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Chancellor of Abu Dhabi University, Past President ...
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Joint Research with the University of Cambridge and the American University of Beirut

Next week, ADU will host Dr. [Erika Pärn](#), Senior Research Associate at the [University of Cambridge](#), and Dr. [Hiam Khoury](#), Associate Professor at the [American University of Beirut](#), for a week of collaborative research in the area of digital twins in construction.

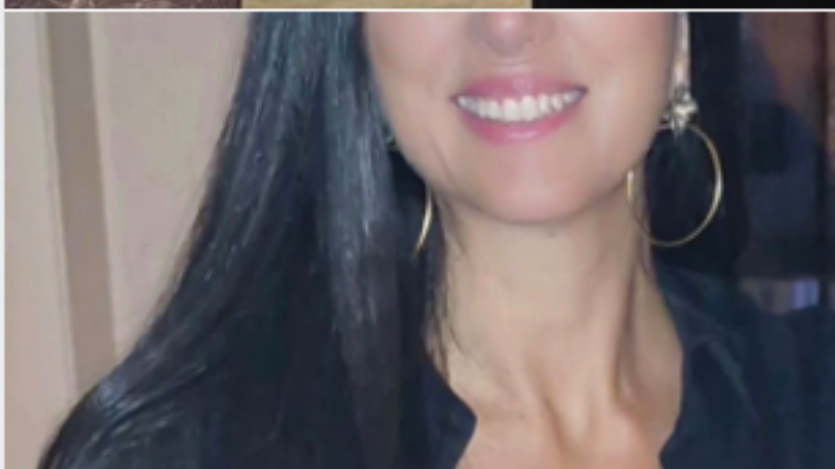
Digital twins in construction refer to virtual replicas of physical assets, processes, or systems. These digital representations are created using real-time data from sensors, IoT devices, and other sources to simulate the behavior and performance of their physical counterparts.

Applications include real-time monitoring, such as the continuous observation of construction sites, which enables project managers to track progress, resource usage, and safety conditions in real time; the provision of a platform for simulating various scenarios, such as changes in design, scheduling, or resource allocation, helping teams to make informed decisions; predictive maintenance, where analyzing data from a digital twin allows construction teams to forecast when maintenance is needed, thus reducing downtime and extending the lifespan of equipment; collaboration among stakeholders by providing a shared, up-to-date view of the project that helps align goals and expectations; enhanced design through performance simulation to identify potential issues before construction begins, leading to better outcomes and reduced costs; and finally, lifecycle management, which involves overseeing the asset throughout its lifecycle, supporting operations, maintenance, and future renovations. This is my area of expertise, and I am excited to be involved and return to research work that I have missed.

I am grateful to my esteemed colleague, Professor [Montasir Qasymeh](#) who heads research and innovation at ADU, for embracing this collaboration, and I look forward to achieving great outcomes from this project.

[#DigitalTwins](#) [#BIM](#) [#Simulation](#) [#Modeling](#) [#Construction](#)
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