



Light, Colour & Vision

Virtual CONFERENCE

ACS General Conference

Date: **25th June 2023**

Time: **9.00am to 5.00 pm** (AEST -Sydney Australia time zone)

We have a great line up of speakers for you!
With latest research and clinical applications.
Don't Miss out register early!

Professor Bernat Sunyer Grau

Professor at the degree in Optics and Optometry at the Polytechnic University of Catalonia (UPC), School of Optics and Optometry

Functional connectivity of brain networks with three monochromatic wavelengths: a pilot study using resting-state functional magnetic resonance imaging

Growing research indicates that exposure to light can have a positive impact on multiple health-related problems. In optometric practice, the use of light has been used for decades in the treatment of visual dysfunctions. Despite the extended use of optometric photostimulation, the scientific evidence is scarce and the extent and location of changes in brain areas caused by exposure to monochromatic light remain largely unknown. In this pilot study, we attempted to provide insight on how different monochromatic wavelengths can affect non-visual brain regions.

Dr Doug Stephey,

Professional Private Practice, Covina, CA Has been Assistant Professor, Ocular Disease Service, Southern California College of Optometry,

Visual Learning Assessment

This one-hour presentation will introduce a visual learning assessment model for your consideration and the developmental stages on how to approach therapy.

This model includes traditional testing, but also includes visual aliasing, magnocellular vision, beat competency / millisecond timing, the polyvagal theory, working memory, decoding skills, phonological processing, retained primitive reflexes, archetype movements, epigenetics, kinetic colour visual fields, mineral regulation, vitamin deficiencies, and fatty acid metabolism.

Dr Ieuan H Ree

B.App.Sc.(Optom)(Hons) MBCO, MOSO. Grad Cert Ocular Therapeutics Specialty Contact Lens Practitioner | Ophthalmic Medicines Prescriber | Orthokeratologist | Behavioural Optometrist

Syntonics: An Analytical Method

Abstract: When implementing any new testing/treatment modality the process stages always lead to how can we make this work better? Syntonics is no different except it covers such a holistic gambit of conditions and there is no easily understood clear pathway to direct treatment options. We use the Black Book as a guide and more recently we have the Hadden trauma protocol. Rather than reevaluate each patient I have taken the Black Book and applied weighted values for physical appearance, emotional stability, binocular vision finding and colour kinetic field result to create a score which in turn directs the choice of syntonics filter. There appears to be reasonable correlation with Blind snap test results. I have also taken on board matching the fields to the iridology charts as provided by Denise Hadden and I am remarkably surprised by the strike rate. Again, I have formularised these such that the analysis of the visual field by computer provides this information.

Professor Glen Jeffery

Professor, Institute of Ophthalmology, University College London.

Honorary Professor Moorfields Eye Hospital. Honorary Professor Cardiff University

Vision Improvement with Red light

The retina burns more energy than any other organ in the body and has the highest concentration of mitochondria in the outer retina. But high burn rates mean faster ageing, the pace of which is partly regulated by mitochondria. But we can manipulate mitochondria optically improving their function with specific deep red lights. This reduces the pace of retinal ageing from flies to humans. We have used this to improve metabolism and function in ageing and in challenged physiological conditions including diabetes. We have also explored how manipulating mitochondria in one part of the body impacts systemically. While longer wavelength provides metabolic protection those around 420nm undermine mitochondria. Shorter wavelengths can dominate artificial lighting and may be a key factor restricting health.

Professor Jie Huang

Professor, Department of Radiology & Neuroscience Program, Michigan State University, USA.

A neurological basis of precision ophthalmic tints in reducing visual stress in migraine

This talk will review several migraine-related cortical activation studies using the blood oxygenation level dependent (BOLD) functional magnetic resonance imaging (fMRI) technique. The talk will focus on: (1) the association of visual cortical hyper-activation with visual illusion/distortion and/or discomfort in migraine; (2) the association of visual cortical hyper-activation with visually triggered migraine attacks; and (3) the neurological basis for reducing visual cortical hyper-activation in migraine with precision ophthalmic tints.

Dr. Danjela Ibrahimi

Ph.D. in Optometry. International Center of Optometry (COI), Madrid, Spain.

Professor-researcher of the Faculty of Medicine and Engineering, Autonomous University of Queretaro. Mexico.

“Cortical activity at baseline and during light stimulation in patients with strabismus and amblyopia”.

This research assesses the brain activity and visual performance at baseline and after light therapy (LTH), of seventeen patients with strabismus and amblyopia (SA), and eleven healthy controls (HCs) from Querétaro, México. Quantitative electroencephalogram analysis (qEEG) was used to record the brain activity, and clinical metrics such as the visual acuity, angle of deviation, phoria state, stereopsis, and visual fields determined the visual performance. Results showed a constant higher alpha-wave frequency for HCs. Low voltages remained negative for HCs and positive for SA patients across stimulation. After LTH, high voltage increased in SA patients, and decreased in HCs. A second spectral peak, (theta-wave), was exclusively recorded in SA patients, at baseline and after LTH. Positive Spearman correlations for alpha-wave frequency, low and high voltages were only seen in SA patients. Synchronized brain activity was recorded in all SA patients stimulated with filters transmitting light in the blue but not in the red spectrum. Enhancement in the visual performance of SA patients was found, whereas deterioration of the phoria state and a decrease in the amount of stereopsis was seen in HCs. To conclude, only a suffering brain and a visual pathway which needs to be enabled can benefit from LTH.

Mr Marco Simeoni,

EMF dangers and how to test and treat your dwelling.

Electro magnetic frequencies are not seen but can have profound effect on your health long term. Light pollution is one of these factors. We will discuss their impact on your health and show how we can test for them and make recommendations to alleviate the concern.

Registration Payments:

Payments to be made via PayPal to syntoniccollegeaustralia@gmail.com

Once payments are made, please email us at syntoniccollegeaustralia@gmail.com with proof of payment and the following details:

- Full Name _____

- Proof of Current Membership

- Practice Address

- Total Amount Paid - \$ _____

You will not get a Zoom link if you do not send through this information

Early Bird Payments (Prior to June 11th, 2023):

Members: ACS: \$295 and CSO: \$310

Non-Members: \$395

Payments (After June 11th 2023):

Members: ACS: \$350 and CSO: \$365

Non-Members \$450

ALL prices are in \$AUD

(Once registered you will receive an email with the link invitation for the meeting)