



2020 Fifth Junior Conference on Lighting

LIGHTING 2020

24 – 26 September 2020 // Virtual Conference

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FINAL PROGRAM



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IEEE – Bulgarian Section

*Lighting 2020 is partially funded under an Agreement 201ДН0001-01
as part of the "Days of Science" initiative of the Technical University of Sofia*

FULL PROGRAM

* Times are listed in Eastern European Summer Time (EEST)

[TIME CONVERTER](#)

Thursday, September 24, 2020

13:00 – 13:30 EEST

Opening ceremony (Virtual Room)

13:30 – 15:15 EEST

Interior, Exterior and Road Lighting. Lighting Quality. Light Pollution (Virtual Room)

Daylight Design and Architectural Lighting

Chair: Kamelia Nikolova, *Technical University of Sofia, Bulgaria*

Weaving with Light

R. Vital, A. Karmon, *Israel*

Three-Dimensional Modeling and Comparative Photometric Analysis of LED Lamp with Polycarbonate, Polymethyl Methacrylate and Acrylic Diffuser Materials

P. Tsankov, M. Yovchev, H. Ibrishimov, *Bulgaria*

Light Pollution. Light and Energy Culture of Lighting and Lighting Design

T. Kyuchukov, *Bulgaria*

Estimation of the Light Pollution, Introduced by the Architectural Lighting of an Educational Building

I. Petrinska, D. Ivanov, *Bulgaria*

Architectural Lighting Development when Financial Restrictions Apply

I. Petrinska, D. Ivanov, *Bulgaria*

15:15 – 15:45 EEST

Break

15:45 – 17:30 EEST

Management of Lighting and Renewable Energy Sources (Virtual Room)

Energy Efficiency and Economic Aspects of Lighting

Chair: Plamen Tsankov, *Technical University of Gabrovo, Bulgaria*

Smart Grid-based Conceptual Model of Virtual Infrastructures for Developing Innovation Capability of Danube Macroregion

D. Antonova, N. Venelinova, S. Kunev, I. Kostadinova, *Bulgaria*

Improving the capacity for adoption of renewable energy sources in transport and logistics: approbation of a methodological approach

S. Kunev, D. Antonova, I. Kostadinova, *Bulgaria*

Sources of Long-Term Economic Growth and High Technologies in Telecommunications

D. Stefanov, D. Antonova, *Bulgaria*

Tunnel lighting control system as a component of SCADA cloud technology for road section

A. Pachamanov, K. Georgiev, *Bulgaria*

Optimization of Energy Consumption of Road Tunnels

V. Gueorgiev, *Bulgaria*

Friday, September 25, 2020

9:00 – 10:30 EEST

Photobiology and non-Visual Effects of Light (Virtual Room)

Chair: Iva Petrinska, *Technical University of Sofia, Bulgaria*

A Study of Healthful Lightings for Elder with Dementia

Ch. Chen-Yu, H. Chen, M. Ronnier Luo, Ch. Fang, G. Hu, *Taiwan*

Dynamic Color Temperature Sleep Assitant Light Implemented on the Mobile Device

Ch. Chen-Yu, Y. Wang, *Taiwan*

Electroencephalographic study of human brain: chromatic light impact on biological rhythms

S. Roslyakova, S. Kolgushkina, V. Prokopenko, *Russia*

UVC irradiators for sterilization of recirculated air in workrooms

A. Pachamanov, D. Pavlov, B. Pregyov, *Bulgaria*

Photobiological Safety of LED Lighting Systems Applicable in Educational Buildings

D. Pavlov, K. Nikolova, D. Ivanov, I. Petrinska, *Bulgaria*

10:30 – 11:00 EEST

Break

11:00 – 12:30 EEST

Lighting Technology (lamps, luminaires, lighting controls) (Virtual Room)

Chair: Rad Stanev, *Technical University of Sofia, Bulgaria*

Study on Factors Correlation of Personal Lighting Comfort Model in Cyber-Physical Human Centric Systems

W. Wang, Y. Fang, W. Wang, Q. He, N. Zou, *China*

Dual-band CPW Transparent Bandpass Filter for Wireless Communication

S. Azizi (*Morroco*), L. Canale (*France*), S. Ayoud (*Morroco*), M. El Halaoui (*Morroco*), P. Dupuis (*France*), A. Asselman (*Morroco*)

In-Vehicle Lighting and its Application in Automated Vehicles: A Survey

A. Shah, Ya. Lin, *China*

Influence of the Constructive and Environmental Parameters on the Thermal Conditions of a LED Driver

B. Evstatiev, N. Evstatieva, S. Kadirova, *Bulgaria*

Break

14:00 – 15:30 EEST

Lighting Calculations. Photometry and Colorimetry (Virtual Room)

Common Lighting Aspects. Standards and Legislation in Lighting

Chair: Vultchan Gueorgiev, *Technical University of Sofia, Bulgaria*

New CIE Standard Illuminant L and its Effect on Measurement Uncertainty

G. Bizjak, M. Kobav, *Slovenia*

Colorimetric Characterizations of Large Area White OLEDs Under Thermal And Electrical Stress Using TM-30-18 Method

O. Abdellah (*Morocco*), A. Haddad (*France*), M. Halaoui (*Morocco*), P. Dupuis (*France*), L. Canale (*France*), A. Asselman (*Morocco*), G. Zisis (*France*)

Analysis of the measurement plane change in street illumination measurements

P. Jaskowski, P. Tomczuk, *Poland*

Test-based approach for selecting new PACS

D. Georgieva, V. Georgiev, I. Evgeniev, M. Nenova, *Bulgaria*

15:30 – 16:00 EEST

Break

16:00 – 17:30 EEST

LED Lighting (Virtual Room)

Chair: Maria Nenova, *Technical University of Sofia, Bulgaria*

Research of Effectiveness on LED Dimming Lighting Installations

O. Petrov, *Bulgaria*

Considerations for measuring the electromagnetic interference of LEDs projectors with the supply electrical network

S. Diga, N. Diga, C. Bratu, P. Nicolescu, G. Vochescu, *Romania*

Comparison between optimal methods for control of DC/DC converter for supplying of LED lighting

G. Vacheva, N. Hinov, *Bulgaria*

Challenges of Usage of Fuel Cells for LED Lighting

G. Vacheva, V. Dimitrov, N. Hinov, *Bulgaria*

ISO standard implementation impact in COVID-19 era on UV-lighting devices

M. Nenova, V. Nenova, D. Georgieva, V. Georgiev, *Bulgaria*

Saturday, September 26, 2020

9:00 – 10:30 EEST

LED Lighting (Virtual Room)

Chair: Dimitar Pavlov, *Technical University of Sofia, Bulgaria*

Modelling and optimization of DC/DC converter for supplying of LED lighting

G. Vacheva, N. Hinov, *Bulgaria*

Modeling of Hybrid Systems with Renewable Energy Sources for Smart Home

G. Vacheva, B. Gilev, N. Hinov, *Bulgaria*

Study of the photometric and colorimetric characteristics of the optical systems of LED domestic lamps

P. Tsankov, M. Yovchev, H. Ibrishimov, *Bulgaria*

Light emitting diode modules with reflective optical system that implements the "Flat beam" lighting technology

A. Ashryatov, D. Churakova, *Russia*

Academic doctrine of light. Esiah concept

T. Kyuchukov, *Bulgaria*

10:30 – 11:00 EEST

Break

11:00 – 12:30 EEST

Ergonomics and Physiology of Vision. Human Aspects of Lighting (Virtual Room)

Renewable Energy Sources and Lighting

Chair: Gergana Vacheva, *Technical University of Sofia, Bulgaria*

Calibration of a Brightness Matching Experiment setup in Mesopic and Scotopic Conditions

P. Dupuis (*France*), L. Kukacka (*Czech Republic*), L. Canale (*France*), M. Vik (*Czech Republic*), A. Richter (*Czech Republic*), G. Zisis (*France*)

Scatch drawing on infinite paper sheets

I. Evgeniev, D. Georgieva, V. Georgiev, M. Nenova, *Bulgaria*

Optimization of hybrid systems with renewable energy sources for smart home

G. Vacheva, B. Gilev, N. Hinov, *Bulgaria*

Self-limiting tunnel lighting system, powered by a photovoltaic system

A. Pachamanov, K. Georgiev, M. Dimitrov, *Bulgaria*

Rehabilitation and modernization of outdoor lighting systems in settlements

A. Pachamanov, S. Petrov, *Bulgaria*

12:30 – 12:45 EEST

Closing ceremony (Virtual Room)



PATRONS

GENERAL



Lighting 2020 is partially funded under an Agreement 201ДН0001-01 as part of the "Days of Science" initiative of the Technical University of Sofia

GOLD



Conference Topics

1. LED Lighting
2. Photobiology and non-Visual Effects of Light
3. Lighting Technology (lamps, luminaires, lighting controls)
4. Lighting Calculations. Photometry and Colorimetry
5. Energy Efficiency and Economic Aspects of Lighting
6. Ergonomics and Physiology of Vision. Human Aspects of Lighting
7. Interior, Exterior and Road Lighting. Lighting Quality. Light Pollution
8. Renewable Energy Sources and Lighting
9. Management of Lighting and Renewable Energy Sources
10. Daylight Design and Architectural Lighting
11. Common Lighting Aspects. Standards and Legislation in Lighting