



LSGI RESEARCH SEMINAR

AI for Infrastructure and Built Environment Inspection Tasks

 **22 OCTOBER 2025 (WED)**

 **10:30 AM - 11:45 AM**

 **Z206, POLYU**

 **ENGLISH**

Prof. Jan Boehm

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ABSTRACT

The aging infrastructure in the western world is expected to require significant investment over the next decade. Estimates for the UK needs reach up to £700 billion. At the same time many countries in the west face a decline in the skilled workforce in the construction sector. It will be crucial for maintaining resilience in the infrastructure sector to harness the capabilities of Artificial Intelligence for inspection and monitoring. We will show some successful examples for using Machine Learning and Artificial Intelligence on inspection tasks often in combination with robotic platforms. The talk will touch upon recent developments in Large Language Models and explore the use of Multi-Modal Models in the built environment

BIOGRAPHY

Prof. Jan Boehm's research focuses on 3D data acquisition and 3D data processing, including scene understanding. He is an expert in photogrammetry and LIDAR and related 3D capture technologies. His research combines geometric processing techniques and machine learning approaches to deliver automated acquisition and high-level analysis of 3D data. He has applied his expertise and collaborated in a variety of application areas including national mapping and infrastructure, automotive and aerospace manufacturing, medical and body imaging, robotics and autonomous navigation, architectural and cultural heritage recording.

Jan Boehm has published over a hundred papers on 3D data related topics in the photogrammetric, remote sensing, computer vision and pattern recognition community. He is co-author of an influential textbook on close-range photogrammetry. His current academic roles include the headship of the Geomatics section in the CEGE department, the co-chair of ISPRS WG II/2 and the co-chair of the OGC WG point clouds.

Moderator: Prof. Bo WU, Associate Head and Professor, LSGI

All are welcome! Please register now to join us on-site!

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