

IEEE Sustainable Smart Lighting World Conference (LS24)

**Edition 2024 will be held November 12-14,
2024,
in Eindhoven, the Netherlands**

The IEEE Sustainable Smart Lighting World Conference (LS2024) provides an excellent forum for scientists and engineers worldwide, both in academia and in industry, to share and exchange the latest progress on the science and technology of lighting. This event will provide a unique forum to discuss and debate the latest developments in energy, environmental and human welfare impact of light, light sources, and lighting infrastructure, and their interaction with healthy buildings. It brings together researchers, developers and policy makers with interest and expertise across technology, effects of light on humans and other living species, design and human interaction and applications. This interaction will be inspiration for impactful innovations and will give birth, for sure, to new successful collaborations.

LS24 important dates

19 July 2024	Deadline for 2-page abstract proposals of special sessions and workshops
Early August 2024	Deadline for contributed paper submissions
Mid-September 2024	Notification of abstract acceptance
September 1st, 2024	Opening of registration & payment
October 1st, 2024	Deadline for early registration
November 12-14, 2024	LS24 In Eindhoven
December 1st, 2024	Last day to submit full paper for IEEE Xplore

The conference has a more than 45-year history and started as the Light Sources (LS) technology conference, with the 1st LS (LS1) in 1975 in Loughborough, United Kingdom. LS used to be held every three years, such as LS7 in Kyoto (1995), LS8 in Greifswald (1998), LS9 in Ithaca (2001), LS10 in Toulouse (2004), LS11 in Shanghai (2007), LS12 in Eindhoven (2010). Since LS13 in Troy (2012), LS has become a series of biennial symposiums, followed by LS14 in Lake Como (2014), LS15 in Kyoto (2016), LS16 in Sheffield (2018), LS17 in Toulouse (2022) and LS18 in Bombay (2023).

LS migrated towards the main IEEE conference in the field of lighting, combining many disciplines, extending towards systems and applications and also connecting to the field the effects of light, and consequently positions itself as the key opportunity to address Smart Sustainable Lighting.

November 2024 will be the 19th time that this event will take place. Especially for this time, LS24 will be held during the GLOW light festival in Eindhoven and will coincide with the ILIAD outreach event of the Intelligent Lighting Institute at Eindhoven University of Technology.

Symposium venue

Eindhoven, the city of light, is a world-wide recognized hotspot for innovation, with one of the highest number of patents per capita in the world. The university has a worldwide reputation in cooperation with industry, leading to meaningful societal innovations and a strong scientific track record. Since Philips started a lighting business about 130 years ago, the Eindhoven Brainport region has become the breeding ground for many innovative companies. These include not only spin outs such as ASML, NXP (formerly Philips Semiconductors) and Signify (formerly Philips Lighting) but also many start-ups and scale-ups. The region is heavily investing in future phonic innovations. Eindhoven is also a hotspot for design with Dutch Design Week in October. During the conference Eindhoven attracts hundreds of thousands of visitors for the yearly GLOW lighting festival with outdoor installations all across the city center.

The Eindhoven Intelligent Lighting Institute (ILI) aims to create a scientific community of practice dedicated to intelligent lighting solutions with a scientific and application-based approach towards all aspects of light. Key is the establishment of partnerships with stakeholders in the public-private field: companies, knowledge institutes, and government bodies. A multidisciplinary and multifunctional approach is the only way to reach breakthroughs in this field, in addition, the work will be concept-driven and evidence-based. Human-centric real-life test beds will be realized at the TU/e campus and public spaces like the city of Eindhoven. Participating TU/e departments are Applied Physics, Built Environment, Electrical Engineering, Industrial Design, Industrial Engineering & Innovation Science, Mathematics & Computer Science. ILI also connect to Delft University of Technology and the Catholic University of Leuven and has close contacts with Wageningen University.

ILIAD: November 12th, 2024

LS24 kicks off with ILIAD; ILI's annual public outreach event. ILIAD highlights recent developments in responsible research & innovation in science & technology in light & intelligent lighting and its applications in, for instance, health & well-being.

First Call for Papers

SSL (LS24) covers the design of effective, yet sustainable lighting systems that automatically adapt to the contextual environment to optimize the added value for living species and their ecosystems. The conference aims to exchange results, knowledge and insights over a broad range of disciplines. Therefore, we welcome papers that address on one of the topics of the

list, as well as multi-disciplinary papers that bridge multiple topics. Relevant topics include, but are not limited to:

1. **Lighting systems and technology**

- Electrical, optical and thermal design for components, devices and systems
- Optical and photonic innovations for lighting
- Innovations on light sources and associated new materials
- Joint communication, sensing and positioning with light(ing)
- Smart lighting systems (incl. Lighting Controls, Dynamic Lighting, Connected Lighting,..)
- Healthy Buildings and Lighting as a driver for IoT
- Interaction paradigms for lighting, self-learning control systems. Applications of AI in lighting

2. **Visual and non-visual effects of light.** Effects on humans, but also on animals and plants

- Visual quality of light
- Spatial light and colour distributions
- Quantified models for physical and psychological effects
- Effects of light on wellbeing, health and productivity
- Circadian effects

3. **Light applications, societal impact**

- Healthy buildings, bio-clock aware spaces
- Animal, agriculture, horticulture lighting
- Beyond lighting (UV-disinfection, curing, bio-medical...)
- Lighting design and scenic lighting,
- Business eco-systems and new economic models for lighting industry (e.g. Light as a Service),
- Techno-economic analysis of lighting systems,
- Societal aspects, circular economy, impact on bio-ecosystems, light pollution
- Regulations, guidelines & public policies

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PAPER SUBMISSION DEADLINE: July 2024

Contributed papers must be in English and should report original work, completed or in progress, connected with the science and technology of lighting. The length of submitted contributed papers, including figures and references, should be 4 pages maximum.

Paper submission, fully online, opens in July 2024. Authors of contributed papers can select either **poster or oral** presentation. The international Scientific Committee may **elevate**, with the agreement of authors, **selected contributed papers to “landmark” level**. All submitted papers will be peer reviewed by the International Scientific Committee. Accepted papers will be included to the conference proceedings. Pending approval from IEEE, The proceedings volume will be published in electronic form by the conference leading sponsor organisation and **all papers will be listed by IEEE Xplore®** which enables invited and contributed papers to

be referenced with an individual DOI number. Extended papers will be eligible for submission, after the conference, to IEEE Transactions of Industry Applications or to an MDPI special issue.

Further information

Please visit our website <https://ssleindhoven.com/> or follow us on LinkedIn <https://www.linkedin.com/company/sustainable-smart-lighting/> for more details and the latest conference news. You can also contact the LS2024 secretariat at ili@tue.nl