

Press

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Project team led by Osram develops invisible light switch

In view of the growing demands for office lighting that offers maximum comfort and sense of security for users while granting large savings in energy consumption, Osram together with the University of Verona and the Istituto Italiano di Tecnologia (IIT) in Genova started the project SceneUnderLight. The project brings together advanced research in computer vision and the most modern technology in lighting. The goal of the project team is to eliminate the need for any switches for lighting, which means that each person in the office perceives the entire office as “all lit”, while lights, which are not visible by the person, are switched off by the system. This can be achieved by combining lighting with presence detection and smart light control. The project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement no. 676455.

Dr Fabio Galasso, head of the computer vision R&D activities at Osram, brought together the team consisting of Prof. Marco Cristani, heading the department of Vision, Processing and Sound of University of Verona, and Dr. Alessio Del Bue, head of the department of Visual Geometry and Modelling of IIT. Since 2015, the project members target two main goals: the understanding of the light and scene structure in an office as well as the understanding of the human factor in an illuminated scene.

The IIT develops a light visibility map, showing where in a scene which luminaire is visible from. The University of Verona focuses on the estimation of the gaze people have in offices. First results show that a joint detection and head pose estimation approach, based on a deep neural network model, outperforms previous algorithms. The gaze estimation will now be used to improve the person future position prediction.

Bringing the goal of the project – the invisible light switch for offices – into applications, may be possible by 2019.

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ABOUT OSRAM

OSRAM, based in Munich, is a globally leading lighting manufacturer with a history dating back about 100 years. The product portfolio includes high-tech applications based on semiconductor technology such as infrared or laser lighting. The products are used in highly diverse applications ranging from virtual reality, autonomous driving or mobile phones to smart and connected lighting solutions in buildings and cities. In automotive lighting, the company is the global market and technology leader. Based on continuing operations (excluding Ledvance), OSRAM had around 24,600 employees worldwide at the end of fiscal 2016 (September 30) and generated revenue of almost €3.8 billion in that fiscal year. The company is listed on the stock exchanges in Frankfurt and Munich (ISIN: DE000LED4000; WKN: LED 400; trading symbol: OSR). Additional information can be found at www.osram.com.