
**The 13th International Conference on Quality, Reliability, Risk, Maintenance, and Safety Engineering
(QR2MSE 2023)
July 26-29, 2023, Kunming, Yunnan, China**

Special Session: Mechanical Reliability Theory and Application

The relevant data indicates that the issue of reliability in complex mechanical systems in equipment is increasingly prominent, and there is an urgent need for research on mechanical reliability issues to solve major equipment problems. This has become a key constraint on the improvement of equipment reliability levels.

To further improve the methodologies of mechanical reliability modeling and optimization techniques, this special session aims to deliberate on recent advances in high-reliability modeling techniques and their application in mechanical systems. The topics covered are include but not limited to:

- Mechanical Reliability
- Structure Reliability
- Reliability testing
- Failure Mechanisms Model
- Structural model simulation
- Reliability Testing Method

Chair: Tianxiang Yu, Northwestern Polytechnical University, China

Tianxiang YU received a Ph.D. degree in the School of Aeronautics from Northwestern Polytechnical University in 2007 and currently serves as a professor in the School of Aeronautics. He has published or had papers accepted by prestigious journals, including Reliability Engineering and System Safety, MSSP, and Engineering Failure Analysis. His current research interests are focused on mechanical reliability modeling and optimization. (E-Mail: Tianxiangyu@nwpu.edu.cn)

Chair: Shengli Zhu, Xi'an Aircraft Design and Research Institute, China

Shengli Zhu received a Ph.D. degree from the Chinese Aeronautical Establishment in 2014 and currently serves as the Vice Chief Designer of the Aircraft Structure Design Department. He has published numerous papers on aircraft structure reliability engineering. His current research interests focus on composite structure design, analysis, and optimization. (E-Mail: 17316655630@189.cn)

Chair: Zhi Bian, China Aero Polytechnology Establishment, China

Bian Zhi, the senior engineer working in the China Aero Poly-technology establishment, focuses on the research of standards and reliability technology for aircraft mechanical and electrical products. He published several papers about accelerated test technology, PHM, and reliability growth. (E-Mail: bianzhi2005@126.com)