

NTU-CEE Seminar Series

Seminar in Civil Engineering

School of Civil and Environmental Engineering

Sensing Technologies for Construction Workers' Productivity, Safety and Health Monitoring

Assoc. Prof. SEO JoonOh, Hong Kong Polytechnic University (PolyU)



About the Speaker

Dr. SEO JoonOh is an Associate Professor at the Department of Building and Real Estate (BRE), Hong Kong Polytechnic University (PolyU). He is currently serving as a programme leader of BSc in Building Engineering and Management.He received his bachelor's and master's degrees in

Architectural Engineering from Seoul National University, South Korea and obtained his PhD degree in Civil Engineering from the University of Michigan in the United States in 2016. His research focuses on understanding the relationship between construction workers' demands and their impact on construction operations. In his studies, various computing and IT approaches—including vision-based motion capture, machine learning-based action recognition, and computer simulation such as discrete event simulation and system dynamics have been applied and implemented. In particular, he is interested in total scene understanding and wearable sensing, aiming to enhance construction workers' performances such as safety, health, and productivity. Also, he is currently working on Augmented and Immersive Virtual Reality (AR/IVR) for enhancing construction workers' safety behavior.

Abstract:

Due to the labor-intensive nature of construction work, many construction workers face excessive demands beyond their physical capabilities, which leads to excessive fatigue, injuries, errors, accidents, and long-term declines in productivity. Given these consequences, recent advancements in sensing technologies such as computer vision and wearable sensors provide an ample opportunity to continuously measure workers' activities, aiming to identify fundamental causes of low productivity and poor safety performance. In this talk, Dr. SEO introduces his on-going studies on applications of sensing technologies for worker monitoring, and discusses about research challenges and opportunities, and practical implications.



Time: 24th Mar 2023 (Friday), 9:30–10:30 am (SGT) Venue: CEE Seminar Room A / Online



Host: Asst. Prof. KIM Jinwoo

Dr. KIM Jinwoo is an Assistant Professor at NTU CEE. His research interests lie in understanding the relationship between human factors and construction system performances. То this end, he leverages digital and AI technologies.

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