

# SEMINAR SERIES

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The Center for Research in Human Movement Variability (MOVCENTR)



## CREATING HEALTHY VISUAL ENVIRONMENTS: A RESEARCHER'S PERSPECTIVE

Featuring Dr. Iason Konstantzos

University of Nebraska-Lincoln

October 23, 2020 | 12:00 - 1:00 pm

Zoom Link: <https://unomaha.zoom.us/j/99114247078>

### ABOUT DR. KONSTANTZOS

Dr. Iason Konstantzos is an Assistant Professor in the Durham School of Architectural Engineering and Construction at University of Nebraska-Lincoln. Through the Human-Centered Integrated Building Operation Lab, he pursues research objectives within the area of indoor environmental perception, sensing and controls, also focusing on lighting and daylighting concepts. Dr. Konstantzos completed his Undergraduate and Master's studies at the National Technical University of Athens (NTUA) in Greece, and Ph.D. studies at Purdue University. So far, he has authored over 20 technical papers, including high impact factor journal publications and international conference proceedings, and his work has been awarded, among others with the Grant-In-Aid award from ASHRAE. His research on new indoor environmental quality metrics, low-cost sensing systems, and shading control and design guides achieved broad impact both in his research field, as well as in the fenestration and lighting industry.

### LEARNING OBJECTIVES

A human-centered design perspective is a necessity for the visual environment, given its hybrid nature of impacting human satisfaction and well-being as well as energy performance. Intelligent adaptive buildings can offer an ideal platform to develop concepts and technologies towards promoting human-centric visual environment. So far, knowledge gaps with respect to human perception and inappropriate sensing and controls approaches prevented from achieving efficient building design and operation, compatible with the human element. This seminar goes over three separate but highly interacting research directions: (i) developing non-obstructive sensing technologies; (ii) investigating human perception; and (iii) formulating human-centric simulation-based controls. The coordination of these research directions can produce human-centric design and operation frameworks, in turn able to be materialize in intelligent buildings that are tailor-made for different objectives.

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