

## Aims and Scope of the Symposium

The 2020 International Symposium on Structural Integrity (ISSI2020) will be held at Suzhou, China, by Suzhou Nuclear Power Research Institute Co., Ltd., during October 22-24, 2020. The predecessor of the annual symposium, Fracture Mechanics series, took place each year from 2003 to 2009, was renamed as Structural Integrity series after 2010, and organized by China Structural Integrity Consortium (CSIC).

As pointed out at the last symposium, ISSI2018, structural integrity has come to a new era as a result of the design and manufacturing of structures and components with long-life and high reliability requirements. Manufacturing of a product with high reliability needs the supports from real or virtual testing method, and strict inspection and on-line monitoring techniques, and thus covers a number of manufactures and stakeholders throughout the life cycle of a product. All of these underpin the theme of ISSI2020, “*Reliability-centered Manufacturing on the Basis of Structural Integrity*”.

The role of structural integrity in this new manufacturing paradigm involves several aspects such as material, design, manufacture and maintenance. In particular, it needs the full support of precision technology, which includes the selection of materials with high precision based on control of damage susceptibility genes, a design for reliability concept by failure probability control, a manufacture for reliability concept based on the principal of zero-defect manufacture and strengthening, and finally the maintenance for reliability recovery. During this process, the tool of failure analysis can provide the input and lay the basis for damage identification.

The aim of this symposium is hence to bring together people from both academic and industrial communities to exchange ideas and network friendship by discussing emerging structural integrity issues in the reliability-centered manufacturing field, where papers toward are mostly welcome.

## Key dates

Deadline for submission of abstract-----1 June 2020  
Notification of acceptance of abstract-----15 June 2020  
Deadline for pre-conference registration-----1 Oct 2020  
Conference open-----22 Oct 2020

## Organizers

China Structural Integrity Consortium,  
including following members:

East China University of Science and Technology  
Hefei General Machinery Research Institute  
China Special Equipment Inspection and Research Institute  
Jiangsu Province Special Equipment Supervision Institute  
Suzhou Nuclear Power Research Institute Co., Ltd.

Nanjing Tech University  
Zhejiang University  
Zhejiang University of Technology  
Zhengzhou University  
Changsha University of Science and Technology  
Southwest Jiaotong University  
Shandong University  
Beihang University  
Tianjin University

## Local organizers

Suzhou Nuclear Power Research Institute Co., Ltd.

## Sponsors

National Natural Science Foundation of China  
Chinese Materials Institution (Committee of High Temperature Strength of Materials)  
Chinese Pressure Vessel Institution  
Chinese Failure Analysis Institution

## Symposium Chairs

Prof. Shan-Tung Tu (Chairman of CSIC)  
Dr. Jinhua Shi (Executive Chairman)

## Symposium Secretariat

Guodong Zhang (zhangguodong@cgnpc.com.cn)  
Xianxi Xia (xiaxianxi@cgnpc.com.cn)

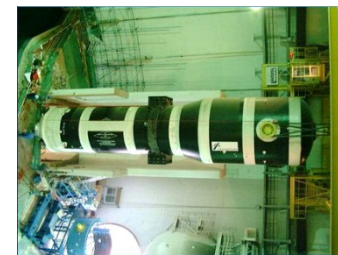
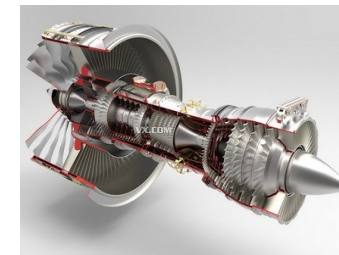
## Symposium Coordinator

Mingliang Zhu (mlzhu@ecust.edu.cn)



## International Symposium on Structural Integrity

RELIABILITY-CENTERED  
MANUFACTURING ON THE BASIS  
OF STRUCTURAL INTEGRITY



Suzhou, China, October 22-24, 2020

中广核 CGN  
苏州热工研究院有限公司  
SUZHOU NUCLEAR POWER RESEARCH INSTITUTE

<http://issi2020.china-sic.net>



## Scope and Topics

- Materials testing and modeling
- Genetics-based material design
- Fatigue and fracture under extreme conditions
- Time-dependent failure (creep, corrosion, etc.)
- Design and assessment codes and standards
- Reliability-based design and manufacturing
- NDT and evaluation
- Structure health and integrity monitoring
- Life management and extension
- Additive manufacturing
- Artificial intelligence and big data

Topics not covered above but fall within the general scope of this symposium are also welcome. Abstracts and full papers should be written in English. Early submission of full papers is advisable in order to get the full benefit of editorial assistance and fast publication.

<http://issi2020.china-sic.net>

## Symposium Coordinator

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## Call for Papers

The official language of the conference is English.

Abstracts (less than 500 words) prepared according to the layout should be submitted to symposium website: <http://issi2020.china-sic.net>

Extended version of selected papers will be published in special issues of international journals after the symposium.

## Registration and Accommodation

Registration fee will be 360 USD. Students are welcome with a reduced registration fee of 270 USD. The registration fee covers admission to all technical sessions, two refreshment breaks each day of the conference, lunches, dinners, conference banquet, and a copy of the conference proceedings, but not accommodation. Accommodation needs to be pre-booked at the conference venue.

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