zaal
		Moderators Christina Zeitz, Adriana Iglesias	
11:00	The development of high myopia in the guinea pig <i>Sally McFadden</i>		
11:10	L opsin expression is reduced in eyes treated with diffusers and negative lenses in the chicken model <i>Sandra Gisbert Martinez</i>		
11:20	Post-GWAS screening of candidate genes for refractive error in mutant zebrafish models <i>Adriana Iglesias</i>		
11:30	Analysis of Genetic Networks Regulating Myopic Eye Growth Susceptibility in a Guinea Pig Model <i>Liqin Jiang</i>		
11:40	Mice with ON-bipolar cell defect develop high myopia <i>Wilmet Baptiste</i>		
11:50	Scleral Cross-Linking in Form-Deprivation Myopic Guinea Pig Eyes leads to Glaucomatous Changes <i>Lei Guo</i>		
12:00	Atropine reduces axial elongation in a mouse model of syndromic myopia without altering retinal dopaminergic activity <i>Emilie van der Sande</i>		
12:10	A-type horizontal cell coupling is bidirectionally associated with the sign of ocular defocus <i>William Myles</i>		
12:20	Shedding light on myopia by studying congenital stationary night blindness <i>Christina Zeitz</i>		

TRAVEL
GRANT
RECIPIENT

12:30 - 13:30 LUNCH

12:40 - 14:10

SPONSORED SESSION COOPERVISION

Van der Weelde Zaal

What we've learned and what questions remain after the 7-year MiSight® 1 day clinical trial



Senior Director Paul Chamberlain and Clinical Research Fellow Arthur Bradley will update attendees on how the 7-year MiSight® 1 day clinical study has helped address many of the key questions in this rapidly evolving field of science. CooperVision have led the way in bringing clinically useful interventions supported by robust scientific evidence to eye care professionals all over the world and this session will demonstrate CooperVision's commitment to advance the scientific understanding of myopia. We also review the outstanding questions that remain in the quest to manage myopia responsibly and effectively so as many myopic children as possible can be treated appropriately.

13:00 - 14:25

SPONSORED SESSION TOPCON

Van der Vorm/Plate/Van Rijkevorsel & Ruys Zaal



Innovations in Myopia: from Research to Myopia Management Applications

CONTINUED

MONDAY 5th
SEPTEMBER

13:30 - 14:30	POSTERS	Feestzaal
	IMAGING AND BIOMETRY ANIMAL MODELS PHARMACOLOGICAL INTERVENTIONS RISK PROFILES	
14:30 - 15:30	KEYNOTE SPEAKER <i>Moderator Virginie Verhoeven</i>	Willem Burger Zaal
	Chew Sek-jin Memorial Lecture - Myopia is in everyone's DNA <i>Joan Bailey-Wilson, the National Human Genome Research Institute (NHGRI), National Institutes of Health (NIH)</i>	
15:30 - 16:40	RISK PROFILES <i>Moderators Teele Palumaa, David Mackey</i>	Willem Burger Zaal
15:30	Distribution of axial length in Australians of different age groups, ethnicities and refractive errors <i>David Mackey</i>	
15:40	Retinal photon dosing in eyes with different axial lengths <i>John Bolger</i>	
15:50	Estimating the risk for long-term myopia progression using a training-free method <i>Jos Rozema</i>	
16:00	Young children with fast axial length growth also progress faster during teenage years <i>Willem Tideman</i>	
16:10	Association between chronotype and refractive error <i>Teele Palumaa</i>	TRAVEL GRANT RECIPIENT
16:20	Myopia and screentime in 6-7-year-old schoolchildren: a cross-sectional analysis from the Ireland Eye Study <i>Síofra Harrington</i>	
16:30	Accommodative facility and response time before and after near task of varying durations in young adults <i>Asha Kaliugavaradhan</i>	
16:40 - 17:00	BREAK	Jurjaanse Foyer, Van der Mandele Zaal & Grote Zaal Foyer
17:00 - 17:30	IMAGING & BIOMETRY 2 <i>Moderators Ranjay Chakraborty, Willem Tideman</i>	Willem Burger Zaal
17:00	Association between Peripheral Refraction and Corresponding Electro-Retinal Signals <i>Ranjay Chakraborty</i>	
17:10	A high-frequency, point-of-care ultrasound device to quantify myopia-induced microstructural changes in the anterior sclera <i>Jonathan Mamou</i>	
17:20	Retinal On-Off pathway activity in myopes and non-myopes <i>Safal Khanal</i>	
19:15 - 0:00	SOCIAL NETWORKING DINNER SS ROTTERDAM	Sponsored by HOYA FOR THE YOUNG

TUESDAY 6th
SEPTEMBER

7:50 - 8:35



SPONSORED SESSION MENICON

Van der Vorm/Plate/Van Rijckevorsel @ Ruys Zaal

**"Menicon Bloom"- from Remedial to Prospective treatment...
an insight into improved patient care**

8:40 - 10:30

OPTICAL INTERVENTIONS 1

Willem Burger Zaal

Moderators Padmaja Sankaridurg, David Berntsen

- 8:40 Efficacy versus vision: breaking the nexus
Noel Brennan
- 8:50 Myopia control efficacy of spectacle lenses with highly aspherical lenslets:
3-year results
Björn Drob
- 9:00 Impact of varying OZD of OrthoK designs on corneal topographical change and
its implication for myopia-controlling efficacy
Maria Liu
- 9:10 Effect of optical myopia-control interventions on peripheral vision
Petros Papadogiannis
- 9:20 Slowing of myopia and eye growth reversal with wear of spectacles comprising
highly aspherical lenslets
Padmaja Sankaridurg
- 9:30 Montreal experience part 2: Corneal topographical changes induced by four
orthokeratology lenses and their relationship with axial elongation.
Remy Marcotte-Collard
- 9:40 Fast progressors are successfully treated with MiSight® 1 day myopia control
contact lenses
Arthur Bradley
- 9:50 Visual performance with novel spectacle lenses for myopia control
Deborah Laughton
- 10:00 Biometric changes associated with active stimulation of the peripheral retina
with myopically defocused images in humans
Ryo Kubota
- 10:10 Changes in relative peripheral refraction in children who wore
Defocus Incorporated Multiple Segments (DIMS) lenses
Han Yu Zhang
- 10:20 Choroid Changes with the Initiation of Sphere and Multifocal
Contact Lenses in the Bifocal Lenses In Nearsighted Kids (BLINK) Study
David Berntsen

10:30 - 11:00

BREAK

Jurjaanse Foyer, Van der Mandele Zaal @ Grote Zaal Foyer

CONTINUED

TUESDAY 6th
SEPTEMBER

11:00 - 12:30		MYOPIC COMPLICATIONS AND PUBLIC HEALTH	Willem Burger Zaal
		Moderators <i>Caroline Klaver, Weizhong Lan</i>	
11:00	High Myopia – the patient's view <i>Gerlof du Bois</i>		
11:10	Design and baseline characteristics of a randomized clinical trial to investigate the effect of natural classrooms on myopia development among children in China <i>Weizhong Lan</i>		TRAVEL GRANT RECIPIENT
11:20	Simulation of the Progression Trajectories of Myopia from Childhood to Older life in China <i>Jun Chen</i>		
11:30	An interim analysis of a telehealth tool to self-assess refractive error and visual acuity in a progressive myopia population <i>Janneau Claessens</i>		
11:40	The Impact of the First Peak of the COVID-19 Pandemic on Myopia treatment practice patterns among ophthalmologists - an IPOSC global perspective <i>Eedy Mezer</i>		
11:50	Pathologic myopia in highly myopic patients with high axial anisomyopia <i>Jonathan Li</i>		
12:00	Differing Macula Deformation Comparing Healthy, High Myopia, High Myopia with Glaucoma, and Pathologic Myopia <i>Quan V. (Donny) Hoang</i>		
12:10	Risk Factors for Bilateral Macular Neovascularization in High Myopia <i>Monica Ravenstijn</i>		
12:20	Intravitreal Panitumumab for Prevention of Myopic Axial Elongation in Highly Myopic Adult Eyes with Myopic Macular Degeneration: Clinical Phase-1 Study <i>Jost Jonas</i>		
12:30 - 13:30		BREAK	Jurjaanse Foyer, Van der Mandele Zaal & Grote Zaal Foyer

CONTINUED

TUESDAY 6th
SEPTEMBER

12:40 - 14:10

SPONSORED SESSION ESSILORLUXOTTICA*Van der Weelde Zaal***EssilorLuxottica****Essilor® Stellest™ lens - New benefits of myopia control spectacle lenses**

Introduction, Olga Prenat

Essilor® Stellest™ lens design, Dr. Damien Paillé

Essilor® Stellest™ lens: 3 -year clinical trial results and importance of wearing time, Dr. Björn Drobe

Impact of spectacle lenses for myopia control on visual functions, Dr. Mark Bullimore

Essilor® Stellest™ lens: Results from a randomised, double-blind, cross-over clinical trial, Dr. Padmaja Sankaridurg

Myopia control in other ethnicities and CARE plot, Dr. Mark Bullimore.

13:30 - 14:15

**SPONSORED SESSION JOHNSON & JOHNSON***Van der Vorm/Plate/Van Rijckevorsel & Ruys Zaal***A breakthrough soft contact lens for myopia control**

Join this exciting presentation to hear the innovative design concepts and latest clinical data behind Johnson & Johnson Vision's breakthrough soft contact lens for myopia control presented by Noel Brennan, MScOptom, PhD, FAAO, Xu Cheng, PhD, FAAO, MBA, and Monica Jong, BOptom, PhD.

13:30 - 14:15

POSTERS*Feestzaal***OPTICAL INTERVENTIONS****MYOPIC COMPLICATIONS****GENETICS**

14:20 - 14:30

AWARDS*Willem Burger Zaal*

14:30 - 15:30


KEYNOTE SPEAKER*Willem Burger Zaal**Moderator Caroline Klaver*

Lessons learned about pandemics

Diederik Gommers

CONTINUED

**TUESDAY 6th
SEPTEMBER**

15:30 - 16:30	GENETICS	<i>Willem Burger Zaal</i>
	<i>Moderators Virginie Verhoeven, Pirro Hysi</i>	
15:30	Assessing the contribution of genetic nurture to refractive error <i>Jeremy Guggenheim</i>	
15:40	Exome sequencing study of 107 patients with Early-Onset High Myopia <i>Xunlun Sheng</i>	
15:50	Whole exome sequencing of known eye genes reveals genetic causes for high myopia <i>Virginie Verhoeven</i>	
16:00	Identification of genetic loci with differential effects on myopia and hyperopia using a case-case genome-wide association study <i>Chris Hammond</i>	
16:10	Education interacts with genetic variants near GJD2, RBOF1, LAMA2, KCNQ5, TOX and LRRC4C to confer susceptibility to myopia <i>Rosie Clark</i>	
16:20	The major heritable risk factors for myopia and the implications for its mechanism and prevention <i>Jay Neitz</i>	
16:30	A comparison of the role of different retinal cell lines in refractive error and myopia <i>Pirro Hysi</i>	
16:30 - 16:50	BREAK	<i>Jurjaanse Foyer, Van der Mandele Zaal & Grote Zaal Foyer</i>
16:50 - 17:30	GENETICS	<i>Willem Burger Zaal</i>
	<i>Moderators Katie Williams, Calvin CP Pang</i>	
16:50	Identification of non-coding regulatory elements for myopia by genome-wide scans <i>Milly Tedja</i>	
17:00	Associations of gene polymorphisms and life style with anisometropia in children: the Hong Kong Children Eye Genetics Study <i>Calvin CP Pang</i>	
17:10	Axial length distributions in patients with genetically confirmed inherited retinal diseases <i>Katie Williams</i>	
17:20	Investigation of association between the myopia risk locus near GJD2 and electroretinogram responses <i>Xiaofan Jiang</i>	
17:30	Rare variant analyses across multiethnic cohorts identify novel genes for refractive error <i>Annet Haarman</i>	
17:30 - 18:30	IMC BUSINESS MEETING	<i>Van Weelde Zaal</i>

WEDNESDAY 7th SEPTEMBER

8:50 - 10:00	OPTICAL INTERVENTIONS 2 <i>Moderators Kate Gifford, Mark Bullimore</i>	Willem Burger Zaal
8:50	Ocular aberration changes in children wearing smaller back optic zone diameter orthokeratology lenses over two years <i>Biyue Guo</i>	
9:00	Axial length shortening after combined repeated low-level red-light therapy in poor responders of orthokeratology in myopic children <i>Mengting Yu</i>	
9:10	Optic Zone in Myopia Control with Ortho-K; Size Matters <i>Jaume Paune Fabre,</i>	
9:20	Retrospective review of orthokeratology versus peripheral defocus contact lenses <i>Martin Rickert</i>	
9:30	Development of Smart spectacles to monitor and modify myopia related health behavior in children <i>Ramamurthy Dharani</i>	TRAVEL GRANT RECIPIENT
9:40	Catenary Optics for Myopia Progression Intervention <i>K. Ashley Tuan</i>	
9:50	MiSight as a myopia control modality in young adults <i>Eilin Lundanes</i>	
10:00	Zone of clear single binocular vision in myopia controlling contact lenses <i>Kate Gifford</i>	
10:10-11:00	PHARMACOLOGICAL INTERVENTIONS <i>Moderators Samantha Lee, Jason Yam</i>	Willem Burger Zaal
10:20	Oral administration of caffeine metabolite 7-methylxanthine is associated with slowed childhood myopia progression <i>Klaus Trier</i>	
10:30	Effects of different Frequency Dose of 0.05% Atropine in Retarding the Progression of Myopia in Chinese Children <i>Yao Tang</i>	
10:40	Low-concentration atropine for the treatment of myopia in multi-racial Western Australian children (WA-ATOM study): first two years of treatment <i>Samantha Lee</i>	
10:50	Effect of high dose atropine for progressive myopia is age-dependent <i>Jan Roelof Polling</i>	
11:00 - 11:30	BREAK	Jurjaanse Foyer, Van der Mandele Zaal & Grote Zaal Foyer
11:30 - 12:45	IMI DEBATE	Willem Burger Zaal
12:45 - 13:00	CLOSING CEREMONY	Willem Burger Zaal
13:00 - 13:30	LUNCH	Jurjaanse Foyer, Van der Mandele Zaal & Grote Zaal Foyer