Dr. Alper Kanyilmaz is an associate professor at Politecnico di Milano, working at the intersection of structural engineering, advanced manufacturing, and computer science. His research team applies artificial intelligence, robotic fabrication and life-cycle driven methods to advance design and assessment of structures.

He is an Expert Advisor for the European Commission Steel Advisory Group (SAG; Mandate 2025-2029), and serves as a project monitoring expert for the EU Future Low Emission Industries programme. He is a member of the CEN/TC 250/SC 3 Ad hoc group "AI Design of Steel Structures".

He coordinates major EU and industry-funded research projects exploring neural networks for automated inspection, expert systems for optimizing fabrication processes, genetic algorithms for multi-objective conceptual design and reuse strategies, surrogate models for seismic response prediction, and fiber optic interferometry for post-earthquake monitoring, all focused on optimizing cost, embodied carbon and structural performance in steel construction.

His highly-cited publications, featured in leading journals like Engineering Applications of Artificial Intelligence, span topics from circular-economy strategies in steel construction to the use of data-science in structural design, monitoring, assessment and repair.

Dr. Kanyilmaz has concieved and delivered professional training programs and workshops in collaboration with global partners such as Microsoft, Arup, Foster & Partners, and Autodesk, guiding hundreds of construction industry professionals in applying AI to design, fabrication and life-cycle assessment.

His work represents a vision where artificial intelligence, applied across the entire asset life-cycle from early stages to final reuse, serves as an engine that augments human expertise to drive the creation and management of a sustainable and resilient built environment.