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The Third International Workshop on High Performance Steel Structures in Beijing 2024.10.09-12

The High Performance Steel Structures Research Council (HPSSRC) was proposed and initiated by Professor Shi Gang from Tsinghua University, Professor Frans Bijlaard and Professor Milan Veljkovic from Delft University of Technology. It was established in 2018. The First International Workshop on HPSSRC was held in 2018 at Delft University of Technology in the Netherlands, and the second workshop was held online in 2020. The Third International Workshop on High Performance Steel Structures (HPSSRC Workshop III) was held in Beijing, China, from October 9 to 12, 2024. This workshop focused on high-strength steel structures, 3D-printed steel structures, fatigue performance of high-performance steel, and other related research on advanced steel materials. Nearly 200 experts, scholars, and graduate students from around the world participated in the workshop, engaging in comprehensive academic exchanges on structural theories and technical applications of materials such as high strength steel, high performance steel, stainless steel, shape memory alloy steel and fire-resistant steel. Dr. Y. F. Hu, Research Assistant Professor, Dr. M. F. Zhu, Postdoctoral Fellow, and PhD student Mr. W. Chen from CNERC were invited to attend the event.

Group photo of the participants

Dr. Hu, Dr. Zhu, and Mr. Chen with the Conference Chair, Prof. G. Shi from Tsinghua University

On 10 October 2024, in the Parallel Session of "Structural Behaviour and Design of High Strength Metallic Structures", Mr. Chen presented an academic report titled "Fatigue Performance of S690 Steel and Their Welded Sections in Bridge Structures". He shared research findings on fatigue tests and numerical simulations of 690 MPa high strength steel with the participants.


Mr. Chen gave a presentation titled "Fatigue Performance of S690 Steel and Their Welded Sections in Bridge Structures"

On the same day, in the Parallel Session of "Structural Behaviour and Design of High Strength Metallic Structures", Dr. Hu gave an academic report titled "Advanced Numerical Simulation on Fabrication Processes of High Strength Cold-formed CHS". He introduced the research related to the design, manufacturing, and welding simulation of cold-formed tubular joints made of high strength steel.

Dr. Hu gave a presentation titled “Advanced Numerical Simulation on Fabrication Processes of High Strength Cold-formed CHS”

On 11 October 2024, in the Parallel Session of “High Performance Steel Frame-Shear Wall/Steel Brace Structural System”, Dr. Zhu gave an academic report titled “Numerical Simulation of Welding of S960 High Strength Steel Considering Phase Transformation”. She presented the experimental and numerical works on 960 MPa high strength steel welded sections, which taking into account metallurgical phase transformations.

Dr. Zhu gave a presentation titled “Numerical Simulation of Welding of S960 High Strength Steel Considering Phase Transformation”