

UNIVERSIDAD DE
MURCIA



33rd International Pupil Colloquium



October 2nd-4th, 2019 Murcia, SPAIN

PROGRAM

OCTOBER 2nd-4th, 2019

Murcia, SPAIN



33rd

INTERNATIONAL
PUPIL COLLOQUIUM



25 years of research and innovation



CAMPUS MARE NOSTRUM
de Excelencia Internacional



PROGRAM

OCTOBER 2nd-4th, 2019
Murcia, SPAIN

33rd INTERNATIONAL PUPIL COLLOQUIUM PROGRAM

2nd OCTOBER 2019

16:00-16:15 Welcome – Pablo Artal

16:15-16:45 **Loewenfeld lecture (Chair: Pablo Artal)**
Andrew Watson, Apple, Cupertino, CA, USA
“Student of the Pupil”

16:45-17:15 Coffee Break

17:15 **Session 1 (Chair: Andrew J. Zele)**

17:15-17:30 James Sadler

“Do rods or cones mediate the transient pupil light reflex in the mesopic range?”

Authors: James RE Sadler (1,2), John L Barbur (1)

1. Applied Vision Research Centre, City, University of London, Northampton Square, London EC1V 0HB, UK
2. Human Systems Technology, QinetiQ, Cody Technology Park, Farnborough, Hampshire, GU14 0LX, UK

17:30-17:45 Sei-ich Tsujimura

“Intrinsic phase delays between cone and melanosin-mediated signals in the pupillary pathway”

Authors: Sei-ich Tsujimura (1*), Wakayo Yamashita (2), Akiko Matsumoto (2)

1. Faculty of Design and Architecture, Nagoya City University, 2-1-10, Kita Chikusa, Chikusa-ku, Nagoya, 464-0083 Japan
2. Department of Information Science and Biomedical Engineering, Kagoshima University, Kagoshima 890-0065, Japan

17:45-18:00

Tim Schilling

“Blue light enhances pupil-response when stimulated locally to the blind-spot”

Authors: Tim Schilling (1), Yeshwanth Seshadri (1), Mojtaba Soltanlou (2,3) and Hamed Bahmani (1,4)

1. Dopavision GmbH, Berlin, Germany
2. Department of Psychology, University of Tuebingen, Tuebingen, Germany
3. LEAD Graduate School & Research Network, University of Tuebingen, Tuebingen, Germany
4. Max Planck Institute for Biological Cybernetics, Physiology of Cognitive Processes, Tübingen, Germany

20:00

Welcome reception

3rd OCTOBER 2019

09:00-09:30

Invited talk 1 (Chair: John Barbur)

Barbara Wilhelm, Steinbeis-Transferzentrum eye-trial am Department für Augenheilkunde (Tübingen)

“On the Trail of Otto Löwenstein”

9:30

Session 2 (Chair: John Barbur)

09:30-09:45

Morgane Udry

“Tadpole pupil”

Authors: Morgane Udry (1), Randy H. Kardon (2), Federico Sadun (3), Aki Kawasaki (1)

1. Hôpital Ophtalmique Jules Gonin, Fondation Asile des Aveugles, Department of biology and medicine, University of Lausanne, Lausanne, Switzerland
2. Department of Ophthalmology and Visual Sciences, Iowa City VA center of Excellence for the prevention and treatment of vision loss, University of Iowa and Veterans Affairs Hospital, Iowa City, Iowa, USA
3. Ospedale Oftalmico Roma, ASL RM1, Rome, Italy

09:45-10:00

Minoru Nakayama

“Developments in procedures for detecting Alzheimer’s disease in patients using PLR waveforms from chromatic stimuli”

Authors: Wioletta Nowak (1), Minoru Nakayama (2), Tomasz Kręcicki (3) and Andrzej Hachot (1)

1. Institute of Biomedical Engineering and Instrumentation, Wrocław University of Science and Technology, Wrocław, Poland 50–370
2. Department of Information and Communications Engineering, Tokyo Institute of Technology, Tokyo, Japan 152-8552
3. Wrocław Medical University Rektorat, wybrzeze Ludwika Pasteura 1, 50-367 Wrocław, Poland

10:00-10:15

Laura Cole

“Measuring the role of the Locus Coeruleus in reward using the pupil response”

Authors: Laura Cole, Stafford Lightman and Iain D. Gilchrist

University of Bristol

10:15-10:30

Carina Kelbsch

“Evaluation of pupillary responses in prechiasmatic, chiasmatic and postchiasmatic lesions”

Authors: Carina Kelbsch (1,2), Ronja Jung (1,2), Melanie Kempf (2), Torsten Strasser (1,3), Tobias Peters (1,2), Barbara Wilhelm (1), Helmut Wilhelm (1,2), Krunoslav Stingl (1,2), Felix Tonagel (2)

1. Pupil Research Group, Center for Ophthalmology, University of Tuebingen, 72076 Tuebingen, Germany
2. University Eye Hospital, Center for Ophthalmology, University of Tuebingen, 72076 Tuebingen, Germany
3. Institute for Ophthalmic Research, Center for Ophthalmology, University of Tuebingen, 72076 Tuebingen, Germany

10:30-10:45

Tobias Peters

“Monochromatic Fullfield Pupillography in Patients suffering of RP Caused by PDE6A Mutation”

Authors: Tobias Peters (1,2), Katarina Stingl (2), Ronja Jung (1,2), Laura Kühlewein(2), Melanie Kempf (2), Torsten Strasser (1,3), Helmut Wilhelm (1,2), Barbara Wilhelm (1), Carina Kelbsch (1,2), Krunoslav Stingl (1,2)

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2. University Eye Hospital, Center for Ophthalmology, University of Tuebingen, 72076 Tuebingen, Germany
3. Institute for Ophthalmic Research, Center for Ophthalmology, University of Tuebingen, 72076 Tuebingen, Germany

10:45-11:15

Coffee Break

11:15-11:45

Invited talk 2 (Chair: Shrikant R. Bharadwaj)

Pedro M. Prieto

“Pupil monitoring as a tool for visual quality objective measurements”

Authors: Pedro M. Prieto, Consuelo Robles, Pablo Artal
Laboratorio de Óptica, Universidad de Murcia, Murcia, Spain)

11:45

Session 3 (Chair: Shrikant R. Bharadwaj)

11:45-12:00

Anton Sonntag

“Summation mechanisms in the pupillomotor system for rod and cone specific central and peripheral stimulation”

Authors: Anton Sonntag (1), Carina Kelbsch (1,2), Krunoslav Stingl (1,2), Torsten Strasser (1,3), Katarina Stingl (2), Ronja Jung (1,2), Tobias Peters (1,2), Helmut Wilhelm (1,2), Melanie Kempf (2), Barbara Wilhelm (1)

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3. Institute for Ophthalmic Research, Center for Ophthalmology, University of Tuebingen, 72076 Tuebingen, Germany

12:00-12:15

John L. Barbur

“Contrasting vision changes and pupil responses in retinal disease”

Authors: John L Barbur (1) ; Benjamin Evans (1); James R E Sadler (1,2)

1. Applied Vision Research Centre, City, University of London, Northampton Square, London EC1V 0HB, UK
2. Human Systems Technology, QinetiQ, Cody Technology Park, Farnborough, Hampshire, GU14 0LX, UK

12:15-12:30

Brendan L. Portengen

“Three pupil perimetry methods compared”

Authors: Brendan L. Portengen (1), Saskia M. Imhof (1), Giorgio L. Porro (1), Marnix Naber(2)

1. Ophthalmology department, University Medical Center Utrecht, The Netherlands
2. Experimental psychology department, Utrecht University, The Netherlands

12:30-12:45

Juan Mompeán

“Automatic and Dynamic presbyopia correction”

Authors: Silvestre Manzanera, Inmaculada Delgado, Juan Mompeán, Pablo Artal.

Laboratorio de Óptica. Instituto Universitario de Investigación en Óptica y Nanofísica, Universidad de Murcia, Murcia, Spain

12:45-13:00

Juan Tabernero

“Design and testing of an IR Raspberry Pi – based pupillometer”

Authors: Javier Gantes-Nuñez (1,4), Megan Vaughan (2), Carles Otero (2), Geovanni Hernández-Gómez (3), Uriel Calderón-Uribe (3), Daniel Malacara Hernández(1), Shahina Pardhan (2) and Juan Tabernero (4)

1. Centro de Investigaciones en Óptica, C.P. 37150, León, Gto., México
2. Vision and Eye Research Institute (VERI) – School of Medicine, Anglia Ruskin University, CB21 2LZ Cambridge, UK
3. División de Ciencias e Ingenierías, Campus Irapuato-Salamanca, Universidad de Guanajuato,
4. Departamento de Electromagnetismo y Electrónica, Universidad de Murcia, 30100 Murcia, Spain

13:00-14:45

LUNCH

14:45-15:15

Invited talk 3 (Chair: Barbara Wilhelm)

Katarzyna Komar, Nicolaus Copernicus University, Toruń, Poland

“Pupil response to infrared stimulus perceived due to two-photon absorption in visual pigments”

15:15

Session 4 (Chair: Barbara Wilhelm)

15:15-15:30

Andreas Widmann

“Separation of the parasympathetic and sympathetic contributions to the pupil dilation response by principal component analysis”

Authors: Andreas Widmann (1,2), Erich Schröger (1), Nicole Wetzel (2,3)

1. Institute of Psychology, University of Leipzig, Germany
2. Leibniz Institute for Neurobiology, Magdeburg, Germany
3. Center for Behavioral Brain Sciences, Magdeburg, Germany

15:30-15:45

Claudio Privitera

“The Pupil in Progressive Supranuclear Palsy”

Authors: Shirley H Wray MD, PhD, FRCP (1), Randy H. Kardon, MD, PhD (2), Anne-Marie Wills MD, MPH (1), Claudio M Privitera, PhD (3)

1. Department of Neurology, Massachusetts General Hospital, Harvard Medical School
2. Department of Ophthalmology and Visual Sciences, University of Iowa and Iowa City VA-Medical Center
3. School of Optometry, University of California, Berkeley

15:45-16:00

Chiara Tortelli

“Pupillometry reveals perceptual differences that are tightly linked to autistic traits”

Authors: Chiara Tortelli (1), Marco Turi (2,3), David C. Burr (4,5), Paola Binda (2)

1. University of Pisa, Department of Surgical Medical Molecular and Critical Area Pathology, Pisa (Italy)

2. University of Pisa, Department of Translational Research on New Technologies in Medicine and Surgery, Pisa (Italy)
3. Fondazione Stella Maris Mediterraneo, Chiaromonte, Potenza, Italy
4. Department of Neuroscience, Psychology, Pharmacology and Child Health, University of Florence, Firenze (Italy)
5. University of Sydney, School of Psychology, Sydney (Australia)

16:00-16:30

Invited talk 4 (Chair: Pablo Artal)

Shrikant R. Bharadwaj

“Pupil responses to near visual demand during human visual development”

Authors: Shrikant R. Bharadwaj (1), Jingyun Wang (2), T. Rowan Candy (3)

1. Brien Holden Institute of Optometry and Vision Sciences, Hyderabad Eye Research Foundation, L V Prasad Eye Institute, Road no.
2. Banjara Hills, Hyderabad, Telangana, INDIA, 2 Retina Foundation of the Southwest, 9900 N Central Expressway, Suite 400, Dallas, Texas, USA,
3. Indiana University School of Optometry, 800 East Atwater Avenue, Bloomington, Indiana, USA

17:00

Mar Menor Tour (Boat tour around the Europe’s biggest salt water lagoon)

20:30

Gala Dinner – 360° Restaurant (San Pedro del Pinatar, Mar Menor)

4th OCTOBER 2019

09:00-09:30

Invited talk 5 (Chair: Aki Kawasaki)

Diego Gutiérrez,

Universidad de Zaragoza (Spain)

“Visual examination on non-collaborative patients”

09:30

Session 5 (Chair: Aki Kawasaki)

09:30-09:45

Noémie Kircher

“Progressive changes in the Pupillary Light Response correlates with progressive retinal degeneration in a mouse model of ciliopathy”

Authors: Noémie Kircher (1), Sylvain V. Crippa (1,2), Catherine Martin (1), Avigail Beryozkin (3), Dror Sharon (3), Aki Kawasaki (2) and Corinne Kostic (1,*)

1. Group for Retinal Disorder Research, Department of Ophthalmology, Hôpital Ophtalmique Jules Gonin, University of Lausanne, Lausanne, Switzerland
2. Neuro-Ophthalmology, Department of Ophthalmology, Hôpital Ophtalmique Jules Gonin, University of Lausanne, Lausanne, Switzerland
3. Department of Ophthalmology, Hadassah-Hebrew University Medical Center, Jerusalem, Israel

09:45-10:00

Juan Manuel Bueno

“The role of the horizontal elongated pupil in ocular aberrations based on a fighting bull’s eye model”

Authors: Juan M. Bueno (1), Raúl Duarte-Toledo (1), J. Manuel Sanes (2), Juan Seva (2)

1. Laboratorio de Óptica, Universidad de Murcia, Murcia, Spain
2. Facultad de Veterinaria, Universidad de Murcia, Murcia, Spain

10:00-10:15

Torsten Strasser

“Pupillography Standards (Mini-Symposium)”

Authors: Torsten Strasser (1, 2) and Helmut Wilhelm (2, 3)

1. Institute for Ophthalmic Research, Centre for Ophthalmology, University of Tübingen, Germany
2. Pupil Research Group, Centre for Ophthalmology, University of Tübingen, Germany
3. University Eye Hospital, Centre for Ophthalmology, University of Tübingen, Germany

10:15-10:30

Krunoslav Stingl

“Monochromatic pupil campimetry in routine clinical diagnostics”

Authors: Krunoslav Stingl (1,2), Katarina Stingl (2), Ronja Jung (1,2), Laura Kühlewein (2,3), Melanie Kempf (2), Jakob Lange (1), Torsten Strasser (1,3), Helmut Wilhelm (1,2), Tobias Peters (1,2), Barbara Wilhelm (1), Carina Kelbsch (1,2)

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3. Institute for Ophthalmic Research, Center for Ophthalmology, Eberhard Karls University Tuebingen, Germany.

10:30-10:45

Nicole Wetzel

“Phasic changes in pupil diameter in response to emotional novel sounds - A developmental perspective”

Authors: Nicole Wetzel (1,2,3), Andreas Widmann (1,4)

1. Leibniz Institute for Neurobiology, Magdeburg, Germany
2. Center for Behavioral Brain Sciences Magdeburg, Germany
3. University of Applied Sciences Magdeburg–Stendal, Germany
4. Institute of Psychology, Leipzig, Germany

10:45-11:15

Coffee Break

Invited talk 6 (Chair: Pedro Prieto)

11:15-11:45

Andrew J. Zele

“Visual and non-visual melanopsin photoreception in humans”

Authors: Andrew J. Zele (1, 2), Prakash Adhikari (1, 2), Subodh Gnyawali (1, 3), Beatrix Feigl (1, 3, 4)

1. Visual Science and Medical Retina Laboratories, Institute of Health and Biomedical Innovation, Queensland University of Technology (QUT), Brisbane, QLD 4059, Australia

2. School of Optometry and Vision Science, Queensland University of Technology (QUT)
3. School of Biomedical Sciences, Queensland University of Technology (QUT)
4. Queensland Eye Institute, Brisbane, Australia

Session 6 (Chair: Pedro Prieto)

11:45-12:00

Silvestre Manzanera

“Pupil diameter under normal viewing condition”

Authors: Silvestre Manzanera, Inmaculada Delgado, Juan Mompeán, Pablo Artal.

Laboratorio de Óptica. Instituto Universitario de Investigación en Óptica y Nanofísica, Universidad de Murcia, Murcia, Spain

12:00-12:15

Minoru Nakayama

“Measuring reward expectation during a controlled Poker game using pupillary change”

Authors: Kohei Shoda and Minoru Nakayama
Tokyo Institute of Technology, Japan

12:15-12:30

Steve Beukema

“Pupil dilation to illusory motion in peripheral drift images: Perception versus reality”

Authors: Beukema S (1), Olson JA (2), Jennings BJ (1), Kingdom FAA(1)

1. McGill Vision Research, Department of Ophthalmology, Montreal General Hospital, Montreal, Quebec, Canada
2. Department of Psychiatry, McGill University, Montreal, Quebec, Canada

12:30-12:45

Ronja Jung

“Improving the reliability of pupil measurement in monochromatic pupil campimetry”

Authors: Ronja Jung (1,2), Carina Kelbsch (1,2), Katarina Stingl (2), Melanie Kempf (2), Torsten Strasser (1,3), Helmut Wilhelm (1,2), Tobias Peters (1,2), Barbara Wilhelm (1), Krunoslav Stingl (1,2)

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12:45-13:00

Next Meeting & Farewell (Pablo Artal)

13:15-15:00

LUNCH

Workshop chair

Pablo Artal

International Organizing Committee

John Barbur

Aki Kawasaki

Paul Gamlin

Corinne Carle

Ted Maddess

Ronald Douglas

Barbara Wilhelm

Randy Kardon

Local Organizing Committee

Pedro Prieto

Carmen Martínez

CONFERENCE VENUE

HOTEL AGALIA,

Av. Arquitecto Miguel Ángel Beloqui, 7, 30006 Murcia

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