

**Monday, June 17
Morning**

Thurgood Ballroom			
09:00 - 09:10	OPENING SESSION Ron Gibbons, US (Local Organizing Committee Chair) Yoshi Ohno, US (CIE President)		
	Keynote Presentation Chair: Yoshi Ohno, US		
09:10 - 10:00	IP01 THE HISTORIC REVISION OF THE INTERNATIONAL SYSTEM OF UNITS William D. Phillips, US		
10:00 - 10:15	AWARD CEREMONY		
10:15 - 10:40	COFFEE BREAK		
	Thurgood Ballroom	Lincoln 5	Lincoln 6
	Oral Presentations		
10:40 - 12:00	PA1-1 D1/D2/D3 - TLM Measurement and Effects Chair: Peter Blattner, CH	PA1-2 D1 - Colour Appearance Chair: Po-Chieh Hung, US	PA1-3 D4 - Road Lighting Chair: Dionyz Gasparovsky, SK
10:40 - 10:55	OP01 Adam Klej, NL FLICKER (PSTLM) AND STROBOSCOPIC EFFECT (SVM) – LIGHT MEASUREMENTS IN PHOTOMETRICAL LABORATORIES	OP05 Chi-Han Ma, TW AN INITIAL STUDY OF COLOUR APPEARANCE IN VIRTUAL REALITY	OP09 Ronald Gibbons, US EVALUATING THE LIGHTING LEVELS, SURROUND RATIO AND UNIFORMITY IN AN LED LIGHTED ENVIRONMENT
10:55 - 11:10	OP02 Anders Thorseth, DK MEASURING AND COMPARING WAVEFORMS OF TEMPORAL LIGHT MODULATION	OP06 Yuechen Zhu, CN MODELLING OF SIMULTANEOUS CONTRAST EFFECTS USING MEMORY COLOUR MATCHING METHOD TO REVISE THE CIECAM16 COLOUR APPEARANCE MODEL	OP10 Stephan Voelker, DE NEW WAYS TO ACHIEVE CLIMATE AIMS IN ROADWAY LIGHTING
11:10 - 11:25	OP03 Lili Wang, CN THE VISIBILITY OF THE PHANTOM ARRAY EFFECT UNDER OFFICE LIGHTING CONDITION	OP07 Changjun Li, CN MODELLING COLOUR APPEARANCE FOR UNRELATED COLOURS BASED ON CAM16	OP11 Steve Fotios, GB WHICH METRICS ARE NEEDED TO SPECIFY GOOD LIGHTING FOR PEDESTRIANS?
11:25 - 11:40	OP04 Jennifer Veitch, CA COGNITIVE AND EYE MOVEMENT EFFECTS ON VIEWERS OF TEMPORAL LIGHT MODULATION FROM SOLID-STATE LIGHTING	OP08 Thanh Hang Phung, BE APPLYING AN IMAGE COLOUR APPEARANCE MODEL FOR SIMPLE SELF-LUMINOUS SCENES	OP12 Jim Uttley, GB THE INFLUENCE OF ROAD LIGHTING ON CYCLIST NUMBERS AND SAFETY
11:40 - 12:00	Discussion	Discussion	Discussion
12:00 - 13:10	LUNCH BREAK		

**Monday, June 17
Afternoon**

	Thurgood Ballroom	Lincoln 5	Lincoln 6
	Oral Presentations	Workshop/Seminar	Oral Presentations
13:10 - 15:10	<p align="center">PA2-1 D2 - LED-Based Standard Sources Chair: Dong Hoon Lee, KR</p>	<p align="center">WS 1 (D1) Convenors: Minchen Wei, HK; Michael Royer, US, Kevin Houser, US</p>	<p align="center">PA2-2 D6 - Photobiology Chair: John O'Hagan, GB</p>
13:10 - 13:25	<p align="center">OP13 Thorsten Gerloff, DE LUMINOUS INTENSITY COMPARISON BASED ON NEW STANDARD LAMPS WITH LED REFERENCE SPECTRUM</p>	<p>RESEARCH METHOD FOR INVESTIGATING LIGHT SOURCE COLOUR RENDITION</p>	<p align="center">OP19 Ljiljana Udovicic, DE LIGHT AND BLUE-LIGHT EXPOSURES OF DAY WORKERS IN SUMMER AND WINTER</p>
13:25 - 13:40	<p align="center">OP14 Timo Dönsberg, FI CONSTANT-VOLTAGE DRIVEN TEMPERATURE STABILIZED LUMINOUS FLUX LED STANDARD LAMP WITH E27 BASE</p>		<p align="center">OP20 Christoph Schierz, DE IS LIGHT WITH LACK OF RED SPECTRAL COMPONENTS A RISK FACTOR FOR AGE-RELATED MACULAR DEGENERATION (AMD)?</p>
13:40 - 13:55	<p align="center">OP15 Alejandro Ferrero, ES DEFINITION OF A SPECTRAL MISMATCH INDEX FOR SPECTRAL POWER DISTRIBUTIONS</p>		<p align="center">OP21 Ting-Lan Tsai, TW INFLUENCE ON HUMAN SLEEP OF DYNAMIC LIGHTING</p>
13:55 - 14:10	<p align="center">OP16 Xi Lv, CN LED SIMULATORS FOR THE REPRODUCTION OF THE NEW CIE STANDARD LED SOURCES</p>		<p align="center">OP22 David Sloney, US RETINAL EXPOSURE - HORIZONTAL OR VERTICAL ALPHA IRRADIANCE OR ILLUMINANCE?</p>
14:10 - 14:25	<p align="center">OP17 Yuqin Zong, US HIGH-POWER STANDARD LEDS WITH SUPERIOR LONG-TERM STABILITY</p>		<p align="center">OP23 Cameron Miller, US INNOVATIVE APPROACHES TO COMBAT HEALTHCARE-ASSOCIATED INFECTIONS USING STANDARDS DEVELOPED THROUGH INDUSTRY AND U.S. FEDERAL COLLABORATION</p>
14:25 - 14:40	<p align="center">OP18 Tsung-Hsun Yang, TW SPECTRAL DISTRIBUTION OF TYPICAL WHITE LED AS A FUNCTION OF CCT</p>		<p align="center">OP24 Mariana Figueiro, US NOCTURNAL MELATONIN SUPPRESSION BY ADOLESCENTS AND ADULTS FOR DIFFERENT LEVELS, SPECTRA, AND DURATIONS OF LIGHT EXPOSURE</p>
14:40 - 15:10	<p align="center">Discussion</p>		<p align="center">Discussion</p>
15:10 - 15:35	COFFEE BREAK		

	Thurgood Ballroom	Lincoln 5	Lincoln 6
	Presented Posters		
	PS1 Presented Posters (D1/D2) Chair: Kevin Smet, BE	PS2 Presented Posters (D2/D3) Chair: Armin Sperling, DE	PS3 Presented Posters (D4/D6) Chair: Maurice Donners, NL
15:35 - 16:30	PP01 Lorne Whitehead, CA SPECTRAL CHARACTERISTICS INFLUENCING THE METAMERIC UNCERTAINTY INDEX	PP11 Janne Askola, FI NATURAL AND ACCELERATED AGEING OF ORGANIC LED PANELS USING SPECTRALLY DISPERSED ULTRAVIOLET EXPOSURE	PP21 Yukio Akashi, JP LIGHTING REQUIREMENTS FOR ADAPTIVE DRIVING BEAM (ADB) TO IMPROVE TARGET VISIBILITY WHEN ONCOMING HEADLIGHT GLARE EXISTS
15:35 - 15:40	PP02 Semin Oh, KR HUE PERCEPTION AND NEUTRALNESS OF A SMARTPHONE DISPLAY UNDER DIFFERENT SURROUND CONDITIONS	PP12 Alejandro Ferrero, ES TESTING SPARKLE MEASUREMENT CAPABILITIES OF NATIONAL METROLOGY INSTITUTES	PP22 Roman Dubnicka, SK MEASUREMENT OF OBTUSIVE LIGHTING OF OUTDOOR LIGHTING INSTALLATIONS
15:40 - 15:45	PP03 Chuen-Yan Gu, TW VISUAL IMPRESSIONS OF PAIRED PATTERNS – TAKING WALLPAPER PATTERNS AS AN EXAMPLE	PP13 Tuomas Poikonen, FI FUTURE PHOTOMETRY BASED ON SOLID-STATE LIGHTING PRODUCTS	PP23 Valérie Muzet, FR TOWARDS AN OPTIMIZATION OF URBAN LIGHTING THROUGH A COMBINED APPROACH OF LIGHTING AND ROAD BUILDING ACTIVITIES
15:45 - 15:50	PP04 Jennifer Veitch, CA DETECTION OF THE STROBOSCOPIC EFFECT UNDER LOW LEVELS OF THE STROBOSCOPIC VISIBILITY METRIC	PP14 Joelene Elliott, AU IMPACT OF LUMINANCE DISTRIBUTION ON PERCEPTION OF THE SHAPE OF ARCHITECTURAL SPACES	PP24 Dorian Talon, FR IMPACT OF THE SPECTRUM OF LIGHT ON VISIBILITY IN ROAD TUNNELS
15:50 - 15:55	PP05 Yoko Mizokami, JP CHANGE IN THE APPEARANCE OF OBJECTS ACCORDING TO THE RATIO OF DIRECT AND DIFFUSIVE LIGHT	PP15 Shuxiao Wang, CN PRELIMINARY RESEARCH ON MATHEMATIC MODEL OF EYE'S ADAPTATION LUMINANCE	PP25 Pimkamol Mattsson, SE ENERGY EFFECTIVE OUTDOOR LIGHTING FOR VISUALLY IMPAIRED PEDESTRIANS
15:55 - 16:00	PP06 Yuki Kawashima, US QUANTIFYING PERCEIVED CHROMA CHANGES BY HUNT EFFECT IN LIGHTING	PP16 Kai Ge, CN EFFECT OF VISUAL DISTRACTION ON ANXIETY IN WOMEN DURING THE FIRST STAGE OF LABOR	PP26 Eric Li, US IMPACT OF ROADWAY LIGHTING ON DRIVER BEHAVIOR AT FREEWAY RAMP LOCATIONS
16:00 - 16:05	PP07 Tzung-Han Lin, TW SHADE-FREE TEXTURE ACQUISITION FOR 3D SCANNING SYSTEM	PP17 Noriko Umemiya, JP DIFFERENCES OF LIGHT ENVIRONMENT EVALUATION BETWEEN ELDERLY AND YOUNG PEOPLE	PP27 Anna Pellegrino, IT ANALYSIS AND DESIGN APPROACH FOR A NOCTURNAL IMAGE OF THE CULTURAL LANDSCAPE
16:05 - 16:10	PP08 Tony Bergen, AU FLASH OBSERVATION AT THRESHOLD OF VISION USING A FOUR ALTERNATIVE FORCED CHOICE EXPERIMENT	PP18 Jing Lin, GB EFFECT OF INTENSITY OF SHORT-WAVELENGTH LIGHT ON SUBJECTIVE AND OBJECTIVE ALERTNESS	PP28 Giuseppe Rossi, IT THE VEILING LUMINANCE IN TUNNEL LIGHTING INSTALLATIONS
16:10 - 16:15	PP09 Kenji Godo, JP Investigation of LED-based compact transfer standard source for luminance measurement	PP19 Hinako Kage, JP EXPERIMENTAL STUDY ON ILLUMINANCE DISTRIBUTION IN THE TASK AND BACKGROUND AREA OF OPEN-OFFICE LIGHTING	PP29 Aleix Llenas, ES DYNAMIC MULTI-LED LIGHTING SYSTEMS THAT MIMIC DAYLIGHT IMPROVES MEASURED ALERTNESS, COMFORT AND SLEEP QUALITY
16:15 - 16:20	PP10 Roman Dubnicka, SK GONIOSPECTRORADIOMETRY OF ROAD LIGHTING LUMINAIRES IN RESPECT OF MESOPIC PHOTOMETRY	PP20 Yandan Lin, CN ASSESSING THE PROPORTIONS AND CCT OF DIRECT AND INDIRECT LIGHTING IN A REAL LIT OFFICE	PP30 Luke Price, GB CIRCADIAN LIGHT EXPOSURES OF SHIFT WORKING NURSES
16:20 - 16:25			PP31 Satoshi Hirakawa, JP ESTIMATION METHOD OF DISCOMFORT GLARE FOR LED TUNNEL INTERIOR LIGHTING
16:25 - 16:30			
	Lincoln Conference Area		
16:30 - 18:00	Poster session 1		

**Tuesday, June 18
Morning**

Thurgood Ballroom			
Invited Presentation Chair: TBD			
08:30 - 09:15	IP02 Non-image forming effects of light and lighting: new insights and metrics Luc Schlangen, NL		
09:15 - 09:20 Room configuration			
Thurgood Ballroom	Lincoln 5		Lincoln 6
Workshop/Seminar	Oral Presentations		
09:20 - 10:20	WS 2 (D3) Convenor: Jennifer Veitch, CA	PA3-1 D1 - Colour in Application Chair: Danny Rich, US	PA3-2 D2 - Measurement of SSL Products Chair: Anders Thorseth, DK
09:20 - 09:35	MEASURING TEMPORAL LIGHT MODULATION AND ASSESSING ITS EFFECTS ON VIEWERS: MOVING TOWARDS SETTING LIMITS	OP25 Qiang Xu, CN EXTENSION OF COLOUR DIFFERENCE FORMULAE FOR HDR APPLICATIONS	OP28 Benjamin Tsai, US NOT ALL 60 Hz ELECTRICITY IS THE SAME – COMPLICATIONS IN MEASURING SOLID-STATE LIGHTING PRODUCTS
09:35 - 09:50		OP26 Tingyun Lu, TW INFLUENCE OF COLOUR ON VISUAL CONSPICUITY: TAKING SUBWAY ROUTE MAPS AS AN EXAMPLE	OP29 Maria Nadal, US SOLID-STATE LIGHTING MEASUREMENT ASSURANCE PROGRAM SUMMARY WITH ANALYSIS OF METADATA
09:50 - 10:05		OP27 Sophie Jost, FR A COLOUR GRAPHIC ICON FOR REAL COMPLEXE SCENES: APPLICATION TO LED ILLUMINANTS	OP30 Denan Konjhodzic, DE EVALUATION OF BLUE LIGHT HAZARD
10:05 - 10:20		Discussion	Discussion
10:20 - 10:45 COFFEE BREAK			
Thurgood Ballroom	Lincoln 5		Lincoln 6
Oral Presentations			Workshop/Seminar
10:45 - 12:05	PA4-1 D3 - Daylight 1 Chair: Dominique Dumortier, FR	PA4-2 D1 - Colour Rendering Chair: Peter Hanselaer, BE	WS 3 (D4) Convenor: Dionyz Gasparovsky, SK
10:45 - 11:00	OP31 Martine Knoop, DE APPROACH TO ANALYZE SEASONAL AND GEOGRAPHICAL VARIATIONS IN DAYLIGHT ILLUMINANTS	OP35 Minchen Wei, HK EFFECT OF LIGHT LEVEL ON COLOUR PREFERENCE AND SPECIFICATION OF LIGHT SOURCE COLOUR RENDITION	IN SEARCH OF A NEW APPROACH TO THE MAINTENANCE FACTOR
11:00 - 11:15	OP32 Niko Gentile, SE ENERGY SAVING POTENTIAL FOR INTEGRATED DAYLIGHTING AND ELECTRIC LIGHTING DESIGN VIA USER-DRIVEN SOLUTIONS: A LITERATURE REVIEW	OP36 Sebastian Babilon, DE A NEW METRIC FOR MEMORY COLOUR PREFERENCE EVALUATION IN LIGHTING APPLICATIONS – EXPERIMENTS, MATHEMATICAL DEFINITION, AND COMPARISON WITH OTHER COLOUR RENDERING INDICES	WP1 Janne Askola, FI REDUCED LIFETIME OF LED STREET LUMINAIRES DUE TO ADAPTIVE CONTROL
11:15 - 11:30	OP33 Yingjun Dong, CN STUDY ON THE EFFECTS OF AROUSAL DAYLIGHTING OF DORMITORY ON COLLEGE STUDENTS' SLEEP QUALITY, ALERTNESS AND MOOD IN SUMMER	OP37 Peter Bodrogi, DE SEMANTIC INTERPRETATION OF THE CIE 2017 COLOUR FIDELITY INDEX	WP2 Peter Schwarcz, HU REVIEW AND PROPOSALS FOR UPGRADE OF METRICS OF USEFUL LIFETIME OF PROFESSIONAL LED LUMINAIRES
11:30 - 11:45	OP34 Victoria Eugenia Soto Magan, CH ASSESSING ALERTING EFFECTS OF DAYLIGHT AT THE WORKPLACE: METHODOLOGY BASED ON A SEMI-CONTROLLED STUDY	OP38 Barbara Matusiak, NO TOWARD NEW COLOUR RENDERING METHOD OF WINDOW GLASS	
11:45 - 12:05	Discussion	Discussion	
12:05 - 13:15 LUNCH BREAK			

**Tuesday, June 18
Afternoon**

	Thurgood Ballroom	Lincoln 5	Lincoln 6
	Oral Presentations	Workshop/Seminar	Oral Presentations
13:15 - 15:15	PA5-1 D3 - Glare Chair: Peter Thorns, GB	WS4 (D1) (Convenors: Ronnier Luo, CN/GB; Tran Quoc Khanh, DE)	PA5-2 D2 - Goniophotometry Chair: Tony Bergen, AU
13:15 - 13:30	OP39 Malgorzata Perz, NL EXPLORING THE PLEASANT SIDE OF GLARE IN THE LED ERA	MODELLING COLOUR QUALITY OF LIGHT SOURCES	OP45 Johannes Ledig, DE PRINCIPLE LIMITATIONS OF NEAR-FIELD GONIOPHOTOMETER MEASUREMENTS
13:30 - 13:45	OP40 Raquel Viula, NL TESTING THE PREDICTIVE POWER OF VISUAL DISCOMFORT FROM GLARE METRICS IN NEAR-WINDOW AND NEAR WALL-ZONES		OP46 Jianguan Pan, CN SPATIAL LIGHT DISTRIBUTION CHARACTERIZATION AND MEASUREMENT OF LED HORTICULTURAL LIGHTS
13:45 - 14:00	OP41 Clotilde Pierson, BE DIFFERENCE BETWEEN FIELD AND LABORATORY STUDIES OF DISCOMFORT GLARE CUT-OFF VALUES		OP47 Alexander Kokka, FI COMPARISON OF THE FISHEYE CAMERA METHOD WITH GONIOPHOTOMETERS FOR MEASURING RELATIVE ANGULAR INTENSITY DISTRIBUTIONS OF LIGHT SOURCES
14:00 - 14:15	OP42 Luigi Giovannini, IT ANNUAL EVALUATION OF DAYLIGHT DISCOMFORT GLARE: STATE OF THE ART AND DESCRIPTION OF A NEW SIMPLIFIED APPROACH		Discussion
14:15 - 14:30	OP43 Sophie Jost, FR TESTING EXPERIMENTAL METHODS FOR DISCOMFORT GLARE INVESTIGATIONS		Workshop/Seminar
14:30 - 14:45	OP44 Toshie Iwata, JP EFFECTS OF LUMINANCE DISTRIBUTION AND VIEW ON EVALUATION OF DISCOMFORT GLARE FROM WINDOWS		WS5 (D6) Convenors: Luc Schlangen, NL; Luke Price, GB
14:45 - 15:15	Discussion		USE AND APPLICATION OF THE NEW CIE S 026:2018 METROLOGY FOR IPRGC-INFLUENCED RESPONSES TO LIGHT "SPECIFYING LIGHT FOR ITS EYE-MEDIATED NON-VISUAL EFFECTS IN HUMANS"

15:15 - 15:40 **COFFEE BREAK**

	Thurgood Ballroom	Lincoln 5	Lincoln 6
	Oral Presentations		Workshop/Seminar
15:40 - 16:40	PA6-1 D3 - Daylight 2 Chair: Martine Knoop, DE	PA6-2 D2 - LED Characterization Chair: Adam Klej, NL	WS6 (D6) Convenor: John O'Hagan
15:40 - 15:55	OP48 Dominique Dumortier, FR ONE YEAR OF USE OF A LIGHT DOSIMETER	OP51 Hans Baumgartner, FI FAILING MECHANISMS OF LED LAMPS	HORTICULTURAL LIGHTING
15:55 - 16:10	OP49 Aicha Diakite, DE A DATA-DRIVEN COLORIMETRIC ANALYSIS OF CIE STANDARD GENERAL SKIES	OP52 Genevieve Martin, NL FROM MEASUREMENTS TO STANDARDISED MULTI-DOMAIN COMPACT MODELS OF LEDS USING LED E-DATASHEETS	
16:10 - 16:25	OP50 Doris Chi, MX USING RADIANCE TO ESTIMATE TRANSMITTED SOLAR RADIATION ENERGY FOR THIN AND THICK PERFORATED SCREENS	OP53 András Poppe, HU MULTI-DOMAIN CHARACTERIZATION OF COB LEDS	
16:25 - 16:40	Discussion	Discussion	

Lincoln Conference Area

16:40 - 18:10 **Poster session 2**

Wednesday, June 19

Morning

Thurgood Ballroom			
Invited Presentation Chair: TBD			
IP03			
08:30 - 09:15	Light the UNseen: research at the interface of architecture, energy engineering, microbiology and daylight and newfound gaps Kevin van den Wymelenberg, US		
Room configuration			
Thurgood Ballroom	Lincoln 5		Lincoln 6
Oral Presentations			
PA7-1 D3 - Interior Lighting 1 Chair: Nozomu Yoshizawa, JP	PA7-2 D2 - Detector Characterization Chair: Hiroshi Shitomi, JP		PA7-3 D4 - Urban Lighting Chair: Nigel Parry, GB
09:20 - 10:20	OP54 Hillevi Hemphälä, FI A NEW METHOD FOR EVALUATING THE VISUAL ENVIRONMENT	OP57 Zhifeng Wu, CN NONLINEARITY OF THE PHOTODETECTOR USING LASER FACILITY	OP60 John Bullough, US INTEGRATING RESEARCH ON SAFETY PERCEPTIONS UNDER PARKING LOT ILLUMINATION
09:20 - 09:35	OP67 Ferenc Szabó, HU INVESTIGATION OF HUMAN CENTRIC LIGHTING IN INDUSTRIAL ENVIRONMENT IN MULTIPLE ASPECTS – BIOLOGICAL EFFECT AND USERS’ PREFERENCE	OP58 Geiland Porrovecchio, CZ LONG-TERM SPECTRAL RESPONSIVITY STABILITY OF PREDICTABLE QUANTUM DETECTORS	OP61 Jialu Wu, CN WHAT TYPES OF VISUAL ENVIRONMENT CAN REDUCE THE PERCEPTION OF NOISE IN URBAN RESIDENTIAL DISTRICT?
09:35 - 09:50	OP56 Peter Dehoff, AT REVISION OF THE INTERNATIONAL STANDARDS OF LIGHTING OF INTERIOR WORKPLACES	OP59 George Eppeldauer, US PYROELECTRIC STANDARDS FOR SPECTRAL AND BROADBAND IRRADIANCE MEASUREMENTS FOR 250 nm TO 3000 nm	OP62 Mike Chapman, AU LED STREET LIGHTING AND LIGHT POLLUTION - A CASE STUDY IN SOUTH EAST AUSTRALIA
09:50 - 10:05	Discussion	Discussion	Discussion
10:05 - 10:20	Discussion	Discussion	Discussion
COFFEE BREAK			
Thurgood Ballroom	Lincoln 5		Lincoln 6
Oral Presentations			
PA8-1 D3 - Interior Lighting 2 Chair: Adrie de Vries, NL	PA8-2 D1 - Colour in Lighting Chair: Michael Murdoch, US		PA8-3 D4 - Road Surface Characteristics Chair: Sermin Onaygil, TR
10:45 - 12:05	OP63 Shao Rongdi, CN EXPERIMENT OF LIGHTING ENVIRONMENTS IN WARD FOR BLOOD CANCER PATIENTS BASED ON VIRTUAL REALITY TECHNOLOGY	OP68 Yuki Kawashima, US VISION EXPERIMENT ON VERIFICATION OF HUNT EFFECT IN LIGHTING	OP72 Valérie Muzet, FR OPTIMIZATION OF ROAD SURFACE REFLECTIONS PROPERTIES AND LIGHTING: LEARNING OF A THREE YEAR EXPERIMENT
10:45 - 11:00	OP64 Luoxi Hao, CN EVIDENCE-BASED RESEARCH AND APPLICATIONS OF A THERAPEUTIC LIGHTING SYSTEM ON CIRCADIAN RHYTHM AND MOOD REGULATION FOR CHINESE PATIENTS	OP69 Yoshi Ohno, US VISUAL EVALUATION OF CIE 2015 CONE FUNDAMENTAL-BASED 10° COLOUR MATCHING FUNCTIONS FOR LIGHTING APPLICATIONS	OP73 Enoch Saint-Jacques, FR EVALUATION OF THE PERFORMANCE OF A ROAD SURFACE GONIOREFLECTOMETER
11:00 - 11:15	OP65 Mariana Figueiro, US LIGHT, ENTRAINMENT AND ALERTNESS: A CASE STUDY IN OFFICES	OP70 Hsin-Pou Huang, HK UNIQUE HUE JUDGMENTS UNDER LIGHT SOURCES WITH DIFFERENT CHROMATICITIES	OP74 Paola Iacomussi, IT INFLUENCE OF MATERIAL CHARACTERIZATION IN THE DESIGN OF TUNNEL LIGHTING INSTALLATIONS
11:15 - 11:30	OP66 Miki Kozaki, JP RESEARCH ON THE RANGE OF PLEASANT DARKNESS AND BRIGHTNESS IN RESTAURANTS: DISCUSSION ON AGE FACTOR	OP71 Ronnier Luo, CN PROPOSAL OF A NEW WHITENESS FORMULA BASED ON CAM16-UCS	OP75 Florian Greffier, FR USE OF AN IMAGING LUMINANCE MEASUREMENT DEVICE TO EVALUATE ROAD LIGHTING PERFORMANCE AT DIFFERENTS ANGLES OF OBSERVATION
11:30 - 11:45	Discussion	Discussion	Discussion
11:45 - 12:05	Discussion	Discussion	Discussion
LUNCH BREAK			
12:05 - 13:15			

**Wednesday, June 19
Afternoon**

	Thurgood Ballroom	Lincoln 5	Lincoln 6
	Workshop/Seminar	Oral Presentations	
13:15 - 15:15	WS 7 - Part 1 (Joint CIE(D1/D8)-OSA-IS&T Workshop) Convenors: Po-Chieh Hung, US; Manuel Spitschan, GB; Francisco Imai, US	PA9-1 D2 - Spectroradiometry Chair: Tobias Schneider, DE	PA9-2 D4 - Visibility and Visual Performance in Road Lighting Chair: Steve Fotios, GB
13:15 - 13:30	COLOUR IMAGING, PERCEPTION, AND REPRODUCTION: NEW DIRECTIONS IN COLOUR SCIENCE AND TECHNOLOGY	OP76 Ralph Zuber, DE COMBINED OUT OF RANGE AND IN BAND STRAY LIGHT CORRECTION FOR ARRAY SPECTRORADIOMETERS	OP82 Rajaram Bhagavathula, US UNDERSTANDING DRIVER VISUAL PERFORMANCE BY EXAMINING DISTRIBUTIONS OF DETECTION DISTANCES
13:30 - 13:45		OP77 Yuqin Zong, US CALIBRATION OF SPECTRORADIOMETERS USING TUNABLE LASER SOURCES	OP83 Maurice Donners, NL ILLUMINATION REQUIREMENTS FOR GAZE PERCEPTION
13:45 - 14:00		OP78 Marek Smid, CZ THE DESIGN AND DEVELOPMENT OF A TUNABLE AND PORTABLE RADIATION SOURCE FOR IN SITU SPECTROMETER CHARACTERISATION	OP84 Cheng-Hsie Chen, TW THE VISIBILITY STUDIES OF DYNAMIC ROAD-LIGHTING ON A FOGGY ROAD
14:00 - 14:15		OP79 Weiqiang Zhao, CN PHOTOMETER SPECTRAL RESPONSE MEASUREMENT USING OPO TUNABLE LASER	OP85 Joanne Wood, AU THE EFFECT OF DIFFERENT HEADLIGHT TECHNOLOGIES ON VISUAL PERFORMANCE AT NIGHT-TIME
14:15 - 14:30		OP80 Armin Sperling, DE AN UNCERTAINTY ANALYSIS OF PHOTOMETRIC RESPONSIVITY BASED ON SPECTRAL IRRADIANCE RESPONSIVITY	OP86 Rajaram Bhagavathula, US APPLICABILITY OF VISUAL PERFORMANCE MODELS TO NIGHTTIME DRIVING
14:30 - 14:45		OP81 Tomi Pullij, FI GENERAL TOOL FOR ESTIMATING EFFECTS OF UNKNOWN CORRELATIONS ON SPECTRAL INTEGRALS	OP87 Jian Li, CN VISUAL COMFORT EVALUATION METHOD AND PREDICTION MODEL RELATING TO DISCOMFORT GLARE: A MOCK-UP STUDY OF LUMINOUS ENVIRONMENT IN AIRPLANE COCKPIT
14:45 - 15:15		Discussion	Discussion
15:15 - 15:40		COFFEE BREAK	

	Thurgood Ballroom	Lincoln 5	Lincoln 6
	Workshop/Seminar	Oral Presentations	Workshop/Seminar
15:40 - 17:40	WS 7 - Part 2 (Joint CIE(D1/D8)-OSA-IS&T Workshop) Convenors: Po-Chieh Hung, US; Manuel Spitschan, GB; Francisco Imai, US	PA10-1 D2 - Gloss and Camera Applications Chair: Udo Krüger, DE	WS 8 (D3) Convenors: Gilles Vissenberg, NL; Maurice Donners, NL
15:40 - 15:55	COLOUR IMAGING, PERCEPTION, AND REPRODUCTION: NEW DIRECTIONS IN COLOUR SCIENCE AND TECHNOLOGY	OP88 Gael Obein, FR WHAT IS THE TRUE WIDTH AND HEIGHT OF THE SPECULAR PEAK ACCORDING THE LEVEL OF GLOSS?	TOWARDS AN INTEGRATED DISCOMFORT GLARE MEASURE BASED ON THE HUMAN VISUAL SYSTEM
15:55 - 16:10		OP89 Coralie Cauwerts, BE COLORIMETRIC ACCURACY OF HIGH DYNAMIC RANGE IMAGES FOR LIGHTING RESEARCH	
16:10 - 16:25		OP90 Changhui Ye, KR TEST METHOD OF LUMINANCE DYNAMIC RANGE FOR HDR CAMERA WITH CMOS IMAGE SENSOR	
16:25 - 16:40		OP91 Oskari Pekkala, FI SETUP FOR CHARACTERISING THE SPECTRAL RESPONSIVITY OF FABRY-PÉROT-INTERFEROMETER-BASED HYPERSPECTRAL CAMERAS	
16:40 - 16:55		OP92 Aiman Raza, FR SIMPLIFIED HYPERSPECTRAL CAMERA CALIBRATION FOR ACCURATE RADIOMETRIC MEASUREMENTS	
16:55 - 17:10		OP93 Ling Li, CN THE DEVELOPMENT OF PORTABLE CALIBRATION LIGHT SOURCE AND TEMPERATURE CORRECTION ALGORITHM FOR IN-SITU RADIOMETERS	
17:10 - 17:40		Discussion	
		Thurgood Ballroom	
17:45 - 18:15	CLOSING SESSION		

Posters

Poster session 1: Monday, June 17, 16:30 - 18:00

NOTE: Presented Posters are shown with the respective presentation number (PPxx) beside the Poster number (POxxx).

PO001	Yuki Akizuki	Japan	IMPROVEMENT OF COLOUR RENDERING OF URETHANE SKIN SAMPLES BY USING COMPUTER COLOUR MATCHING METHOD
PO002	Miyoshi Ayama	Japan	COLORIMETRIC VALUES OF IMAGE SKIN COLOUR IN THE WHOLE FACE AND CHEEK PART, AND THEIR RELATION TO SUBJECTIVE EVALUATION
PO003	DeWei Cao	China	STUDY OF TARGET VISIBILITY ON THE ROAD WITH DRIVING AS WORKLOAD
PO004	Giorgia Chinazzo	Switzerland	COGNITIVE PERFORMANCE EVALUATION UNDER CONTROLLED DAYLIGHT LEVELS AT DIFFERENT INDOOR TEMPERATURES
PO005	Dorukalp Durmus	Australia	EVALUATION OF HUE SHIFT FORMULAE IN CIELAB AND CIECAM02-UCS
PO006	Tomoya Fujiwara	Japan	THRESHOLD METRIC CHROMA OF IMAGES FOR CHROMATIC PERCEPTION
PO007	PP03 Chuen-Yan Gu	Chinese Taipei	VISUAL IMPRESSIONS OF PAIRED PATTERNS – TAKING WALLPAPER PATTERNS AS AN EXAMPLE
PO008	Peter Hanselaer	Belgium	EXPLORING THE MICHAELIS-MENTON FORMULA FOR APPEARANCE MODELLING
PO009	Stijn Hermans	Belgium	EVALUATING BRIGHTNESS AND GLARE PERCEPTION OF SELF-LUMINOUS STIMULI
PO010	Eiji Hidaka	Japan	DEVELOPMENT FOR THE OPTIMUM DISPLAY COLOURS ON ROAD INFORMATION BOARDS WITH CONSIDERATION FOR COLOUR VISION BARRIER FREE
PO011	Yejin Hong	South Korea	COLOUR APPEARANCE MATCH UNDER TWO LIGHTINGS HAVING DIFFERENT LUMINANCE LEVELS
PO012	Jeff Hovis	Canada	TRICHROMATIC AND DICHROMATIC COLORIMETRIC ANALYSIS OF THE FARNSWORTH-MUNSELL D-15 COLOUR VISION TEST
PO013	Zheng Huang	China	THE IMPACT OF GENDER AND OBJECT COLOUR ON THE PREFERRED COMBINATION OF ILLUMINANCE AND COLOUR TEMPERATURE
PO014	Min Huang	China	COLOUR DIFFERENCE DISCRIMINATIONS OF YOUNG AND OLD OBSERVERS BASED ON DIFFERENT DISPLAYS
PO015	Michico Iwata	Japan	STUDY ON THE RELATIONSHIP BETWEEN PREFERRED ILLUMINANCE AND CORRELATED COLOUR TEMPERATURE OF LED LIGHTING FOR VISUALLY CHALLENGED PEOPLE
PO016	Xin Jiang	China	PEDESTRIANS TEND TO LOOK AT SCENES WITH HIGHER LUMINANCE AND GREATER SALIENCY AT NIGHT
PO017	Shogo Kageyama	Japan	KANSEI EVALUATION OF THE RED OBJECT IMAGES USING DIFFERENT RED PRIMARIES
PO018	Masafumi Kamei	Japan	EFFECT OF DIRECT GLARE OF LED FLOODLIGHT ON CATCHING A MOVING OBJECT
PO019	Kohei Kawame	Japan	REPRESENTATIVE COLOUR OF THE WHOLE-FACE IMAGE AND ITS RELATION TO FINISH-UP IMPRESSION
PO020	Kitivut Kongbuntud	Thailand	HYBRID WHITE LED STREET LIGHT FOR MESOPIC VISION
PO021	Chan-Su Lee	South Korea	CHROMATIC DEPENDENCE OF THE CONTRAST SENSITIVITY FUNCTION OF THE PHANTOM ARRAY EFFECT
PO022	Yandan Lin	China	EFFECTS OF CRI AND GAI ON EMOTION AND WORK PERFORMANCE IN OFFICE LIGHTING
PO023	Yandan Lin	China	ASSESSING LIGHTING APPRAISAL, PERFORMANCE, PHYSIOLOGICAL COMPONENTS IN OFFICE WORK
PO024	PP20 Yandan Lin	China	ASSESSING THE PROPORTIONS AND CCT OF DIRECT AND INDIRECT LIGHTING IN A REAL LIT OFFICE
PO025	Qiang Liu	China	BEST LIGHTING FOR JEANS: OPTIMISING COLOUR PREFERENCE, COLOUR DISCRIMINATION AND COLOUR CONSTANCY
PO026	PP05 Yoko Mizokami	Japan	CHANGE IN THE APPEARANCE OF OBJECTS ACCORDING TO THE RATIO OF DIRECT AND DIFFUSIVE LIGHT
PO027	Kenji Mukai	Japan	RELATIONSHIP BETWEEN COLOUR RENDERING INDICES AND SUBJECTIVE COLOUR DIFFERENCES
PO028	Balazs Vince Nagy	Hungary	CHROMATIC ADAPTATION EFFECTS AND LIMITS OF AMBIENT ILLUMINATION SPECTRAL CONTENT
PO029	Balázs Vince Nagy	Hungary	OBSERVING THE EFFECT OF CHROMATIC ADAPTATION ON COLOUR DISCRIMINATION UNDER DIFFERENT VIEWING CONDITIONS
PO030	Marina Nishikawa	Japan	A STUDY ON COMPREHENSIBILITY OF INFORMATION OF INDUCTION SIGNS: DEGREE OF INFORMATION SEPARATION IN SIGNBOARDS
PO031	PP02 Semin Oh	South Korea	HUE PERCEPTION AND NEUTRALNESS OF A SMARTPHONE DISPLAY UNDER DIFFERENT SURROUND CONDITIONS

PO032	Kazim Hilmi Or	Turkey	ISN'T COLOUR VISION AN ILLUSION?
PO033	Michael Royer	United States	REVIEW OF EXPERIMENTS ON SUBJECTIVE QUALITIES OF COLOUR RENDITION
PO034	Takashi Sakamoto	Japan	VISIBILITY OF HANDRAILS UNDER 500 LUX AND 0.5 LUX FLUORESCENT LIGHT: SUITABLE RAILING-COLOURS FOR ELDERLY PEOPLE
PO035	Renzo Shamey	United States	ON DETERMINING UNIQUE HUES FOR OBJECT STIMULI
PO036	Kevin Smet	Belgium	LUXPY: A PYTHON PACKAGE FOR COLOUR AND LIGHTING SCIENCE
PO037	Kevin Smet	Belgium	PILOT STUDY ON COLOUR MATCHING ACCURACY USING DIFFERENT PRIMARIES
PO038	Kevin Smet	Belgium	PILOT STUDY ON A NEW APPROACH FOR ESTIMATING ROOM BRIGHTNESS
PO039	Kevin Smet	Belgium	IMPACT OF BACKGROUND FIELD SIZE AND CORNEAL ILLUMINANCE ON THE DEGREE OF CHROMATIC ADAPTATION
PO040	Kevin Smet	Belgium	REAL VS RENDER: COLORIMETRIC AND PERCEPTUAL ACCURACY USING A REAL AND RENDERED CORNELL BOX WITH HEAD-MOUNTED DISPLAY VIRTUAL REALITY
PO041	Kevin Smet	Belgium	COLORIMETRIC ACCURACY OF A SIMULATION OF THE LIGHTING IN A REAL TUNNEL USING A PHYSICAL BASED RENDERER AND USING DIALUX
PO042	Yuki Tachikawa	Japan	MEASUREMENTS OF INTRAOCULAR STRAYLIGHT, VISUAL SENSITIVITY, AND DISCOMFORT GLARE FOR YOUNG AND ELDERLY OBSERVERS
PO043	Hiroshi Takahashi	Japan	EFFECTS OF LIGHT COLOUR ON WORK EFFICIENCY AND ALERTNESS
PO044	Kees Teunissen	Netherlands	APPLICATION OF CIE 13.3-1995 WITH ASSOCIATED CRI-BASED COLOUR RENDITION PROPERTIES
PO045	Toshihiro Toyota	Japan	A QUANTITATIVE VISUAL EVALUATION METHOD FOR IN-VEHICLE OPTICAL DEVICES BY LIGHTING SIMULATION
PO046	Quang Vinh Trinh	Germany	COLOUR PREFERENCE IS DEPENDENT OF CORRELATED COLOUR TEMPERATURE, CHROMA ENHANCEMENT AND ILLUMINANCE LEVELS - EXPERIMENTS AND ANALYSIS
PO048	Pintus Valentina	Austria	EXPERIMENTAL STUDY ON CHEMICAL AND COLORIMETRIC CHANGES OF ART MATERIALS BY LED IRRADIATION
PO049	PP04 Jennifer Veitch	Canada	DETECTION OF THE STROBOSCOPIC EFFECT UNDER LOW LEVELS OF THE STROBOSCOPIC VISIBILITY METRIC
PO050	Michal Vik	Czech Republic	WHITENESS FORMULA BASED ON CIECAM02 AND THEIR TEXTILE APPLICATION
PO051	Martina Vikova	Czech Republic	DESIGN OF ALTERNATIVE WARNING SIGN AND PEDESTRIAN CONSPICUITY
PO052	Minchen Wei	Hong Kong	INVESTIGATION OF EFFECT OF CCT AND LUMINANCE OF ADAPTING FIELD ON DEGREE OF CHROMATIC ADAPTATION VIA MEMORY COLOUR MATCHING
PO053	PP01 Lorne Whitehead	Canada	SPECTRAL CHARACTERISTICS INFLUENCING THE METAMERIC UNCERTAINTY INDEX
PO054	Kaida Xiao	United Kingdom	DEVELOPMENT OF WHITENESS INDEX FOR FACIAL COLOUR
PO055	Nianyu Zou	China	THE IMPACT OF LIGHTING SOURCE AND CALLIGRAPHY FONTS ON THE DEGREE OF PREFERENCE OF CHINESE CALLIGRAPHY WORKS
PO056	Fengyun Cui	Japan	QUANTIFICATION OF VISUAL ENVIRONMENT RECALL RADIO OF OMNIDIRECTIONAL VIRTUAL REALITY (VR)
PO057	Andrea Kim	United States	COLOUR EFFECTS IN THE RENDERING OF MIXED-REALITY SCENES
PO058	PP07 Tzung-Han Lin	Chinese Taipei	SHADE-FREE TEXTURE ACQUISITION FOR 3D SCANNING SYSTEM
PO059	Midori Tanaka	Japan	PHYSICAL INDICES FOR REPRESENTING MATERIAL PERCEPTION WITH REGARD TO GLOSSINESS, TRANSPARENCY, AND ROUGHNESS
PO060	Alexandra Tran	Australia	DYNAMIC LIGHTING FACILITATED BY COMPUTER VISION
PO061	Raquel Viula	Netherlands	A METHOD FOR ESTIMATING FISH-EYE LENS' FIELD-OF-VIEW ANGLE AND PROJECTION FOR HDR LUMINANCE CAPTURE
PO062	PP11 Janne Askola	Finland	NATURAL AND ACCELERATED AGEING OF ORGANIC LED PANELS USING SPECTRALLY DISPERSED ULTRAVIOLET EXPOSURE
PO063	Nina Basic	Switzerland	SPATIALLY RESOLVED MEASUREMENTS OF DIFFUSE REFLECTANCE
PO064	PP08 Tony Bergen	Australia	FLASH OBSERVATION AT THRESHOLD OF VISION USING A FOUR ALTERNATIVE FORCED CHOICE EXPERIMENT
PO065	Catherine Cooksey	United States	REFERENCE DATA SET AND VARIABILITY STUDY FOR HUMAN SKIN REFLECTANCE
PO066	Peter Csuti	Hungary	DETECTOR BASED PHOTOMETRIC CALIBRATION OF GONIOPHOTOMETERS
PO067	Paul Dekker	Netherlands	MAINS OPERATED LED BASED TRANSFER SOURCE FOR LUMINOUS FLUX SCALE REALISATION AND DISSEMINATION

PO068	Antonio Ferreira Junior	Brazil	OPTICAL PARAMETERS COMPARISON OF DENTISTRY OPERATION LIGHTS
PO069	Alejandro Ferrero	Spain	VISUAL SCALE DEFINITION FOR GRAININESS TEXTURE BY APPLYING MULTIDIMENSIONAL SCALING
PO070	Alejandro Ferrero	Spain	CHARACTERIZATION OF BYKO- SPECTRA EFFECT LIGHT BOOTH FOR DIGITAL SIMULATION IN A RENDERING TOOL
PO071	PP12 Alejandro Ferrero	Spain	TESTING SPARKLE MEASUREMENT CAPABILITIES OF NATIONAL METROLOGY INSTITUTES
PO072	Cheng Gao	China	CACULATION OF CCT AND Duv BASED ON POLYNOMIAL UP TO THIRD ORDER
PO073	PP09 Kenji Godo	Japan	INVESTIGATION OF LED-BASED COMPACT TRANSFER STANDARD SOURCE FOR LUMINANCE MEASUREMENT
PO074	János Hegedüs	Hungary	A STEP FORWARD IN LIFETIME MULTI-DOMAIN MODELLING OF POWER LEDs
PO075	Liu Hui	China	EXTENDED WAVELENGTH LED FOR RADIOMETRICAL AND PHOTOMETRICAL CALIBRATION
PO076	PP06 Yuki Kawashima	United States	QUANTIFYING PERCEIVED CHROMA CHANGES BY HUNT EFFECT IN LIGHTING
PO077	Thijs Krusselbrink	Netherlands	CEILING-BASED LUMINANCE MEASUREMENTS: A FEASIBLE SOLUTION?
PO078	Johannes Ledig	Germany	AUXILIARY DETECTOR POSITIONING SYSTEM WITH SIX DEGREES OF FREEDOM FOR THE EXTENSION OF A PHOTOMETRIC BENCH
PO079	Johannes Lindén	Denmark	BEAT FLICKER – A TEMPORAL LIGHT ARTEFACT DUE TO MULTIPLE SOURCES OF TIME MODULATED LIGHT
PO080	Minoru Minoru	Japan	SPECTRAL SUPRALINER BEHAVIOR OF SILICON PHOTODIODES WITH OVER-FILLED ILLUMINATION
PO081	Yuri Nakazawa	Japan	DEVELOPMENT OF A COMPACT-SIZE STANDARD LED FOR SPHERE-SPECTRORADIOMETER IN 2PI GEOMETRY
PO082	PP13 Tuomas Poikonen	Finland	FUTURE PHOTOMETRY BASED ON SOLID-STATE LIGHTING PRODUCTS
PO083	PP14 Joelene Elliott	Australia	IMPACT OF LUMINANCE DISTRIBUTION ON PERCEPTION OF THE SHAPE OF ARCHITECTURAL SPACES
PO084	PP16 Kai Ge	China	EFFECT OF VISUAL DISTRACTION ON ANXIETY IN WOMEN DURING THE FIRST STAGE OF LABOR
PO085	PP19 Hinako Kage	Japan	EXPERIMENTAL STUDY ON ILLUMINANCE DISTRIBUTION IN THE TASK AND BACKGROUND AREA OF OPEN-OFFICE LIGHTING
PO086	PP18 Jing Lin	United Kingdom	EFFECT OF INTENSITY OF SHORT-WAVELENGTH LIGHT ON SUBJECTIVE AND OBJECTIVE ALERTNESS
PO087	PP17 Noriko Umemiya	Japan	DIFFERENCES OF LIGHT ENVIRONMENT EVALUATION BETWEEN ELDERLY AND YOUNG PEOPLE
PO088	PP15 Shuxiao Wang	China	PRELIMINARY RESEARCH ON MATHEMATIC MODEL OF EYE'S ADAPTATION LUMINANCE
PO089	PP21 Yukio Akashi	Japan	LIGHTING REQUIREMENTS FOR ADAPTIVE DRIVING BEAM (ADB) TO IMPROVE TARGET VISIBILITY WHEN ONCOMING HEADLIGHT GLARE EXISTS
PO090	PP10 Roman Dubnicka	Slovakia	GONIOSPECTRORADIOMETRY OF ROAD LIGHTING LUMINAIRES IN RESPECT OF MESOPIC PHOTOMETRY
PO091	PP22 Roman Dubnicka	Slovakia	MEASUREMENT OF OBTRUSIVE LIGHTING OF OUTDOOR LIGHTING INSTALLATIONS
PO092	PP26 Eric Li	United States	IMPACT OF ROADWAY LIGHTING ON DRIVER BEHAVIOR AT FREEWAY RAMP LOCATIONS
PO093	PP25 Pimkamol Mattsson	Sweden	ENERGY EFFECTIVE OUTDOOR LIGHTING FOR VISUALLY IMPAIRED PEDESTRIANS
PO094	PP23 Valérie Muzet	France	TOWARDS AN OPTIMIZATION OF URBAN LIGHTING THROUGH A COMBINED APPROACH OF LIGHTING AND ROAD BUILDING ACTIVITIES
PO095	PP28 Giuseppe Rossi	Italy	THE VEILING LUMINANCE IN TUNNEL LIGHTING INSTALLATIONS
PO096	PP24 Dorian Talon	France	IMPACT OF THE SPECTRUM OF LIGHT ON VISIBILITY IN ROAD TUNNELS
PO097	PP27 Anna Pellegrino	Italy	ANALYSIS AND DESIGN APPROACH FOR A NOCTURNAL IMAGE OF THE CULTURAL LANDSCAPE
PO098	PP29 Aleix Llenas	Spain	DYNAMIC MULTI-LED LIGHTING SYSTEMS THAT MIMIC DAYLIGHT IMPROVES MEASURED ALERTNESS, COMFORT AND SLEEP QUALITY
PO099	PP30 Luke Price	United Kingdom	CIRCADIAN LIGHT EXPOSURES OF SHIFT WORKING NURSES
PO198	PP31 Satoshi Hirakawa	Japan	ESTIMATION METHOD OF DISCOMFORT GLARE FOR LED TUNNEL INTERIOR LIGHTING

Poster session 2: Tuesday 16:40 - 18:10

PO100	Siarhey Nikanenko	Belarus	COMPACT REFERENCE UV LED SOURCES WITH CONICAL DIFFUSE REFLECTOR
PO101	Masayuki Osumi	Japan	EVALUATION WAY OF EFFECT COATINGS APPLYING GONIO-PHOTOMETRIC SPECTRAL IMAGING
PO102	András Poppe	Hungary	DOES A SINGLE LED BIN REALLY REPRESENT A SINGLE LED TYPE?
PO103	Oswaldo Sanchez Junior	Brazil	CHARACTERIZATION OF THE INTENSITY DISTRIBUTION IN RETROREFLECTIVE ADHESIVES WITH NEAR FIELD GONIOPHOTOMETRY
PO104	Tobias Schneider	Germany	AGEING PROPERTIES OF DEUTERIUM LAMPS USED IN CALIBRATIONS OF UV SPECTRORADIOMETERS
PO105	Tobias Schneider	Germany	EXTRAPOLATION OF PHOSPHOR CONVERTED WHITE LED SPECTRA BEYOND THE VISIBLE WAVELENGTH RANGE
PO106	Wataru Shichi	Japan	EVALUATION OF THE INFLUENCE OF AN INTEGRATING SPHERE INTERNAL STRUCTURE ON TOTAL LUMINOUS FLUX MEASUREMENT
PO107	Dong-Joo Shin	South Korea	REFERENCE RADIOMETER IN A DUAL-PHOTODIODE DESIGN FOR CALIBRATION OF UVA IRRADIANCE METERS
PO108	Hiroshi Shitomi	Japan	OPTIMIZATION OF BARIUM SULFATE COATING FOR AN INTEGRATING SPHERE BY MEANS OF SPECTROPHOTOMETRIC ANALYSIS
PO109	Hirota Suzuki	Japan	A MEASUREMENT METHOD OF SPATIAL ILLUMINANCE DISTRIBUTION FOR AN OUTDOOR STADIUM MAKING USE OF A QUADCOPTER
PO110	Ljiljana Udovicic	Germany	PHOTOBIOLOGICAL SAFETY OF COMMON OFFICE LIGHT SOURCES
PO111	Alwyn Williams	United Kingdom	APPLICATION OF THE EFFECTIVE INTENSITY CONVOLUTION METHOD FOR THE CALCULATION OF FLASH DURATION
PO112	Peng Xue	China	THE INFLUENCE OF PARTICULATE MATTER CONCENTRATIONS ON SPECTRAL POWER DISTRIBUTION
PO113	Yasuki Yamauchi	Japan	EFFECTS OF NON-UNIFORM SPATIAL RESPONSE DISTRIBUTION OF INTEGRATING SPHERE ON THE TOTAL LUMINOUS FLUX MEASUREMENT OF PANEL LIGHT SOURCE
PO114	Jinyun Yan	China	LED FILAMENT STANDARD LAMPS FOR TOTAL LUMINOUS FLUX AND LUMINOUS INTENSITY
PO115	S. L. Steven Yang	Hong Kong	STUDY OF THE SIZE-OF-SOURCE EFFECT (SSE) ON THE CALIBRATION OF SPECTRAL RADIANCE STANDARDS
PO116	Xiaobo Zhuang	China	MEASUREMENT AND ANALYSIS ON TABLE LAMPS WITH DIMMING AND TONING FUNCTIONS
PO117	Myriam Aries	Sweden	STUDENTS IN GOOD MOOD APPEAR SLOWER AND LESS ACCURATE: A PILOT STUDY INVESTIGATING DYNAMIC LIGHTING IMPACT ON STUDENTS' PERCEPTION AND PERFORMANCE
PO118	Aleksandra Bartseva	Russia	MUSEUM LIGHTING IN RUSSIA: STATE OF THE ART
PO119	Juliano Beraldo	Brazil	WINDOW PROPORTION AND DAYLIGHT IN BUILDINGS: THE USE OF GOLDEN SECTION AS A DESIGN AID
PO120	Vladimir Budak	Russia	LIGHT SCIENCE IS NOT ONLY SCIENCE OF LIGHTING: THEORETICAL BASES AND APPLICATION AREA
PO121	Jung-En Chang	Chinese Taipei	PREFERENCE AND VISUAL IMPRESSION OF HUMAN FACES LIT IN VARIOUS DIRECTIONS
PO122	Ya-Han Chung	Chinese Taipei	EFFECTS OF LIGHTING ON VISUAL IMPRESSIONS OF A MEETING ROOM IN VIRTUAL REALITY
PO123	Bertrand Deroisy	Belgium	ENDURANCE TEST ON PHOTOMETRIC PERFORMANCE FOR FIRST GENERATION LED LUMINAIRES
PO124	Lale Erdem Atilgan	Turkey	AN ANALYSIS OF LED DRIVER PERFORMANCE USING TRIAC AND DC LINK DIMMING
PO125	Lale Erdem Atilgan	Turkey	AN INVESTIGATION OF A19 LED RETROFIT LAMPS IN THE TURKISH MARKET
PO126	Qing Fan	China	STUDY ON THE TRESPASS THRESHOLD OF STATIC LIGHT SOURCES ON INDOOR ACTIVITIES OF RESIDENTIAL BUILDINGS
PO127	Natalia Sokol	Poland	DAYLIGHT WITHIN A ROOM IN THE EYES OF ARCHITECTURE STUDENTS
PO128	Tommy Goven	Sweden	PREFERRED COLOUR TEMPERATURES OF AMBIENT LIGHT AT DIFFERENT LIGHT LEVELS AND SETTINGS
PO129	Luoxi Hao	China	EXPERIMENTAL RESEARCH OF DYNAMIC LIGHTING SCHEMES ON IMPROVING THE ANXIETY AND DEPRESSION IN LOW VISION PATIENTS
PO130	Hsin-Pou Huang	Chinese Taipei	HUMAN VISUAL RESPONSE TO OFFICE LIGHTING THROUGHOUT THE DAY
PO131	Mika Kato	Japan	INFLUENCE OF COLOUR TEMPERATURE AND INTERIOR REFLECTANCE ON SPATIAL BRIGHTNESS DEMAND
PO132	Matej Kobav	Slovenia	INTEGRATION OF DAYLIGHT IN SCHOOLS AND KINDERGARTENS

PO133	Yi Lin	China	AN EXPERIMENTAL STUDY OF THE LIGHTING FOR NONE NATURAL LIGHT OFFICE SPACE BASED ON NON-VISUAL BIOLOGICAL EFFECTS
PO134	Gang Liu	China	EXPLORATION AND RESEARCH ON VISUAL COMFORT MODEL OF NATURAL LIGHTING ENVIRONMENT IN COLLEGE CLASSROOMS
PO135	Jennifer Long	Australia	VISUAL DISCOMFORT ASSOCIATED WITH CEILING LUMINAIRES: OBSERVATIONS, TRENDS AND CHALLENGES 2009-2018
PO136	Shunta Matsumoto	Japan	INVESTIGATION OF OPENING DESIGN INDEX FOR DAYLIGHTING IN HOUSES
PO137	Barbara Matusiak	Norway	TOWARDS NEW DESIGN OF LASER CUT ACRYLIC PANELS FOR WINDOWS
PO138	Naomi Miller	United States	PRACTICAL CONSIDERATIONS FOR AN EFFECTIVE FLICKER METRIC
PO139	Naomi Miller	United States	TOP EFFICACY PERFORMERS: THE QUALITY TRADEOFFS IN LED LUMINAIRES
PO140	Hiroyuki Miyake	Japan	EFFECTS OF LIGHTING ON PERCEPTION OF SPACIOUSNESS
PO141	Etsuko Mochizuki	Japan	GLARE FROM WINDOW CONSIDERING TIME FLUCTUATION AND TYPES OF TASK
PO142	Tongsheng Mou	China	A NOVEL METHOD TO EVALUATE DYNAMIC LIGHTING ENVIRONMENT THAT MEASURES VISUAL AND NONVISUAL PERFORMANCE IN ARCHITECTURE SPACES
PO143	Xi Mou	China	CHINESE HIGH SCHOOL LIGHTING DESIGN TO IMPROVE STUDENT'S VISUAL AND NONVISUAL PERFORMANCE
PO144	Bruce Nordman	United States	LIGHTING CONTROL USER INTERFACE STANDARDS
PO145	Chikako Ohki	Japan	FAÇADE DESIGN OPTIMIZATION BASED ON ENERGY USAGE, GLARE AND VIEW USING RADIANCE AND NEWHASP
PO146	Toshihide Okamoto	Japan	CASE STUDIES OF A THREE-DIMENSIONAL EXPRESSION OF COLOURED LIGHT FLOW USING VOLUME PHOTON MAPPING
PO147	Shino Okuda	Japan	PREFERABLE LIGHTING FOR APPEARANCE OF WOMEN'S FACIAL SKIN
PO148	Yukino Shimizu	Japan	A STUDY ON THE CONTRAST OF LUMINANCE BETWEEN PAINTINGS AND WALL SURFACES WITH WHITE LEDS IN MUSEUM
PO149	Juliëtte van Duijnhoven	Netherlands	OFFICE WORKER'S SATISFACTION WITH LIGHTING
PO150	Gilles Vissenberg	Netherlands	ROBUST UNIFIED GLARE RATING EVALUATION FOR REAL LIGHTING INSTALLATIONS
PO151	Aiyang Wang	China	BUILDING INFORMATION MODELING BASED ARCHITECTURAL LIGHT EMITTING DIODE LIGHTING DESIGN: A PROPOSAL
PO152	Lei Wang	China	THE STUDY OF LED LIGHTING DAMAGE TO PAPER RELICS
PO153	Tongyao Wu	China	COMFORT SUBJECTIVE EVALUATION OF DIFFERENT READING MEDIUM UNDER THE ILLUMINATION ENVIRONMENT IN LIBRARY READING ROOM
PO154	Hideki Yamaguchi	Japan	DEVELOPMENT OF GENERIC COLORIMETRY SYSTEM FOR EVALUATION OF LIGHTING ENVIRONMENT
PO155	Yuan Yao	China	A PRELIMINARY EXPLORATION OF DAYLIGHTING SIMULATION IN CHINESE TRADITIONAL SIHEYUAN WITH WINDOW PAPER
PO156	Yusuke Yonekura	Japan	VALIDATION OF THE SPATIAL BRIGHTNESS ESTIMATION FORMULA IN OFFICES WITH WINDOWS
PO157	Nozomu Yoshizawa	Japan	EXAMINATION OF THE APPLICATION RANGE OF THE AVERAGE LUMINANCE FOR ESTIMATING SPATIAL BRIGHTNESS
PO158	Jianping Zhao	China	RESEARCH ON LIGHTING POWER DENSITY AND ENERGY-SAVING TECHNIQUES OF SPORTS LIGHTING
PO159	Vincent Boucher	France	DYNAMIC GLARE EVALUATION ALONG A ROUTE
PO160	Constantinos Bouroussis	Greece	OPTIMIZATION OF TUNNEL LIGHTING CONTROL BY RE-AIMING OF THE EXTERNAL L20 LUMINANCE METER
PO161	John Bullough	United States	INVESTIGATION OF STROBOSCOPIC EFFECTS FROM CHROMATIC FLICKER
PO162	John Bullough	United States	INFLUENCE OF LIGHT LEVELS ON VISIBILITY FOR SAFETY AT AUTOMATED TELLER MACHINE FACILITIES
PO163	Romain Chasseigne	France	LIGHT POLLUTION ANALYSIS USING HI-RESOLUTION NIGHT AERIAL LIGHTING MAPS
PO164	Cheng-Hsien Chen	Chinese Taipei	GLARE ASSESSMENT FOR LOW-REFLECTION DISPLAY DEVICES
PO165	Cheng-Hsien Chen	Chinese Taipei	ROAD LIGHTING MEASUREMENTS BY AN EQUIPPED VEHICLE
PO166	Dennis Dan Corell	Denmark	TOOL FOR ANALYSIS OF TUNNEL LIGHTING BASED ON VISUAL PERFORMANCE AND VISUAL COMFORT
PO167	Roman Dubnicka	Slovakia	INTERPOLATION METHODS OF I-TABLES OF ROAD LIGHTING LUMINAIRES

PO168	Elvo Calixto Burini Junior	Brazil	LIGHTING, QUALITY AND ARTIFICIAL INTELLIGENCE
PO169	Steve Fotios	United Kingdom	WHAT ARE YOU LOOKING AT? TESTING NANCY'S RULES FOR PEDESTRIAN INTERACTIONS
PO170	Yuanpeng Gao	China	LED APPLICATION IN HELICOPTER COCKPIT LIGHTING
PO171	Dionyz Gasparovsky	Slovakia	MODELLING OF LARGE LIGHT SOURCES RADIATION TO THE UPPER HEMISPHERE – OBTRUSIVE LIGHT
PO172	Dionyz Gasparovsky	Slovakia	SMART POLYGON AT VSB – TU OSTRAVA 24 H/DAY USING OF PUBLIC LIGHTING NET
PO173	Ronald Gibbons	United States	IMPLICATIONS OF LIGHT SOURCE SELECTION IN A NIGHT TIME ENVIRONMENT
PO174	Toru Hagiwara	Japan	DEVELOPMENT OF PRO-BEAM ROAD LIGHT
PO175	Yoshihisa Ikeda	Japan	EFFECTIVE LIGHTING FACTORS FOR IMPROVING VISIBILITY OF FALLEN OBJECTS ON THE ROAD AT EXPRESSWAY TUNNEL
PO176	Annika Jägerbrand	Sweden	EVALUATION BETWEEN ENERGY EFFICIENCY, ECOLOGICAL IMPACT AND THE COMPLIANCE OF REGULATIONS OF ROAD LIGHTING
PO177	Yoshinori Karasawa	Japan	STUDY ON IMPROVEMENT OF LOW-LEVEL ROAD LIGHTING INSTALLATIONS IN A POOR VISUAL RANGE
PO178	Satoru Kishimoto	Japan	TUNNEL INTERIOR LIGHTING FOR SAFETY IN TWO-WAY TRAFFIC
PO179	Pål Johannes Larsen	Norway	VISIBILITY OF TUNNEL EVACUATION LIGHTS IN A REAL FIRE
PO180	Aleks Liachenko Monteiro	United Kingdom	UNIFORMITY PREDICTS PEDESTRIAN REASSURANCE BETTER THAN AVERAGE ILLUMINANCE
PO181	Mikael Lindgren	Sweden	CHARACTERIZATION OF REFLECTIVITY AND GEOMETRY FOR SOFT CAR TARGETS
PO182	Yichong Mao	United Kingdom	HAZARD DETECTION: TESTING THE CAVEATS OF PREVIOUS STUDIES
PO183	Yingying Meng	China	CORRELATING THE PARAMETERS OF COMMERCIAL SIGNAGE IN URBAN AREAS AND VISUAL COMFORT OF PEDESTRIANS
PO184	Sermin Onaygil	Turkey	EFFECT OF BACKGROUND LUMINANCE CALCULATION METHOD ON VL VALUE IN ROAD LIGHTING
PO185	Sermin Onaygil	Turkey	CALCULATION OF ENERGY SAVINGS FOR A SAMPLE ROAD USING LED CONTROL SYSTEMS AND REAL TRAFFIC DATA
PO186	Hyensou Pak	South Korea	VISIBILITY IMPROVEMENT BY CCT TUNABLE LED HEADLAMP UNDER THE ADVERSE WEATHER CONDITIONS
PO187	Kriangkrai Pattanakdee	Thailand	EXPERIMENTAL INVESTIGATION OF PAVEMENT LIGHT REFLECTION CHARACTERISTICS IN WET CONDITIONS
PO188	Link Powell	United Kingdom	REVIEW OF THE COLOUR SHIFT AND ATTENUATION OF SIGNAL LIGHTS OVER LONG DISTANCE
PO189	Haiping Shen	China	MODELING REFLECTION PROPERTIES OF ROAD SURFACES BY DADA BASE METHOD
PO190	Krzysztof Skarżyński	Poland	THE BALANCE BETWEEN VISUAL EFFECT AND ENGINEERING CORRECTNESS IN ARCHITECTURAL LIGHTING
PO191	Ferenc Szabó	Hungary	REAL ENVIRONMENT RESEARCH LABORATORY WITH LIGHT POLLUTION OPTIMIZED STREET LIGHT LUMINAIRES
PO192	Fabrizio Valpreda	Italy	INNOVATIVE DESIGN AND METROLOGICAL APPROACHES TO SMART LIGHTING
PO193	Yong Yang	China	THE INFLUENCE OF VEHICLE HEADLIGHT SOURCES ON THE RETROREFLECTIVE OPTICAL PROPERTIES OF TRAFFIC SIGNS
PO194	Alexey Bartsev	Russia	PHOTOBIOLOGICAL RESEARCHES – A WAY TO OPTIMIZE LED'S PLANT LIGHTING
PO195	Camille Ehrismann	France	COMPARISON OF THE EFFECTS OF BRIGHT CHROMATIC STIMULI OF EQUI-LUMINANCE AND EQUI-RADIANCE ON THE PUPIL LIGHT REFLEX AND INVESTIGATION OF THE PERFORMANCES OF BLUE-
PO196	Wen Rongrong	China	MECHANISM STUDY OF LIGHT-INDUCED VISUAL FATIGUE BASED ON PHYSIOLOGICAL PARAMETERS AND EVALUATION METHOD CONSTRUCTION
PO197	Pei-Jung Wu	Chinese Taipei	THE RESPONSES OF THE AUTONOMIC NERVOUS SYSTEM ON HUMANS WHEN WORKING WITH DIFFERENT LED LIGHTING CONDITIONS
PO199	Maira Vieira Dias	Brazil	A NEW WEARABLE DEVICE FOR MEASURING PUPILAR ILLUMINANCE AND EVALUATE DISCOMFORT GLARE