



INFO DAY

HORIZON EUROPE ED IL MONDO DELLA RICERCA

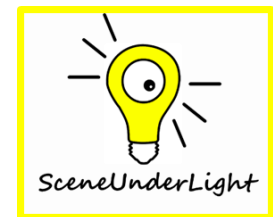
16 Settembre 2019

Il progetto "**SCENEUNDERLIGHT**" – Un esempio virtuoso di
collaborazione fra ricerca e industria

Understanding the scene and its lighting

MSCA-ITN-EID - European Industrial Doctorates

Claudio Nidasio





- ✓ **Il progetto**
- ✓ **La ricerca**
- ✓ **I risultati ottenuti**
- ✓ **Gli effetti sulla carriera dei ricercatori**

Proposal: Time-lapse understanding of the static and human scene and its lighting

Duration: 48 months (Periods in Academia – Phd + Periods in Industry) – 2015-2019

Abstract: SCENEUNDERLIGHT creates a breakthrough in light management systems by enabling the understanding of the environment via long-term observation with cameras for smart illumination and energy saving.

- ☐ Collaborative (Academia + Industry)
- ☐ Development of a final demonstrator
- ☐ Two early stage researchers (ESRs)
- ☐ Industrial integration into a light management system that implements an “invisible light switch”

ESRs:

1. Theodore Tsesmelis (ESR1)
2. Irtiza Hasan (ESR2)

Supervisors:

Prof. Marco Cristani (Università degli Studi di Verona, Department of Computer Science)

Dr. Alessio Del Bue (IIT - Visual Geometry and Modelling (VGM - Lab)

Dr. Fabio Galasso (Osram, Department of Corporate Technology, Research and Innovation, Electronics)

Main Idea



- Use jointly people velocity and head pose for forecasting human trajectories
- This idea is built upon sociological findings and data statistics

Scene & Light

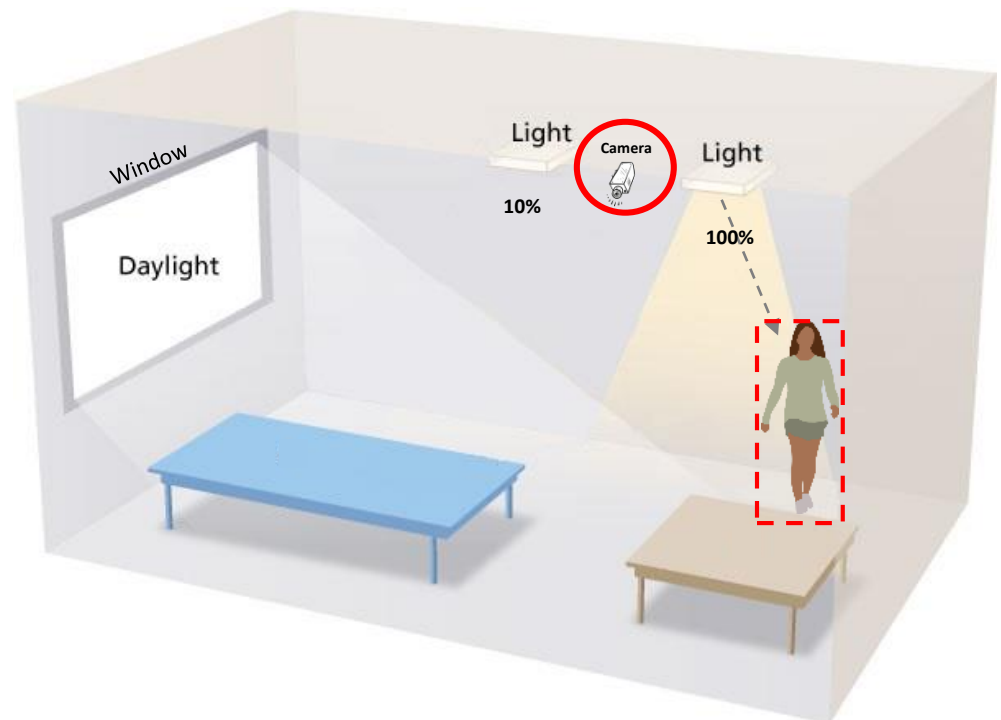
Setup

- Indoor environment
- Different illumination (artificial, natural)
- RGB-D camera (top view)

Objectives

- Estimate the number of light sources and localize their position in space (calibration)
- Estimate photometric properties of materials & objects
- Compute visibility and illumination maps
- Adjust light sources according to people location/activity

Human Activity





Irtiza Hasan

- ✓ **4 Patent applications**
- ✓ **8 International papers/publications**
- ✓ **13 Conference, workshop attendance, courses, and /or seminar presentations**
- ✓ **Research Skills:** technical and theoretical skills + software and hardware tools
- ✓ **Communication skills, professional training, networking opportunities**

Theodoros Tsesmelis

- ✓ **4 Patent applications**
- ✓ **6 International papers/publications**
- ✓ **+ 20 Conference, workshop attendance, courses, and /or seminar presentations**
- ✓ **Research Skills:** technical and theoretical skills + software and hardware tools
- ✓ **Communication skills, professional training, networking opportunities**



Irtiza Hasan

Research associate at [Inception Institute of Artificial Intelligence \(IIAI\)](http://www.inceptioniai.org) -
www.inceptioniai.org
<https://irtizahasan.com/>

Theodoros Tsesmelis

Developer at OSRAM



Contacts



Università di Verona

Area Ricerca

Unità Progettazione e Rendicontazione Progetti di Ricerca

Website: <https://www.univr.it/it/organizzazione/area-ricerca/progettazione-e-rendicontazione-progetti-di-ricerca>

Claudio Nidasio

claudio.nidasio@univr.it

POLO SCI (Biotechnology – ICT)

ricerca.poloSCI@ateneo.univr.it