

NEWS ITEM

## 33<sup>rd</sup> International Pupil Colloquium, Murcia, Universidad de Murcia (Spain); 2<sup>nd</sup>–4<sup>th</sup> October 2019

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The Scientific Committee were formed by John Barbur, Aki Kawasaki, Paul Gamlin, Ted Maddess, Ronald Douglas, Barbara Wilhelm and Randy Kardon.

For over 60 years, Pupil Colloquia have brought together experts from around the world who study pupillary responses in humans and animals. The meetings discuss the latest findings in areas of research that relate to pupil response mechanisms as well as the functional consequences of normal and abnormal pupil responses and clinical applications. The 33<sup>rd</sup> meeting was held early October 2019 in Murcia, Spain, organized by the Optics lab of the University of Murcia. The meeting was highly successful including invited and contributing presentations covering the traditional range of pupil topics together with some optically-related talks concerning pupil responses. All presentations were of high scientific standard, covered a range of pupil-related studies and generated interesting and useful discussions. A group picture of the scientists attending the 33<sup>rd</sup> Pupil Colloquium is shown on the right.

The meeting featured seven invited presentations. Andrew Watson from Apple delivered this year Loewenfeld lecture entitled “Student of the pupil”. Dr. Watson described different useful formulae to describe the pupil behavior under different conditions. In the first invited presentation, Barbara Wilhelm from Tübingen University presented a historical overview on the career of Otto Löwenstein. Pedro Prieto from Murcia University described options of using pupil responses as a method to determine visual acuity that can be used in non-cooperative subjects.

Katarzyna Komar, from Nicolaus Copernicus University, talked on pupil responses to infrared stimulus perceived due to two-photon absorption in visual pigments. Shrikant R. Bharadwaj from LV Prasad Institute delivered an invited talk on pupil responses to near visual demand during human visual development. Diego Gutiérrez, from University of Zaragoza talked on visual examination on non-



collaborative patients using pupil responses. Andrew J. Zele from Queensland University of Technology presented an invited talk on visual and non-visual melanopsin photoreception in humans.

The abstracts from the conference are published online as supplementary material.

### Supporting Information

Additional Supporting Information may be found in the online version of this article:

**Supplementary Material S1.** Abstracts of papers presented at the 33rd International Pupil Colloquium.