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## Mr. Eric K. F. Yuen, PhD student of CNERC received a Student Presentation Award at the Third ASCE Greater China Conference in Guangxi, China 2025.01.20

Mr. Eric K. F. Yuen, PhD student of CNERC attended the Third ASCE Greater China Conference in Guangxi, and presented his research work titled “*Investigating Pitting Morphology of Corroded High-Strength Steel Strand Using High-Resolution 3D Scanning Technology.*”. He received one of the eight Student Presentation Awards among a total of 60 presentations. Mr. Eric Yuen is currently a PhD student at CNERC, and he works on advanced technology on corrosion monitoring and durability assessment of steel structures and members.

The Conference was organized by the Greater China Section of **American Society of Civil Engineers (ASCE)**, and it is a premier international platform for civil and structural engineering professionals. It was held from 10 to 12 January at Guangxi University, and attracted 250 leading engineers and academics in civil engineering for exchange in research and innovations.

In his presentation, Mr. Yuen described various challenges posed by corrosion onto high strength steel strands and wires commonly used as post-tensioned tendons in bridges. He discussed limitations of the mass loss measurement which often failed to provide detailed information on corrosion morphology. To overcome these challenges, he introduced an innovative approach leveraging the high resolution 3D scanning technology which is capable of accurately identifying both sizes and shapes of pitting corrosion, and more importantly, their spatial distributions on the surfaces of steel strands and wires. This allows rational assessments on these corrosion damages to the long term service lives of the steel strands and wires under cyclic loadings.





Mr. Eric Yuen presenting his research work on corrosion monitoring and 3D scanning technology



Group photo (left to right) Mr. Jiang Hao, Vice President of ASCE Greater China Section, Prof. Han Lin-hai, President of Guangxi University and Mr. Eric Yuen



Group photo (left to right): Mr. Eric Yuen, Prof. Luo Xiaowei of City University of Hong Kong, Prof. Ban Huiyong, TsingHua University, and Mr. Jiang Hao, ASCE Great China Section