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XXIII ICVS Symposium: Sendai, JAPAN

July 3rd-7th, 2015

ICVS 2015 Organizing Committee

email: info@icvs2015.jpn.org

web: www.vision.riec.tohoku.ac.jp/ICVS2015

Venue: Sakura hall, Katahira campus, Tohoku University, Sendai, Japan

The 23rd symposium of the International Colour Vision Society will be held in Sendai, Japan, from **July 3rd to 7th, 2015**.

About Sendai (仙台)

With one million inhabitants, Sendai City is the largest city in the Tohoku region. The settlement of modern Sendai city began around 1600 by Date Masamune, a powerful and famous lord. Many of Sendai's tourist attractions shown below are related to Masamune and his family. *Aoba Castle*, now the ruins of Date's castle, consists of the remains of the outer stone walls and a guard tower. *Zuihoden Mausoleum*, in walking distance from the venue, is the site of entombment of Date's family. *Osaki Hachimangu Shrine* was constructed by Masamune in 1607; Hachiman is a Shinto god and is considered to protect the city. Less than an hour northeast of the city centre lies the town of Matsushima, whose bay is dotted by pine-clad islets and is known for one of Japan's three most scenic views.

Sendai has been nicknamed "the city of trees" (Mori-no-Miyako) for its greenery, and its main streets are lined with zelkova trees. Sendai is also known as an academic town due to its large number of universities and tertiary institutions relative to its size and population.

Sendai was the closest major city to the huge earthquake of March 11, 2011. The tsunami damaged the city's coastal side but did not cause major problems in the city centre. The effect of the radiation from the meltdown at the Fukushima Dai-Ichi nuclear power plant is limited in Sendai and most cities in Japan. The recent environmental radioactivity level is carefully monitored by the Japanese government and released online at <http://radioactivity.nsr.go.jp/en/>. The organizing committee of ICVS 2015 is convinced that the venue is completely secure.

Contents

Sendai, Japan.....	1	Important Dates.....	2
Call for Papers and Special Sessions.....	2	Traveling to Sendai, Japan.....	2
ICVS 2015, Social Programs, Organization Committee & Advisory Board	3	ICVS 22 nd Symposium Report.....	5
Membership Renewal & Editorial.....	4	Obituary: Dr. Philippe Lanthony.....	7
Early Career Member Profile.....	6		

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Call for Papers

We invite you to submit an abstract for either a paper or a poster presentation on any aspect of colour vision. Topics of interest include, but are not restricted to, any of the following:

- Acquired loss of colour vision in diseases of the retina
- Central processing of colour signals
- Colour in occupational environments
- Colour induction and constancy
- Colour cognition
- Colour in the mesopic range
- Colour vision assessment
- Comparative colour vision
- Congenital colour vision deficiencies
- Ecology of colour vision
- Effects of ageing on colour vision
- Functional imaging and colour vision
- Genetics of colour vision
- Hypoxia and colour vision
- Isolation of chromatic mechanisms
- Object-surface properties, material perception, and related topics
- Peripheral chromatic sensitivity
- Physiology of colour vision
- Unique hues
- Variability in colour vision

Special Sessions

This year's meeting includes a special session for the 100th anniversary of Ishihara pseudo-isochromatic test plates for colour deficiency, a special session in memory of Dr. Lanthony, and special talks with invited Japanese outstanding researchers:

- Hidehiko Komatsu (National Institute for Physiological Sciences, Japan)
- Kentaro Arikawa (The Graduate University for Advanced Studies, Japan)
- Shoji Kawamura (Tokyo University, Japan)
- Mitsuru Sawa (Isshinkai Public Interest Incorporated Foundation, Japan)

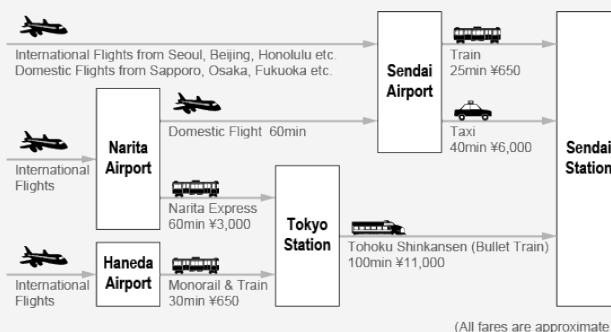
Important Dates

- December 10th, 2014: Online registration and abstract submission open
- March 25th, 2015: Submission of abstracts for papers and posters, including abstracts for student travel award ends
- May 1st, 2015: Notification of authors' acceptance and student travel award
- May 11th, 2015: Early registration ends
- June 20th, 2015: Late registration ends
- (Date to be advised): JOSA A paper submission deadline

Traveling to Sendai

From Sendai Airport, by taxi; it is about 60 minutes from Sendai Airport to Katahira Campus or by taking Sendai Airport Line; it is about 25 minutes from Sendai Airport to Sendai Station.

We recommend you arrive at Narita or Haneda airport in Tokyo, then take Tohoku-Shinkan-sen, the bullet express train from Tokyo station to Sendai station (2 hours). From Sendai Station to the venue, it will take 20 minutes to walk or 5 minutes by taxi.



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Social Programs

The proposed social programs include visits to places of historical interest with scenic views and traditional Japanese attractions.

Accompanying person's programs are also planned. Please enjoy splendid and traditional Japanese attractions.

Friday 3rd July: Reception will be held in Sakura hall and a local dancing attraction "Sendai Suzume Odori" (Sendai Sparrow Dance) will take place.

Sunday 5th July: Excursion

Monday 6th July: Banquet will take place in *Shoukeikaku* restaurant which was built in 1905 as a residence of the Date Clan. It is the city's designated tangible cultural heritage and is known to the citizens as a valuable asset.

Notes

For a program outline, registration details and updated information, please visit our website:

www.vision.riec.tohoku.ac.jp/ICVS2015

For any other request, please contact the organizers at: info@icvs2015.jpn.org

We look forward to welcoming you to Sendai next July!



ICVS 2015 Organizing Committee

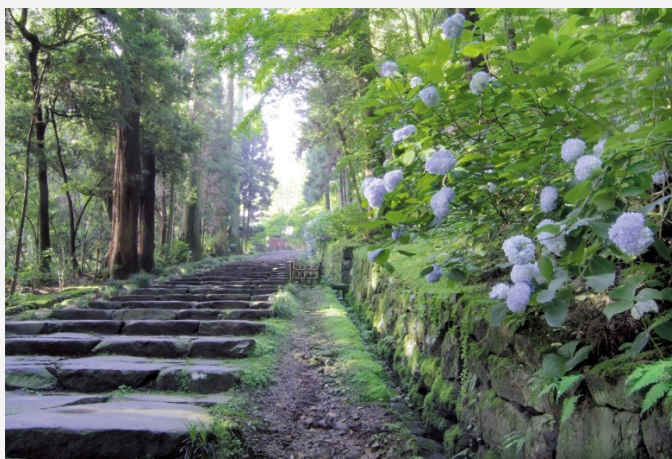
Chair

Keiji Uchikawa (Tokyo Institute of Technology)

- Shigeki Nakauchi (Toyohashi University of Technology)
- Ichiro Kuriki (Tohoku University)
- Kenji Yokoi (National Defense Academy of Japan)
- Kazuho Fukuda (Tokyo Institute of Technology)
- Takehiro Nagai (Yamagata University)
- Yoko Mizokami (Chiba University)
- Kowa Koida (Toyohashi University of Technology)

ICVS 2015 Advisory Board

- Hidehiko Komatsu (NIPS)
- Satoshi Nakadomari (National Rehabilitation Center for Persons with Disabilities)
- Keizo Shinomori (Kochi Tech)
- Sei-ichi Tsujimura (Kagoshima Univ)
- Hirohisa Yaguchi (Chiba Univ)
- Yasuki Yamauchi (Yamagata Univ)



ICVS Membership Renewal

By Neil Parry, the Treasurer

It's time to **renew** your membership. Everyone's membership expired on 31/12/14, so please take some time to visit the website and renew. Rates remain unchanged this year, at €140 for regular membership, €30 retired, and €30 for students. If you are a recent postdoc, you will still have student status if your doctorate was awarded on or after 1st January 2013. To renew, please visit the website (www.icvs.info) and click on 'membership'. This time, there are a couple of extra fields for you to fill in before you click 'Pay Now', so that I have your up to date affiliation and full postal address. Please make sure you fill them in when you renew - it makes my job a lot easier. Something else that would make my life easier would be if you could renew well before the abstract deadline – there is quite a lot of work involved in processing each membership application, and if you all do it at the same time it becomes more or less a full time job for a couple of weeks.

One final plea: As you know, it is a requirement that presenters at the meeting become paid up members of the society. A lot of this is done on trust, with, if needs be, a little gentle bullying from me. I'm sad to say that 9 of you never joined the society last time, despite my best efforts. The practical upshot of this is that we have over €1000 less in our treasury than we should have and will therefore be unable to fund as much student travel as we would like. You will know who you are because you were not sent a copy of the proceedings. Please don't make me beg this time!

That's enough complaining from your beleaguered treasurer! May I take this opportunity to wish you all a Happy New Year.



Editorial

Dingcai Cao, PhD (dcao98@uic.edu) and Andrew J. Zele, PhD (andrew.zele@qut.edu.au)

We extend a special thanks to Drs. Keiji Uchikawa and Valérie Bonnardel for their contributions to this issue. Memberships can now be processed via the ICVS website: www.icvs.info. Have a happy, healthy, productive and colorful year of 2015.

ICVS XXII Symposium (Winchester, UK) Report

*Valérie Bonnardel, PhD, Symposium Organization Committee
Reader in Experimental Psychology
University of Winchester, Colour Group (Great Britain), Chair*



Coming from twenty-eight countries, one hundred sixty three colour scientists met in Winchester for the 22nd ICVS symposium, 14th-18th July, 2013.

The program included sixty seven oral presentations and seventy four poster presentations. In line with the Society's tradition, the symposium received an healthy participation from young researchers who represented a third of the attendees. The Society funded twenty-one Travel Students Awards and the JOSA A. best poster award was shared by Natasha Bloch (University of Chicago) and Romain Bachy (SUNY, NYU) who received both a prize of US \$250.

On Sunday 14th July, after a welcome address from the University Vice Chancellor, Joy Carter and John Mollon, the symposium started by a special session on Colour Neurophysiology co-organised with the Colour Group (Great Britain), chaired by Joel Pokorny and Qasim Zaidi, to celebrate Barry Lee's prestigious scientific career. The paper presentations were given by Dennis Dacey, Dingcai Cao, Paul Martin, Sam Solomon and Qazim Zaidi, while Barry Lee closed the session with the historical talk. The session was followed by the University of Winchester Enterprise Lecture introduced by Gordon Plant and given by Neil Harbisson on the topic of 'Hearing colours' that described his phenomenologic experience of colours as a cyborg.

In the presence of the Mayor of Winchester, a reception was organised in the Great Hall where ICVS members could admire the greatest symbol of medieval mythology; King Arthur's Round Table. The medievalist Michael Hick, and the music composer The Reverend June Boyce-Tillman, joined the celebration to provide guests some hints on the atmosphere and the etiquette in use at medieval times.

In the following days, twelve sessions, each diligently organised by a Society member, provided a program of large diversity and high scientific standard.

The Society was delighted to present the 2013 Verriest Medal to Françoise Viénot for her outstanding contribution to Colour Science in general and to her support to the Society since 1974. The Verriest lecture on 'Visual properties of metameric blacks beyond cone vision' provided new insights on the use of metameric blacks.

The two posters sessions were particularly buoyant with filled with intense networking activities and informal exchanges. These exchanges were to be pursued during the excursion at Buckler's Hard and Beaulieu Estates to be only interrupted by the William Shakespeare play 'As You Like It' performed by the young and talented Castle Theatre Company. ICVS guests could rest and relax on the Abbey's garden lawn and enjoy the warm summer evening.

After the Business meeting, on the last evening there was a final get-together for a Winchester Cathedral tour followed by a cocktail.

Soon after the Ecology of colour vision session, the meeting closed on Thursday 18th July, everyone was parting anticipating the 23rd ICVS symposium to be held in Sendai, Japan, in July 2015.

Fifty five research papers stemming from of the symposium were published in in the Journal of The Optical Society of America A. Feature Issue on Colour Vision in April 2014.

The organisers are grateful to all members of the Society for making these symposiums repeatedly successful.



Early-Career Member Profile: Pablo Alejandro Barrionuevo, PhD



Pablo in Ireland

Pablo is an Argentine scientist. His interest for vision started in 2005 when he developed an algorithm to measure pupil diameter as undergraduate student in the National University of Tucuman, Argentina. In the same university he obtained Master (2009) and Doctoral (2012) degrees working on glare effect in brightness perception. Under the supervision of Dr. Elisa Colombo and Dr. Luis Issolio, he developed a model of retinal adaptation in mesopic conditions and proposed a technique to quantify intraocular scattering in people with cataracts. In 2007 a short stay in Dr. Dora Ventura's lab triggered his curiosity to color vision. In 2011 he participated for the first time in an ICVS meeting. On the first day, he met Dr. Dingcai Cao on the train from Oslo to Kongsberg. They discussed rod-cone interactions. In 2012 he was awarded with the "John G. Nicholls" research fellowship from the International Brain Research Organization for carrying out postdoctoral studies of rod-cone interactions in Dr. Cao's lab.

Currently, he is working in the visual perception laboratory of the University of Illinois at Chicago with Dr. Cao. His work mainly concerns with rod-cone interaction in the peripheral retina and the functional consequences of melanopsin activation in intrinsically photosensitive retinal ganglion cells (ipRGCs). He has studied efficient combinations of photoreceptor signals considering the constraints of natural environment using natural image statistics. He found that the contributions of rods and cones to phasic pupil light reflexes are linearly combined. He is currently investigating retinal circuitries mediating rod and cone inputs to ipRGCs. Recently, the Illinois Society for the Prevention of Blindness provided him a grant for studying the effect of glaucoma on melanopsin-mediated pupil responses. In addition, the impact of light exposure on circadian rhythms and the visual perception in patients with keratoprosthesis are matters of his attention. He is maintaining collaboration with Dr. Juan Aparicio from the University of Valladolid in Spain about studies of detection sensitivity at different eccentricities.

In December 2014, Pablo was awarded the highly competitive "Return Home Fellowship" from International Brain Research Organization to help him to establish his lab in Argentina in 2015.

Color Vision Feature Issue of JOSA-A (2013 Winchester Symposium)

(by Steve Buck, PhD, ICVS Secretary)

The Color Vision feature issue of the Journal of the Optical Society of America A that includes the papers based on presentations at the 2013 Winchester ICVS Symposium is published. Altogether, the issue includes 55 peer-reviewed articles, including Françoise Viénot's Verriest Lecture and Barry Lee's Historical Lecture. The articles can be found online on the JOSA A OpticsInfoBase website: <http://www.opticsinfobase.org/josaa/issue.cfm?volume=31&issue=4>

Congratulations to the authors for the high scientific quality of their papers. This is a very impressive compendium that speaks well for our Society. I especially want to thank the many ICVS members who helped to review this large number of submissions on a very tight schedule. The timely publication of these results depended on your efforts. Please also join me in thanking my fellow editors who worked tirelessly to nurture as many papers as possible into the feature issue: Valérie Bonnardel, Rigmor Baraas, Barry Lee, Delwin Lindsey, Michael Webster, and John Werner.

Obituary: Dr. Philippe Lanthony

*Written by Valérie Bonnardel, PhD, Reader in Experimental Psychology
University of Winchester, Colour Group (Great Britain), Chair*

The Director of the Centre Hospitalier National des Quinze-vingts – Paris - announced the sad news that Doctor Philippe Lanthony died on the 28th August 2014 at age of 84.



Philippe Lanthony was an ophthalmologist specializing in the physiology and the pathology of colour vision, which he studied in his Laboratory of Colour Vision at the Centre National d'Ophthalmologie des Quinze-Vingts in Paris. Doctor Lanthony is perhaps best known in the Colour Science Community for the Lanthony desaturated D15 (1973) and the New Color Test (1975) that were designed as screening and grading tests for acquired achromatopsia. Philippe Lanthony had also a keen interest in the relationship between visual perception and artistic expression. He was a regular contributor to the magazine 'Points de vue' edited by Essilor International with whom several books were published including 'An eye for painting' (2006), 'Light vision and painting' (2009) and 'A natural history of colour vision' (2012). Additional books that he wrote were 'Art and Ophthalmology' (2009) and his last book 'The History of Color Blindness' (2013), both published by Wayenborgh Publishing.

Philippe Lanthony was the Chair of the Paris Ophthalmology Society and a founding member of the IRGCVD - International Research Group on Colour Vision Deficiencies (today ICVS-International Colour Vision Society). Philippe Lanthony was a scholar of scientific rigour with an artistic sensitivity and borrowing the words of José-Alain Sahel, Director of the 'Institut de la Vision-Paris', the world of colours has lost 'a man of integrity loaned to us by the age of the encyclopedists'.

Color Book Information

What is color blindness: What to know if you're diagnosed with color blindness

(Author: Egill Hansen)

What is Color Blindness? Is intended for both lay people and medical doctors alike who want to gain a better understanding of what color blindness really is, its causes, the various diagnostic tests, and its implications for work and daily life. Color blindness is an often used catch all term for all degrees and types of color vision defects, from minor issues to major deficiencies that pose severe difficulties in daily life. The book takes the reader through these differences and shows how they pose problems for children and adults at school, at work, and at their daily lives. It also covers professions that require good color vision, such as those found in aviation, shipping and railroad services. The book explains the many causes of color blindness, ranging from inborn genetic causes to color vision defects caused by diseases, injuries to the eye, and intoxication. What is Color Blindness? is an easy yet thorough guide for color blind People and their families, friends and colleagues at work. The book gives answers to typical questions posed by health care professionals who deal with color blindness, including ophthalmologists, physicians, psychologists, opticians and teachers.

