



9TH LUX PACIFICA LIGHTING ENGINEERING CONFERENCE

**Saint-Petersburg, Russia
April 20-22 2020**

PROGRAM



State Hermitage, General Staff Building (The Palace Square, 6-8)

09:00 **REGISTRATION, WELCOME COFFEE**

10:00 **Opening ceremony**

- *Mikhail Piotrovsky*, Director of the State Hermitage Museum
 - *Georgy Boos*, Chairman of STC “Svetotekhnika”
 - *Alla Manilova*, Deputy Minister of Culture of the Russian Federation
 - *Motoharu Takao*, Chairman of Lux Pacifica, Professor of Tokai University, Japan
 - *John O’Hagan*, Director of Division 2 and Vice-President of the CIE
 - *Anton Shalaev*, Deputy of the Department of Technical Regulating and Standardization of RF
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PLENARY SESSION

State Hermitage, General Staff Building

Chair:

- *Mikhail Piotrovsky*, Director of the State Hermitage Museum
- *Georgy Boos*, Chairman of STC “Svetotekhnika”

11:00 **Lighting in museums as a priority development of lighting technology**

Georgy Boos

Chairman of STC “Svetotekhnika”, the President of International Lighting Corporation “Boos Lightning Group”

11:20 **Actual issues of museum lighting**

Alexey Bogdanov

Deputy Director for Operations of the State Hermitage

11:40 **The relevance of the task of developing the regulatory framework of the museum lighting environment**

Anton Shalaev

Deputy of the Department of Technical Regulating and Standardization of RF

12:00 **Public Health Issues from Museum Lighting**

John O’Hagan

Director of Division 2 and Vice-President of the CIE, UK

12:30 Coffee-break

13:00 **Light and museum. The interaction of museum specialists and lighting engineers, as an urgent need for museum practice**

Marina Chistyakova

Chief curator of the State Historical Museum

13:20 **Light exposure and mitigation of risks to museum objects in a modern context**

Hannah C Harte, Head of Preventive Conservation Collection Care Department
British Museum, UK

13:40 **Light management as preventive conservation tool - experiences from the National Museums Berlin**

Stefan Simon

Rathgen Research Laboratory Berlin

14:00 **OPENING OF AN EXPERIMENTAL INSTALLATION TO DETERMINE CORRELATED COLOR TEMPERATURE**

- *Mikhail Piotrovsky*, Director of the State Hermitage Museum

- *Alexey Bogdanov*, Deputy Director for Operations of the State Hermitage

14:30 **LUNCH**

PLENARY SESSION "FROM LIGHT IN MUSEUMS TO LIGHT FOR PEOPLE"

State Hermitage, General Staff Building

Chair: *Vladimir Budak*, Prof. Dr., Chief-editor of the "Light & Engineering" journal

The implications of the human basis of lighting

16:00 *Warren Julian*

Professor of the University of Sydney, Australia

16:20 **Lighting in halls of the Tretyakov Gallery. Experience of generations and look into the future**

Tatiana Gorodkova

Chief curator of the Tretyakov Gallery, Russia

16:40 **Psychophysiological Approaches on Human Centric Lighting**

Motoharu Takao

Chairman of Lux Pacifica, Professor of Tokai University, Japan

17:00 **Lighting in restoration workshops: current problems and solutions**

Dmitriy Sergeev

General Director of All-Russia Grabar Art Restoration Centre in Moscow, Russia

17:20 **The rise of human centric lighting: What does it mean for lighting museums?**

Kevin Houser

PhD, Illuminating Engineering Society of North America, Oregon State University; Corvallis, Professor of Civil and Construction Engineering, USA

17:40 **Innovative Art Lighting Systems based on tunable LED light sources and hybrid optical designs**

Marco Angelini

Head of ELS R&D Product Development Clay Paky S.p.A., Italy

19:00 **WELCOME RECEPTION**

State Hermitage, General Staff Building

State Hermitage, General Staff Building. (The Palace Square, 6-8)

10:00 **REGISTRATION, WELCOME COFFEE**

10:30 **OPENING CEREMONY:**

- *Motoharu Takao*, Chairman of Lux Pacifica, Professor of Tokai University
- *Alexey Bogdanov*, Deputy Director for Operations of the State Hermitage
- *Anna Shakhparunyants*, Ph.D., General director of VNISI Russian Lighting Research Institute named after S.I. Vavilov, Russia
- *Georgy Boos*, Ph.D., Chairman of STC "Svetotekhnika", the President of International Lighting Corporation "Boos Lightning Group"

SESSION "MUSEUM LIGHTING AND LIGHTING DESIGN"

Chair: *Vladimir Budak*, Prof. Dr., Chief-editor of the "Light & Engineering" journal

11:00 **The State Hermitage: problems and solutions in the field of museum lighting**

Ekaterina Balakhnina

Engineer of the Hermitage Museum, Russia

11:20 **Evaluation of visual experience in the National Museum Bangkok**

Chanyaporn Bstieler

King Mongkut's University of Technology Thonburi, Thailand

11:40 **Immersive virtual reality as a tool for lighting design**

Michelangelo Scorpio

Assistant Professor of Environmental Technical Physics, Department of Architecture and Industrial Design, University of Campania "Luigi Vanvitelli" Italy

12:00 **Evaluation on the appearance of paintings based on the luminance ratio with background – Spatial frequency characteristics of paintings and their influence on the appearance**

Eishi Sekine

Tokyo University of Science, Japan

12:20 **Museum lighting environment's role on public enjoyment degree for Chinese calligraphy works**

Nianyu Zou

Professor of Research Institute of Photonics, Dalian Polytechnic University, China

12:40 **Preserving cultural heritage in Indian religious environments using Hindu Nagara Style lighting.**

Cruz Dennis Sam Shaju

The University of Cambridge at the IDBE program, India

13:00 **LUNCH**

SESSION “PHOTOMETRY, COLORIMETRY AND EVALUATION OF LIGHT”

Chair: *Kevin Houser*, Illuminating Engineering Society of North America

14:20 **Evaluating light source color quality using IES TM-30-18**

Kevin Houser

PhD, Illuminating Engineering Society of North America, Oregon State University; Corvallis, Professor of Civil and Construction Engineering, USA

14:40 **Correlated Color temperature perception and visual performance in road lighting for Thais**

Acharawan Chutarat

Ph.D., King Mongkut's University of Technology Thonburi (KMUTT), Thailand

15:00 **Optimization of the Road Illuminance Mobile Measurement Method**

Alena Kuznetsova

VNISI Russian Lighting Research Institute named after S.I. Vavilov, Russia

15:20 **Study on Task and Ambient Lighting Influence of correlated color temperature on impression and illuminance**

Youko Inoue

Nara Women's University, Japan

15:40 **Rating scales in lighting research: Do we understand each other?**

Steve Fotios

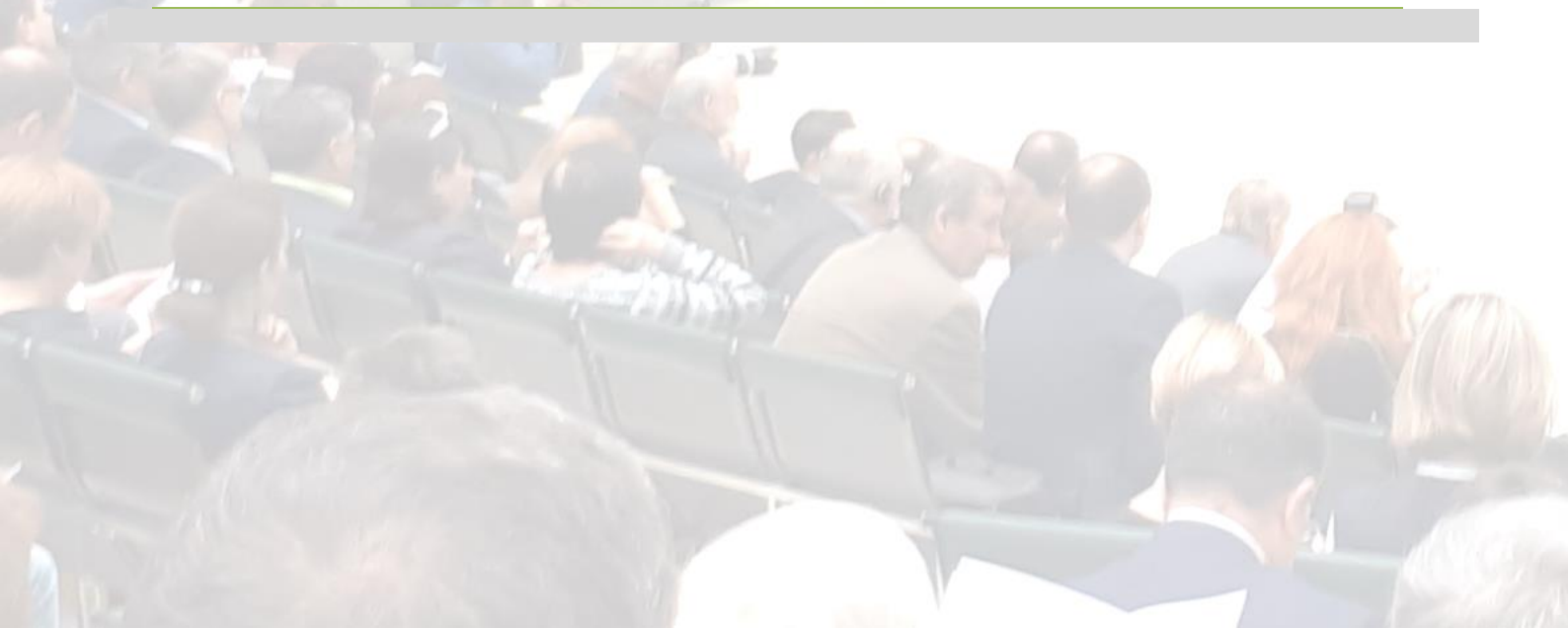
Professor of Lighting and Visual Perception, The University of Sheffield, UK

16:00 **POSTER SESSION**

Chair:

- *Andrey Turkin*, Ph.D., Ph.D., Faculty of Physics M.V. Lomonosov Moscow State University
- *Russia Motoharu Takao*, Chairman of Lux Pacifica, Professor of Tokai University

17:00 **TOUR OF THE GENERAL STAFF BUILDING OF THE STATE HERMITAGE MUSEUM**



State Hermitage, Fund of the Hermitage (Zausadebnaya ulitsa, bld.37, 1st floor. Lecture Hall)

10:00 **WELCOME COFFEE**

SESSION “NONVISIBLE IMPACT OF LIGHT AND LIGHTING TECHNOLOGY”

Chair: *Warren Julian*, Professor Sydney School of Architecture, Design and Planning, Australia

10:40 **The effect of polychromatic light on anxiety behavior**

Motoharu Takao

Chairman of Lux Pacifica, Professor of Tokai University, Japan

11:00 **Damage Evaluation Model of Cultural Relics Illumination Based on Infrared Spectroscopy in Museum**

Rui Dang

Tianjin University, China

11:20 **Factors influencing spectral efficiency of radiation in light culture of plants**

Alexander Tikhomirov

Ph.D., Deputy Director for Scientific Research Institute of Monitoring of Climatic and Ecological Systems of the Siberian Branch of the Russian Academy of Sciences (IMCES SB RAS), Russia

11:40 **Physiological and psychological effects of fluctuating illumination with Heart Rate Variability in various states of activity**

Shun Yamamoto

Shibaura Institute of Technology, Japan

12:00 **Effects of 100 Hz-flickering and non-flickering blue LED lights on melatonin secretion**

Tamoaki Kozaki

Fukuoka Women's University, Japan

12:20 **Optimising Road Lighting**

Steve Fotios

Professor of Lighting and Visual Perception, The University of Sheffield, UK

12:40 **DISCUSSION**

13:00 **LUNCH**

SESSION "CITY LIGHTING AND SMART SYSTEMS"

Chair: *Motoharu Takao*, Chairman of Lux Pacifica, Professor of Tokai University, Japan

- 14:00 **Nightscape assessment of shopping district in a virtual reality display**
Wataru Ishii
Department of Human and Information Science, Tokai University, Japan
- 14:20 **Research on Smart Lighting Indicators in Urban Lighting Planning**
Ximing Wang
Tianjin University, China
- 14:40 **Anti-reflective glass: increased lighting efficiency**
Alexey Dudin
Architectural project manager, Guardian Glass, Russia
- 15:00 **Lighting environments for crime prevention on University campuses**
Nianyu Zou
Professor of Research Institute of Photonics, Dalian Polytechnic University, China
- 15:20 **The effect of cultural backgrounds on the evaluation construct of nightscape**
Naoyuki Oi
Kyushu University, Japan
- 15:40 **DISCUSSION**
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16:00 **CLOSING CEREMONY. WELCOME CHAMPAGNE**

16:30 **TOUR OF THE FUND OF THE HERMITAGE**