

About The Course

The building and construction industry is slowly but constantly iterating and evolving, emerging new technologies such as Building Information Modelling (BIM), Digital Twins (DT), Artificial Intelligence (AI), Internet of Things (IoTs) and Smart Vision (SV), which can further enhance the efficiency, productivity, accuracy, and safety of the built environments. Especially, AI has launched Industry 4.0 (also called the fourth industrial revolution) and has had a profound influence on the transformation of the traditional construction industry practices and methods into autonomous smart systems using advanced digital technologies.

In the era of building and construction industry 4.0, there will be a confluence of state-of-the-art industrial production systems, cyber-physical systems, and digital and computing technologies that can redefine building and infrastructure design, construction, operation, and maintenance while considering circularity. Industrial production systems could introduce 3D printing and assembly, prefabrication and offsite manufacturing. Cyber-physical systems could have IoTs, robots, cobots, and actuators, whilst digital and computing technologies could be embedded with BIM, AI, machine learning (ML), deep learning (DL), cloud computing, big data and data analytics, Blockchain, Virtual Reality (VR), Augmented Reality (AR), DT. Due to digital transformation, massive amounts of data will be generated, and systematic analysis of the data and predictive modelling can be used to generate innovative architectural and structural designs. These will help to improve construction and operational safety, reduce the embodied and operational energy requirements, reduce construction and operational costs, increase construction speeds, improve payback periods and enhance sustainability.

Who should attend?

The course is intended for Engineers, Operations Managers, Applied Scientists and Technologists interested in the building and construction industry which is slowly but constantly iterating and evolving, emerging new technologies such as BIM, DT, and artificial intelligence (AI) and Smart Vision (SV)

Cost

The registration fee for the workshop Will be £695 +VAT (VAT UK ONLY)
Which includes course notes.

Payment

Payments can be made by cheque (made payable to ASRANet Ltd.), cash or bank transfer. Please enquire for details.

Contact Us

ASRANet
Limited

W: www.ASRANet.co.uk/courses

E: info@asranet.co.uk

General enquiries: +44 (0)7764575990

Payment enquiries: +44 (0) 7712731566

AI in Construction Industry

10-11 June 2024

ONLINE



(A Maritime Company for Courses, Conferences, and Research)

PROGRAMME (All timings are in BST (GMT +1))

Monday 10 June 2024

09:00 – 10:30 Lecture 1: Artificial intelligence (AI) and smart vision for building and construction 4.0

10:30–11:00 Break

11:00–12:30 Lecture 2: Digital technology transformation in construction industry

12:30 – 13:00 Lunch

13:00-14:30 Lecture 3: How digital transformation drives sustainability in building construction

14:30 – 15:00 Break

15:00 – 16.30 Lecture 4: The role of Digital Twins in construction technology

Tuesday 11 June 2024

09:00 – 10:30 Lecture 5: Virtual Reality (VR) and Augmented Reality (AR) in construction industry

10:30 – 11:00 Break

11:00 – 12:30 Lecture 6: Smart buildings

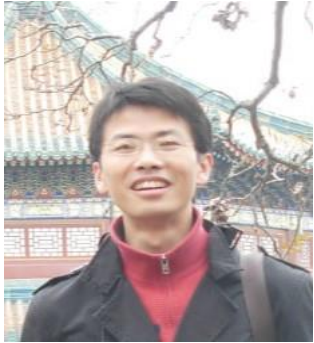
12:30 – 13:00 Lunch

13:00 – 14:30 Lecture 7: Real-time control of building energy management systems

14:30 –15:00 Break

15:00 – 16:30 Lecture 8: Intelligent fault diagnosis of building operation and management

CV of Speaker



Dr. Jie Deng, Senior Lecturer, Kingston University, UK

I have an education background in HVAC or Building Services Engineering. Before joining KU as a Senior Lecturer in Built Environment in August 2023, I served as a Lecturer in Green Technology & Sustainability at the UWL, School of Computing and Engineering since June 2022. Prior to this, I went through a couple of years of postdoctoral research experience at the University of Reading (2018 - 2022) and Heriot-Watt University (2017) in the UK, with a focus on sustainable technologies in the built environment. Apart from research and academic experience in the UK, I also had a couple of years of overseas research experience, especially in solar thermal applications in buildings (Guest Researcher at Technical University of Denmark, Kgs. Lyngby, Denmark, 2015-2016; Research Assistant Professor in Chinese Academy of Sciences, Beijing, China, 2014-2016; Postdoc at Tsinghua University, Beijing, China, (2011-2013). At the end of 2016, I resigned from the Chinese Academy of Sciences and moved to the UK for a career adventure.