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Smart Lighting and Internet of Things

Abstract: With the introduction of IoT technologies and proliferation of Visible Light Communications (VLC), indoor LED-based lighting is becoming a focus of intense interest in communication engineering community. In this talk, we discuss possibilities of developing indoor smart lighting solutions by exploiting several key ingredients: 1) low-cost fixed or wearable IoT devices that measure light illumination and provide information about occupant presence, 2) indoor VLC-based positioning for low-cost devices, and 3) central smart lighting optimization system that takes into account occupant comfort and position. The solution under development is part of an ongoing H2020 project SENSIBLE, which focuses on indoor sensing in built environment.

Biography: Dejan Vukobratovic received Dipl.-Ing, Mr.-Ing. and Dr.-Ing. degrees in electrical engineering from the University of Novi Sad, Serbia, in 2001, 2005 and 2008, respectively. Since February 2009, he was an Assistant Professor, and since March 2014, he is an Associate Professor with the Department of Power, Electronics and Communication Engineering, University of Novi Sad. From June 2009 until December 2010, Dr Vukobratovic was on leave as a Marie Curie Intra-European Fellow (FP7-PEOPLE-2008-IEF project "MMSTREAM") at the Department of Electronic and Electrical Engineering, University of Strathclyde, Glasgow, UK. From 2011-2014, his research at the University of Novi Sad was supported in part by Marie Curie European Reintegration Grant (FP7-PEOPLE-2010-ERG project "MMCODESTREAM"). Research group of Dr Dejan Vukobratovic was involved in FP7-PEOPLE-2011-IRSES project "QoSTREAM" (2012-2016), and is involved in FP7-PEOPLE-2013-ITN project "ADVANTAGE" (2014-2018), and H2020-PEOPLE-2015-RISE project "SENSIBLE" (2017-2021).