



Notice for the PhD Viva-Voce Examination

Mr Shynu R V, Registration Number: 2170284, PhD Scholar at the School of Architecture, CHRIST (Deemed to be University), Bangalore will defend his PhD thesis at the public viva-voce examination on Wednesday, 29 October 2025 at 10:15 am in the CDI Conference Room, Block V, Bangalore Kengeri Campus, Bengaluru - 560074, Karnataka, India.

Title of the Thesis : **Role of Urban Streetscape Variability on the Dynamics of Cognitive Processes: A Psycho-Physiological Analysis of Respondents in an Indian Context**

Discipline : **Architecture**

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The members of the Research Advisory Committee of the Scholar, the faculty members of the Department and the School, interested experts and research scholars of all the branches of research are cordially invited to attend this open viva-voce examination.

Place: Bengaluru
Date: 15 October 2025

Registrar (Academics)

ABSTRACT

Current urban environmental development has a rising concern over emotional well-being and overall quality of life of the people mainly due to the impact of the built environment. The environment's visual stimuli play a significant role in information processing in the human brain, since human interaction with their environment is largely based on visual perception. However, studies are yet to explore the impact of the urban street environment completely on human perception and cognitive responses, especially mapping response variations based on gender dynamics and educational background. This research fills the gap by studying human psychophysiological responses to urban street scales in the Indian pedestrian context. The study argues that the urban street architectural attributes like building height and street width, impact participant's cognitive processes and decision-making, with reference to task completion duration, intelligence quotient, and spatial memory as overall behavioral indicators. The investigation emphasizes perception-based environmental interaction with its variables in gender and educational background in the design and non-design realms. The study adopts Gibson's ecological perception theoretical framework, to correlate how people perceive, navigate, and engage with urban environments with empirical findings. It examines the impact of environmental affordances on neuro-architectures that shape human behavior. The study examines psychophysiological responses by empirically measuring behavioral indicators and neural responses using virtually simulated urban environments to estimate pedestrian well-being on the street. It maps the gender-specific differences impacted by the street width and the building height over participant task performance and emotional responses. The brain and behavior lab tests provide brain signal data rendering a deeper understanding of cognitive information processing while navigating urban environments. While concluding these findings, the study provides guidelines and recommendations for urban design practice to aid design in better affordance and inclusive urban environments. The significant outcome of this study is a deep understanding of human emotional experiences and decision-making on urban streets thus aiding evidence-based design.

Keywords: *Pedestrian behavior, Perception, Spatial cognition, urban environment*

Publications:

1. **Shynu, R. V.**, and Anitha Suseelan (2023). Human cognition and emotional response towards visual environmental features in an urban built context: a systematic review on perception-based studies. *Architectural Science Review*, 66(6), 468–478. <https://doi.org/10.1080/00038628.2023.2232339>.
2. **Shynu, R. V.**, and Anitha Suseelan (2024). The green and blue urban environments influence on human psychophysiology: A systematic review on perception-based studies. *Future is Urban*: 250-257, Routledge
3. **Shynu, R. V.**, and Anitha Suseelan (2024). Urban Cognition and Emotion Simulation Platform (UCESP). Patent Publication Number- 202441055611.
4. **Shynu, R. V.**, and Anitha Suseelan (2024). Urban Street Design and Human psychophysiology: A Pedestrian-centric analysis Using Virtual Environments. Copyright Diary No: 21600/2024-CO/L.