LESO LUNCHTIME* LECTURES

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Modeling approaches and design strategies for more sustainable and livable urban areas

Bruno Bueno, PhD
Head of Thermal & Daylighting Façade Systems Team at Fraunhofer Institute for Solar Energy Systems ISE

Introduction by Dr Dasaraden Mauree – Followed by open discussion

Summary
This research aims to contribute to the improvement of the sustainability and livability of urban areas, where more than half of the global population currently lives. Within this context, the presentation will cover two topics. On the one hand, we will discuss on modelling approaches to predict the air temperatures at the urban boundary layer. These modelling approaches can be used to develop mitigation strategies for the Urban Heat Island (UHI) effect or the increase in air temperature observed in urban areas relative to the surrounding rural areas. On the other hand, we will discuss on the importance of daylight-inspired urban design for sustainable cities including aspects related to social life in cities, the aesthetic of indoors and outdoors urban environments, climate adaptation, biodiversity and energy reduction strategies.

About the speaker
Bruno Bueno is the head of the team “Thermal and Daylighting Façade Systems” at the Fraunhofer Institute for Solar Energy Systems ISE. He received his PhD degree in Building Technology from the Massachusetts Institute of Technology (USA) in 2012. He is specialized in façade systems and urban microclimate research. Current research activities include the optical and thermal characterization and modelling of complex fenestration systems, as well as the evaluation of their performance in terms of daylighting provision, glare protection and solar heat gain management. Bruno Bueno is a founding member of the Daylight Academy and participates in various national and international forums on Daylighting.

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