

Biophotonics for Eye Research summer school @ Sedoptica



The Biophotonics for Eye Research summer school @Sedoptica is a scientific meeting dealing with aspects of the Physics and Engineering of the human eye.

This meeting aims to follow on from the summer schools organized previously by the Visual Sciences committee @SEDOPTICA. In this meeting, we shall focus on new results and techniques in imaging technology and optics of vision.

The format of the meeting is a series of classes, invited lectures with ample time for discussion and interaction, and scientific contributions presentations. The interaction of basic science and cutting edge technology to develop future solutions for better vision will be at the center of the workshop.

Young researchers and doctoral students will present their research in dedicated sessions.

The meeting will be hosted by the University of Granada in the summer of 2025.

**4-6 June 2025
Granada, Spain**

BER2025
Biophotonics for Eye Research
summer school @Sedoptica

4-6 JUNE 2025 GRANADA, SPAIN



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Advancing Optics and Photonics Worldwide

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ORGANIZING & SCIENTIFIC COMMITTEE

María Viñas	Institute of Optics-CSIC (Spain)
Mikel Aldaba	Technical University of Catalonia-UPC (Spain)
Clara Mestre	Technical University of Catalonia-UPC (Spain)
Alba Paniagua	University of Castilla La Mancha (Spain)
José Juan Castro	University of Granada (Spain)
Justo Arines	University of Santiago de Compostela-USC (Spain)
María S. Millán	Technical University of Catalonia-UPC (Spain)
E Josua Fernández	University of Murcia (Spain)
Juanma Bueno	University of Murcia (Spain)
Pablo Artal	University of Murcia & VOPTICA (Spain)
Aixa Alarcón	Johnson & Johnson Vision (The Netherlands)
Susana Marcos	University of Rochester (USA)
Carlos Dorrnsoro	Institute of Optics-CSIC & 2EyesVision (Spain)
Jaume Pujol	Technical University of Catalonia-UPC (Spain)
Brian Vohnsen	University College Dublin (Ireland)
Christina Schwarz	University of Tübingen (Germany)
Katarzyna Komar	Int. Centre for Translational Eye Research (Poland)
Linda Lundström	KTH Royal Institute of Technology (Sweden)
Walter Furlan	University of Valencia (Spain)
Laura Remon	University of Zaragoza (Spain)
Jose M Meijome	University of Minho (Portugal)

LOCAL COMMITTEE


José Juan Castro	University of Granada (Spain)
Sonia Ortiz	
Miriam Casares	
José Ramón Jiménez	
Rosario González Anera	
Francesco Martino	
Pilar Granados	

BER2025 will gather students, researchers, and renowned scholars in an international forum on Biophotonics for eye research, with a series of classes, invited lectures with ample time for discussion and interaction, and scientific contributions presentations. The interaction of basic science and cutting edge technology to develop future solutions for better vision will be at the center of the workshop.

EXPECTED NUMBERS

- 100 attendees from international institutions
- 70 young researchers will present their research
- 3 days event
- 3 scientific societies involved (OPTICA, SPIE, SEDOPTICA)

BER2025 web:
<https://ber.sedoptica.es>
 Contact: ccvision@sedoptica.com

 Join BER2025 SLACK channel!!
<https://shorturl.at/7Jvgo>

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PRELIMINARY PROGRAM

	4 June-Wednesday	5 June-Thursday	6 June-Friday
Morning		BREAKFAST WITH THE EXPERTS	
		KEYNOTE TALK	
		SESSION I Optics and vision	SESSION IV New horizons in refractive, cataract and eye surgery
		SESSION II Structural & Functional disruptions of the eye	SESSION V Visual Function, Smart Glasses and Diagnostics tools
Afternoon	SOCIAL EVENT Networking poster session	SESSION III Microscopy, retina and beyond	POSTER SESSION
	BIOPHOTONICS: INDUSTRIAL APPLICATIONS		KEYNOTE TALK, AWARDS CEREMONY & CLOSING REMARKS
Evening	KEYNOTE TALK	SOCIAL EVENT Carmen de la Victoria	VISIT TO LA ALHAMBRA
	WELCOME RECEPTION		

REGISTRATION form

<https://shorturl.at/OiztM>

IMPORTANT DATES

Registration opens **1st February 2025**

Deadline for abstracts **17th March 2025**

REGISTRATION*

Junior (early, 1 february to 15 april): 200€

Senior (early, 1 february to 15 april): 300€

Junior (regular, until 14th may): 250€

Senior (regular, until 14th may): 350€

*Includes: accommodation (4th & 5th June; double room for juniors, single for seniors; breakfast included), lodging & social events

Additional information

TRAVEL GRANTS: available for students and early careers

Awards for best young researcher scientific contribution

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**TECHNICAL
PROGRAM**



	WEDNESDAY	
	15:00-18:00	SOCIAL EVENT. <i>Networking poster session</i>
	16:30-17:00	Coffe Break
	18:00-19:00 BIOPHOTONICS: INDUSTRIAL APPLICATIONS	
4 JUNE	Moderator	Antonio Castelo European Photonics Industry Cluster Patrick Kolsch NKT Photonics Head of Global Market Development for Life Science and Biomedical Lucie Sawides Spanish National Research Council (CSIC) Scientist & former Industry <i>2EyesVision</i> Vanessa Morcillo <i>Wooptix</i> VP of Bussiness Development Camera
	19:00-20:00	KEYNOTE TALK
		Prof. Susana Marcos <i>Current challenges in Visual Optics & Biophotonics</i> University of Rochester (US)
	20:00-22:00	WELCOME RECEPTION

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THURSDAY

8:00-9:00 **BREAKFAST WITH THE EXPERTS**

9:00-09:45 **KEYNOTE TALK**

Prof. Kate Grieve *OCT in vivo/in vitro methods*
Institut de la Vision Paris (France)

09:45-11:15 **SESSION I. Optics and vision**

09:45-09:50 **María Viñas Peña** *Vision: ocular optics, brain and beyond*
Institute of Optics-CSIC (Spain)

09:50-10:10 **Alberto de Castro** *The role of accommodation on vision*
Institute of Optics-CSIC (Spain)

10:10-10:30 **Prof. J.M. Bueno** *Imaging the eye*
University of Murcia (Spain)

10:30-10:50 **Prof. Eva Acosta** *Computational approaches for eye research*
University of Santiago de Compostela (Spain)

10:50-11:15 **Discussion** *Moderator: Justo Arines (USC)*

11:15-11:30 **Break**

11:30-13:30 **SESSION II. Structural & Functional disruptions of the eye**

11:30-11:50 **Prof. J.M. González-Méijome** *Myopia control*
Universidade do Minho (Portugal)

11:50-12:10 **Prof. Brian Vohnsen** *Stiles-Crawford effect*
University College Dublin (Ireland)

12:10-12:30 **Prof. Elvira Orduna** *Retina morphological changes*
University of Zaragoza (Spain)

12:30-12:50 **Junior researcher**

12:50-13:15 **Discussion** *Moderator: Jose Juan Castro Torres (UGr)*

13:30-14:30 **Lunch**

14:30-16:30 **SESSION III. Microscopy, retina and beyond**

14:30-14:50 **Simone Morrtal** *Expansion microscopy for retinal imaging*
ICFO-The Institute of Photonic Sciences (Spain)

14:50-15:10 **Prof. Michael Telias** *Retinal ganglion cells visual sensing using multiphoton microscopy*
University of Rochester (US)

15:10-15:30 **Elena Gofas Salas** *Biomarkers of inflammation in neurodegenerative disease using AOSLO*
Institut de la Vision Paris (France)

15:30-15:50 **Prof. Katarzyna Komar** *AO-TwoPhoton Vision. Ocular Optics and accommodation*
International Center for Translational Eye Research (Poland)

15:50-16:10 **Prof. Gloria Bueno** *Computational approaches for biological imaging*
University of Castilla La Mancha (Spain)

Discussion

20:00-22:00 pm **SOCIAL EVENT. Carmen de la Victoria**

5 JUNE

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FRIDAY

9:00-11:00 SESSION IV. New horizons in refractive, cataract and eye surgery

9:00-9:20 Aixa Alarcon *New horizons in refractive, cataract and eye surgery in the industry*
 Johnson & Johnson (The Netherlands)

9:20-9:40 Prof. Walter Furlan *Contact lens design. On-bench evaluation*
 University of Valencia (Spain)

9:40-10:00 Pablo Pérez Merino *Computational Eye tracing & IOL calculator*
 Institute of Optics-CSIC (Spain)

10:00-10:20 Consuelo Robles García *Clinical visual simulation*
 Voptica SL (Spain)

10:20-10:40 Prof. E. Josua Fernández *Correcting chromatic aberration*
 University of Murcia (Spain)

10:40-11:00 Discussion *Moderator: María Sagrario Millán (UPC)*

11:00-11:30 Break

6 JUNE 11:30-13:30 SESSION V. Visual Function, Smart Glasses and Diagnostics tools

11:30-11:50 Sonia Ortiz *Visual function & daily tasks*
 University of Granada (Spain)

11:50-12:10 Brian L. Due *Practical aspects of using smart glasses in everyday life*
 University of Copenhagen (Denmark)

12:10-12:30 Juan L. Aragón *Optoelectronic presbyopia glasses*
 University of Murcia (Spain)

12:30-12:50 Haris Ginis *Scattering Diagnostic tools*
 Diestia (Greece)

12:50-13:15 Junior researcher

13:15-13:30 Discussion *Moderator: Alba Paniagua (UCLM)*

13:30-14:30 Lunch

14:30-16:30 POSTER SESION + Coffee break

16:30-17:30 KEYNOTE TALK

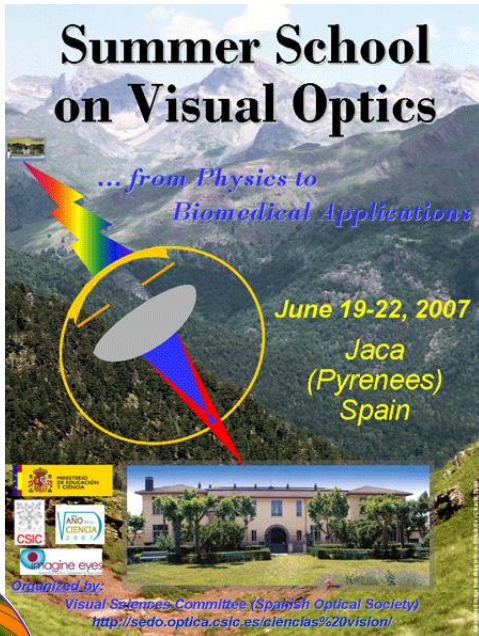
Prof. Pablo Artal *Future challenges in Visual Optics & Biophotonics*
 University of Murcia (Spain)

17:30-18:00 CLOSING REMARKS. AWARDS CEREMONY

18:00-22:00 VISIT TO LA ALHAMBRA

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