

**SEMINAR ANNOUNCEMENT****DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING****COLLEGE OF DESIGN AND ENGINEERING**Website: <https://cde.nus.edu.sg/ece>**Area: Control, Intelligent Systems & Robotics (CISR)****Host: Assoc Prof Prahlad Vadakkepat**

<b>TOPIC</b>	:	<b>Real-time Vision Measurement for Large Precast Components Installation</b>
<b>SPEAKER</b>	:	Mr Liang Yuanchang Graduate Student, ECE Dept, NUS
<b>DATE</b>	:	<b>Wednesday, 7 January 2026</b>
<b>TIME</b>	:	<b>10:30AM-11:30AM</b>
<b>VENUE</b>	:	Join Zoom Meeting <a href="https://nus-sg.zoom.us/j/84577675942?pwd=bkhYY3dmczJNa2FkVTvjYVByKzUxQT09">https://nus-sg.zoom.us/j/84577675942?pwd=bkhYY3dmczJNa2FkVTvjYVByKzUxQT09</a> Meeting ID: 845 7767 5942 Passcode: 556446

**ABSTRACT**

The installation of a lifted precast concrete component on the construction floor requires accurate alignment with its target position. Current site practice relies on manual adjustment of workers by trial and error. Digitalization of the pose of the lifted precast unit is desired to achieve safe, fast and reliable adjustment for the position and rotation. To fill this gap, this study proposes a data-efficient real-time vision measurement method by a monocular RGB camera on the lifting frame. The experiments demonstrate that the measurement accuracy is even better than the latest commercially available stereo cameras. The proposed method is ready to deploy on the real construction site and accelerate the adjustment process by providing digital feedback for both manual and automated adjustment.

**BIOGRAPHY**

Liang Yuanchang is currently a PhD student at the Department of Electrical and Computer Engineering, National University of Singapore. His research interests include data-efficient robot learning and automation for construction.

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