

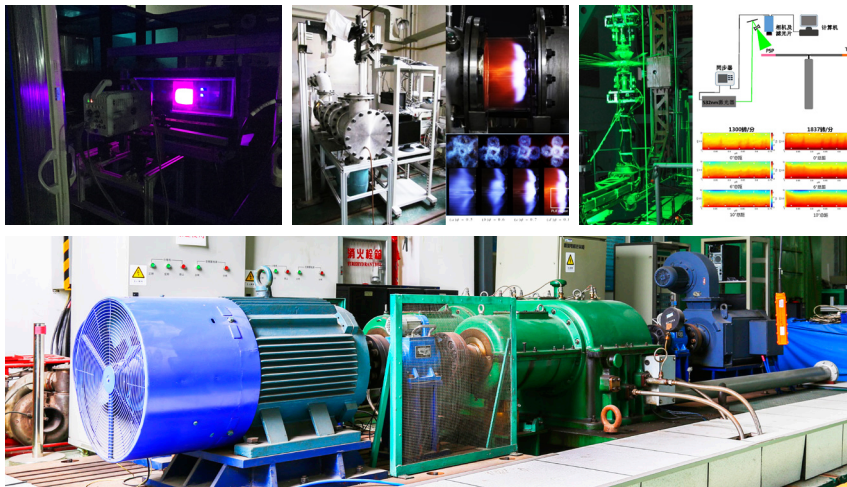


Institute of Turbomachinery



1. Description

The Institute of Turbomachinery at Shanghai Jiao Tong University was founded in 1952. It belongs to the state key subject "Power Machinery and Engineering", which has a key lab of the Education Minister and is one of the key academic agencies, which were first accredited by the ministry of education to enroll post-graduate students and post-doctor fellows. Currently, it boasts a highly qualified faculty, which including 8 professors, 11 associate professors and 4 assistant professors, among them two are the Academician of the Chinese Academy of Engineering. The institute concentrates its research on engineering solutions and fundamental research on fluid and solid mechanics which are critical to aeroengine, gas turbine, steam turbine and wind turbine etc.



2. Key Research Fields

- ⊙ Gas Turbine Performance and Advanced Power Cycle Technology
- ⊙ Gas Turbine Low-Emissions Combustion Technology
- ⊙ Gas Turbine Thermodynamics and Aero-Acoustics
- ⊙ High-Efficiency Turbine Blade Cooling Technology
- ⊙ Structural Mechanics and High-Temperature Strength Analysis of High-Temperature Component and Thermal Barrier Coating
- ⊙ Gas Turbine Distributing-Supplying-Energy Technology and Low-Grade Power Generation Technology
- ⊙ Advanced Measurement Technology for Gas Turbine

3. Labs, Centers and Groups

- ⊙ Group for gas turbine system simulation and health diagnosis
- ⊙ Group for gas turbine combustion
- ⊙ Group for gas turbine aerodynamics and heat transfer
- ⊙ Group for aerodynamics, heat transfer and combustion measurement
- ⊙ Group for structure integrity evaluation and life prediction
- ⊙ Group for thermal barrier coating

4. Instrumentation & Facilities

- ⊙ PIV/PDA/LDV/PLIF
- ⊙ Hot wire/microphone array/High speed camera
- ⊙ PSP/TSP/ Phosphor thermography
- ⊙ Low speed wind tunnel/linear cascade tunnel
- ⊙ Humid air gas turbine system
- ⊙ Gas turbine combustion test rig
- ⊙ Gas turbine blade cooling test rig
- ⊙ Helicopter aerodynamics test rig

5. Director

Director: Prof. LIU Yingzheng

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