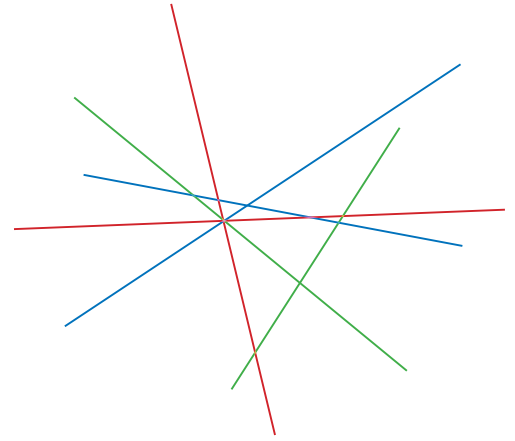


LIGHTING METROPOLIS PRESENTS

# Metropolis: *by* **LIGHT**

CONFERENCE PROGRAMME

MALMÖ • SWEDEN • 12–15 SEPTEMBER 2018 • MALMÖ LIVE



LIGHTING METROPOLIS PRESENTS

# Metropolis: *by* LIGHT

International Conference & Living Lab Tour 12–15 September

**Greater Copenhagen is one of the world's leading regions in developing and demonstrating innovative lighting solutions through unique collaboration. With the project Lighting Metropolis we have now turned the whole region into a living lab for intelligent lighting, which will officially open this September – and you're invited.**

Lighting Metropolis is a unique eco system for innovative collaboration, with some 30 demonstration projects to show for it. This conference event gives you the opportunity to explore the living lab as well as join colleagues for talks, presentations, seminars, workshops across a wide range of topics, from biological lighting – with insights from real cases on how this new knowledge can be applied in hospitals, learning environments and psychiatric clinics, to the latest research on flicker from LED and the development of flicker free luminaires, and best-practise solutions for how to use sensors and LED-technology to create interactive solutions for safer school routes, increased health – and, not least, how to evaluate the data from the sensors.

Join industry leaders, visionary cities and cutting edge researchers for a unique lighting event in Greater Copenhagen.

Main Organisers: City of Malmö, Gate 21 & Innovation Skåne

*\*\*Registration is now open\*\**

For more information, including registration, conference fees, related events and more, please visit [Lightingmetropolis.com](http://Lightingmetropolis.com) & [12DaysofLight.com](http://12DaysofLight.com)



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# Metropolis: by LIGHT

International Conference & Light event Sep 12-23



## Programme

### WEDNESDAY 12 SEPTEMBER

Evening Tours	<b>Parallel Living Lab Bus Tours – Outdoor Lighting</b>
	#1 DOLL Living Lab – DOLL in Albertslund is Europe’s largest test field, showroom and innovation hub for intelligent lighting and Smart City solutions
	#2 Light & Art in Copenhagen – Interactive lighting design at Storm 20, replacement of luminaires with LEDs and visit to Nikolaj Square and Art Gallery
	#3 Interactive urban lighting – Interactive lighting in public spaces in Roskilde and Egedal
	#4 Innovative lighting in Lund – Lighting for a smart urban area, safer and more attractive cycling spaces and outdoor lighting for people with visual impairment
	Details about the Living Lab Tours <a href="#">here</a> .

### THURSDAY 13 SEPTEMBER

09.00–09.10	<b>Welcome speech</b>
	Presentation of Lighting Metropolis by Niels Carsten Bluhme
09.10–09.30	Lighting Metropolis is transforming the region into a living lab for lighting with innovative solutions for citizens and major smart lighting demo sites. Universities are collaborating closely with cities and companies. You can gain deeper insight by visiting new solutions in the region and meeting the local experts.
	<b>Keynote Florence Lam – Lighting for Humanity</b>
09.30–10.15	Light is fundamental to humanity – from securing safety and resilience and enabling equality to facilitating social interaction and achieving prosperity. Florence’s keynote will offer perspective on how lighting technology and design solutions may contribute to achieving resilience and sustainability.
10.15–10.45	Coffee break
	<b>Biological Lighting – effects on health and wellbeing</b> by Ellen Kathrine Hansen, Kristina Aggergaard & Åsa Moum
10.45–11.30	We know the effect that daylight has on humans. Human-centric lighting systems use LED technology and intelligent lighting control systems to match light characteristics that map to humans’ natural circadian rhythms. The intent of these systems is to enhance productivity and performance and to address the psychological and physiological problems that are created by disruptions to our circadian clock. While circadian rhythms are built into the human body, they adapt to the environment using external cues – these cues are primarily daylight. We will hear about human-centric lighting in general, as well as the results from testing

human-centric lighting in elderly care, at a school, a hospital's neonatal department and a psychiatric center for patients suffering from eating disorders.

**Keynote Joachim Ritter – Who changed the market? An attempt to gain a perspective of what the future holds for a lighting design specialist**

11.30–12.00 What is the future going to look like for those who design lighting – and in fact for the lighting design market as a whole? That is the big question, the answer to which can only be found by taking a "slowly but surely" approach. Change is an ongoing process and the status quo is nothing more than a moment in time. What is causing the current changes we are witnessing, and what experience are the designers gaining, as a result of change? One thing is for sure: we are on the threshold of dramatic changes in our society. And there is no blueprint in place to show us how to deal with the situation.

12.00–13.30 Lunch

**Interactive and safety lighting in public spaces** by Johan Ib Hansen, Sara Kralmark, Susanna Sonesson, Simon Panduro & Sune Schøning

The urban landscape is changing and so must the lighting solutions to keep up. We hope to inspire you all to work with new innovative and interactive light in public spaces. It is all about making people feel part of their city and to let them have fun and share your vision.

**School crossing:** The project Svebølle uses light to connect the school and its activities with the main street of the village. The project is developed together with local businesses and includes data collection, controllable light and interactive installations – used for teaching natural science and mathematics

13.30–14.45 **Brighter Brunnsbög place branding:** Light installations that are self-sufficient energy-wise and encourage visitors to interact and do physical training are a way to draw attention and give identity to a new city district, Brunnsbög, in Lund

**Green alley:** To go from A to B sounds easy but sometimes inspirations are needed to get people to use a bike instead of a car or to use a bike helmet etc. With light you can make these choices more natural and appealing.

**Musicon path:** Light in Roskilde that can be changed to make people slow down or even take a detour and that responds to the users and the surroundings. Inspired by the machine industry and hoping to promote bicycling

**The ZOOper bicycle path:** With light and smart technology, we can encourage people to develop new habits in a fun way. It works better than exhortations – for children and adults. In Egedal they worked with the local students for a healthy, safe and fun way to school – while reminding them of using the bicycle helmet

14.45–15.15 Coffee break

**Keynote Sandra Rey – The future of lighting. What if nature had the solution?**

15.15–16.00 Electrical lighting is responsible for 1.7 billion tons of CO<sub>2</sub> every year and 15 percent of global electricity consumption. Meanwhile, more than 80 percent of humans are affected by light pollution. Nature has undertaken 3.8 billion years of R&D to find the most sustainable solutions. Bioluminescent animals might have the sustainable lighting solution we've so far overlooked. What if we could grow our own light?

16.00 –16.10 End of sessions

16.10 –17.00 Network and exhibition

19.00-21.30

Conference dinner

21.30

Guided tour of the :by Light event

FRIDAY 14 SEPTEMBER

Friday morning and afternoon you can choose between three parallel activities: Seminars | Round table talks | Bus tours.

Morning parallel sessions

09.00-09.30	<p><b>Keynote Mark Burton-Page – How can we make cities more liveable using lighting?</b></p> <p>The LUCI network connects cities engaged in using sustainable urban lighting to make cities more liveable. Mark will give examples from cities using light as a tool to create safe, attractive and functional environments.</p>	<p>Round table talks – Innovation, Research, Experience, Design</p>	<p>#5 Living Lab Tour – Indoor Lighting</p>
09.30-10.15	<p><b>The lighting revolution in Greater Copenhagen - The City</b> by Matthew Nunn</p> <p>In collaboration the City of Copenhagen and Citelum have renewed the street lighting in Copenhagen. Approximately 20.000 luminaires have been replaced and an intelligent communications network has been implemented.</p>		
10.15-10.45	<p>Coffee break</p>	<p>Round table talks – Innovation, Research, Experience, Design</p>	<p>Biological lighting in psychiatry, elderly care, offices and schools</p> <p>8.30 – 12.30</p>
10.45-11.15	<p><b>Light and Design – the :by Light concept</b> by Johan Moritz</p> <p>Based on four key criteria, selected to engage designers, artists, academics, producers and residents, Malmö’s unique concept goes beyond traditional light events in its ambition to support urban social sustainability. This is the key element in development of public lighting in the city of Malmö. Johan Moritz, City of Malmö/IALD, explains his concept.</p>		
11.15 -12.00	<p><b>New Research in Lighting</b> by Maria Johansson &amp; Hillevi Hemphälä</p> <p>Outdoor lighting should support visual accessibility, mobility and perceived safety to provide pedestrian-friendly urban environments. This presentation introduces tools to evaluate pedestrian perspectives on new energy-efficient lighting applications.</p>		

Afternoon parallel sessions

13.30–14.10	<p><b>The lighting revolution in Greater Copenhagen – Research and Education</b> by Michael Mullins</p> <p>A presentation of a selection of initiatives and experiences that help us improve how we use and perceive light in our daily lives.</p>	<p>Round table talks – Innovation, Research, Experience, Design</p>	<p>#6 Living lab tour – Indoor Lighting</p>
14.10 –14.45	<p><b>Public private innovation – A new way of making innovative lighting solutions for the citizens</b> by Jacob Lundgaard &amp; Joakim Nelson</p> <p>Innovation is making a real impact on the lighting industry's traditional demand-supply chain and its traditional roles. Municipalities are expected to engage in the creative process, while manufacturers are asked to become more open. This paradigm shift requires a radical rethinking of roles and responsibilities. This session presents two proven formulas for accelerating innovation.</p>		
14.45–15.15	<p>Coffee break</p>	<p>Round table talks – Innovation, Research, Experience, Design</p>	<p>Lighting for the office, canteen and the neonatal unit</p> <p>13.30 – 16.30</p>
15.15 –15.45	<p><b>Light and Design – The concept of lighting events</b> by Catja Thystrup &amp; Josette Dahlin</p> <p>The growing number of lighting events around the world shows the power of light to inspire and transform the urban spaces around us. Two of Greater Copenhagen's biggest light events; Dreamlight in Helsingborg and its latest incarnation, Copenhagen Light Festival, offer different takes and perspectives on how light installations and events can increase our cities' liveability.</p>		
15.45–16.30	<p><b>New Research in Lighting</b> by Paul Michael Pedersen &amp; Jessika Luth Richter</p> <p>This session discusses how we can move toward better lighting by testing the quality of indoor and outdoor lighting, and reviews the latest research on the environmental impacts of LED lighting products and trade-offs from a lifecycle perspective.</p>		
<p><b>SATURDAY 15 SEPTEMBER</b></p>			
09.30–14.30	<p><b>#7 Living Lab Bus Tour – Indoor &amp; Outdoor Lighting</b></p> <p>Lighting for the office, canteen, a neonatal unit and safety</p>		