ASSOCIATION OF CONSULTING ENGINEERS SINGAPORE

ACES AI Seminar 2025

Date: **20 August 2025 (Wednesday)**
Time: **6.00 pm to 9.30 pm**
Mode of Delivery: In-person
Fee: $20 nett for ACES Member
$30 nett for non-ACES Member
CPD: PDU to be confirmed
Venue: SMU Connexion Level 5
40 Stamford Rd, Singapore 178908

Registration Link and QR Code
https://forms.gle/LnmD2D1vzjxUAAk66

TOPIC & AGENDA

ACES is organising an AI Seminar to showcase the real project experiences, real work examples, cutting-edge technologies, innovative solutions, and practical applications, engaging the consultants, local engineering community and to support members in digitally transforming their workflows.

Programme

Time	Programme	Action By / Speaker
6:00pm - 7:00pm	Registration, Networking & Dinner	
7:00pm - 7:10pm	Welcome and Opening Remark	Er. Mak (ACES) / Mr Samuel Tan (IMDA)
7:10pm - 7:40pm	Presentation by Arup + Q&A	Ranzi Huang (Arup)
7:40pm - 8:10pm	Presentation by CivilAI + Q&A	Stevan Lukic (CivilAI)
8:10pm - 8:40pm	Presentation by Wenti Labs + Q&A	Ethan Ow (Wenti Labs)
8:40pm - 9:10pm	Presentation by IDEA StatiCa + Q&A	Vlastimil Konecny (IDEA StatiCa)
9:10pm - 9:20pm	Closing Remarks	

Speakers

Firm	Synopsis / Speaker	
CivilAI	**Synopsis:** In this session we dive into 3 real world examples of how AI is being used by Consultants to automatically extract structured data from complex pre-construction documents looking at PDF 2D CAD data, tables of rates, and geotechnical reports. We explore the underlying technology and how you can use AI models to extract and prepare data for calculations and reports, saving hours of manual measuring, counting and transcribing. **Speaker:** Stevan Lukic **Bios**: Stevan is a Chartered Civil Engineer and founder of the Venture Capital backed construction technology company Civils.ai. Before starting Civils.ai, Stevan worked for Arup, designing tunnelling projects like Singapore's Cross Island Line and Crossrail in London.	

Firm	Synopsis / Speaker	
AIVEA (by Arup)	**Synopsis:** This presentation explores how Large Language Models (LLMs) and Retrieval-Augmented Generation (RAG) can be effectively applied within the engineering domain. Two practical examples will be discussed: leveraging LLMs to retrieve relevant information from design codes, standards, and reference drawings, to improve design efficiency and decision-making; integrating the LLMs' coding capabilities with Rhino and Revit to generate geometry, automate modelling tasks, and streamline computational design workflows. **Speaker:** Ranzi Huang **Bios**: Ran-zi Huang is a senior structural engineer and computational designer at Arup Singapore. Throughout his career, he has served as the design engineer on various iconic projects across east asia and europe, including 400m plus high rise towers and geometrically complex steel structures. He also leads multiple research initiatives in AI and generative design, and received the Arup Digital Innovation Award in 2024.	
Wenti Labs	**Synopsis:** Learn about what's the difference between ChatGPT and the different term in Generative AI. Ethan will share about how and why Wenti Labs uses AI Agent to solve the different construction workflow. Understand what's the limitation of the LLM technology today, where it's headed and how AI Agent can do for you. **Speaker:** Ethan Ow **Bios**: Ethan is the CEO of Wenti Labs where they're building AI Agent to help the team in built environment sector to automate their data entry workflows. Among the workflows that they aim to automate are progress updates, safety non-compliance, manpower reporting, defects reporting, inspection report and many more. Wenti Labs AI Agent fits into your existing workflow and that means no more change management and never ending training for your team to utilise the tool.	

Firm	Synopsis / Speaker	
IDEA StatiCa	**Synopsis:** The presentation aims to demonstrate how machine learning can be used to estimate the ultimate load resistance of steel welds. At load levels lower than the weld's ultimate load resistance, stress concentrations will often occur along the length of a weld, given by the geometrical configuration of the connected plates and the surrounding structure. For this reason, stress values calculated at lower load levels cannot be used to determine the total weld load resistance directly. Machine learning methods were therefore used to estimate the weld's ultimate load resistance based on a single given stress state below the weld's ultimate load resistance, assuming a linear increase in all load components. Sufficiently accurate estimates were achieved using convolutional neural networks, and this method was implemented as a part of the Component-based Finite Element Method (CBFEM). **Speaker:** Vlastimil Konecny **Bios**: Vlastimil Konecny is a Technical Channel Manager at IDEA StatiCa, having worked for IDEA StatiCa headquarters in Brno, Czech Republic, Europe, before joining the IDEA StatiCa Asia and Pacific team in the Singapore office. He has over seven years of experience in designing concrete and steel structures, participating in various projects in Europe. He graduated from Brno University of Technology with a Master of Science in Civil Engineering, specializing in Structural Engineering and has been working in this field ever since.	

Venue Sponsor

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