



2022 Seventh Junior Conference on Lighting

LIGHTING 2022

19 – 21 September 2022 // Hybrid Conference

Technically Co-sponsored by IEEE | conference record [#56379](#)

Financially Co-sponsored by the Technical University of Sofia

PROGRAM



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Technical University of Sofia



IEEE – Bulgarian Section

Lighting 2022 is partially funded under an Agreement 221ДН0028-01 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](#)

Monday | September 19, 2022

13:00 – 13:30 EEST [Sozopol, BG // Virtual]

Opening ceremony

13:30 – 15:00 EEST [Sozopol, BG // Virtual]

Lighting Calculations. Photometry and Colorimetry

Daylight Design and Architectural Lighting

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

[Virtual] Dynamics in Lighting – Post Covid, Flexibility and Adaptiveness in Residential Spaces/Office Spaces

M. Pavlidou, M. Spentza, *Greece*

[Virtual] Natural Light and Architectural Synthesis: the Experience of Residential Spaces

K. Pliatsika, M. Spentza, H. Sigala, *Greece*

Creative Lighting Solutions for Ski Slopes & Resorts

D. Pavlov, K. Kassev, V. Petrov, A. Alexsandrov, *Bulgaria*

Comparative Study of the Photometric Characteristics and the Efficiency of a Linear LED Luminaire with Prismatic and Opaque Diffusers

P. Tsankov, M. Yovchev, I. Stoyanov, *Bulgaria*

15:00 – 15:30 EEST

Break

15:30 – 17:00 EEST [Sozopol, BG // Virtual]

LED Lighting

Energy Efficiency and Economic Aspects of Lighting

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

Color Consistency of Retrofit LED Lamps

I. Petrinska, D. Ivanov, *Bulgaria*

[Virtual] Energy Efficient and Economically Effective Reconstruction of the Lighting System of a Lecture Hall

I. Petrinska, *Bulgaria*

Comparison of Electrical Parameters of LED Luminaires for Outdoor Lighting in an Industrial Plant

B. Yordanov, O. Petrov, *Bulgaria*

Multicomponent LED Lighting Installation on Main Machinery Room of Electric Plant

O. Petrov, *Bulgaria*

Tuesday | September 20, 2022

10:30 – 12:00 EEST [Sozopol, BG // Virtual]

Lighting Technology (lamps, luminaires, lighting controls)

Interior, Exterior and Road Lighting. Lighting Quality. Light Pollution

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

[Virtual] **Influence the Metamerism to Color Rendering in Through Video Path**

V. Pyliavskyi, et al., *Ukraine*

[Virtual] **Commercial Shop Window Lighting Design: Capturing the Gaze of Passers-by and Creating the Desire to Consume**

A. Tzouma, C. Skandali, *Greece*

[Virtual] **Obtaining Nanoparticles by Underwater Laser Ablation – A Brief Review**

R. Ghalot, L. Lazov, *Latvia*

Determination of the Danger of the Occurrence of Stray Currents in Electrified DC Urban Transport

P. Petkova, *Bulgaria*

12:00 – 13:30 EEST

Break

13:30 – 15:00 EEST [Sozopol, BG // Virtual]

POSTER SESSION I

Photobiology and non-Visual Effects of Light

Lighting Calculations. Photometry and Colorimetry

Energy Efficiency and Economic Aspects of Lighting

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

Aspects of Photometric Calculation and Monitoring of Parameters Related to an Interior Lighting Installation

S. M. Diga, I. Patru, N. Diga, I. Mircea, P.-M. Mircea, *Romania*

Management of Street Lighting by Relative Value of the Rate of Change of Natural Light

A. Pachamanov, D. Pavlov, K. Kassev, *Bulgaria*

Light Intensity Influence on Stereolithographic 3D Printing Curing Time

M. Ralchev, V. Mateev, I. Marinova, *Bulgaria*

Comparative Analysis of MTP and TORA Routing Protocols

T. Marinov, M. Nenova, G. Iliev, *Bulgaria*

15:00 – 15:30 EEST

Break

15:30 – 17:00 EEST [Sozopol, BG // Virtual]

POSTER SESSION II

Energy Efficiency and Economic Aspects of Lighting

Renewable Energy Sources and Lighting

Energy Efficiency and Economic Aspects of Lighting

Chair: Dilyan Ivanov, *Technical University of Sofia, Bulgaria*

Device for Prevention of Unregulated Connections to Street Lighting Lines in Small Settlements

A. Pachamanov, P. Stoev, K. Georgiev, K. Hristov, *Bulgaria*

Modernization of Street Lighting Systems in Small Settlements

A. Pachamanov, M. Konstantinov, K. Kassev, S. Petrov, *Bulgaria*

Control and Compensation of Reactive Power of Road Tunnels

D. Ibram, V. Gueorgiev, *Bulgaria*

[Virtual] **Control of the Modes of Architectural and Artistic Lighting Systems**

P. Hovorov, A. Kindinova, V. Hovorov, *Ukraine*

[Virtual] **Voltage Equalizer for Two Batteries/Ultracapacitors – Control System and Practical Realization**

H. Antchev, *Bulgaria*

19:00 – 22:00 EEST [Sozopol, BG]

Gala-Dinner

Wednesday | September 21, 2022

9:00 – 10:00 EEST [Sozopol, BG // Virtual]

Renewable Energy Sources and Lighting

Chair: Kamen Georgiev, *Technical University of Sofia, Bulgaria*

Utilization of Photovoltaic Installation to Optimize Electric Vehicle's Loads

V. Totev, V. Gueorgiev, *Bulgaria*

Review of Methodologies for Life Cycle Assessment of Power Electronic Devices

P. Stanchev, G. Vacheva, N. Hinov, *Bulgaria*

Hybrid System for Supplying Smart Home

P. Stanchev, G. Vacheva, N. Hinov, *Bulgaria*

10:00 – 10:15 EEST [Sozopol, BG // Virtual]

Closing ceremony

[HTTPS://CONFERENCE.NKO.BG](https://conference.nko.bg)

2022 LIGHTING

PATRONS

GENERAL



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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