GPPS Global Power & Propulsion Society

Co-host: School of Aerospace Engineering & Applied Mechanics, Tongji University

SHANGHAI 25
TECHNICAL CONFERENCE

Hyatt Regency Shanghai Songjiang

SEPTEMBER 4th - 6th, 2025

Next-generation Power & Propulsion Systems: Efficiency, Sustainability, and Resilience

Welcome to GPPS Shanghai25

On behalf of the Organizing Committee and the GPPS Executive Committee, I am delighted to welcome you to the Global Power and Propulsion Society (GPPS) Technical Conference Shanghai 2025. Dedicated to "Next-Generation Power and Propulsion Systems: Efficiency, Sustainability, and Resilience," GPPS Shanghai25 serves as a global platform for researchers, engineers, and leaders addressing challenges of decarbonization and energy transition.

The three-day program (September 4–6), inspired by Shanghai's legacy as the "Gateway to the Yangtze River and the Pacific," showcases how the quest for next-generation propulsion demands weaving a silk thread, spun from scientific precision and industrial pragmatism, theoretical foresight and engineered execution. This thread guides megacity sustainability, embodying Shanghai ingenuity as a luminous compass reconciling technological ambition with ecological harmony.

Two cornerstone panels will explore critical frontiers in energy and propulsion: "Engineering the Engineers of the Future" and "The Dynamics of Power Generation Decarbonization," bridging global decarbonization strategies and positioning turbomachinery as key to a net-zero future. Six plenary keynotes will cover cutting-edge topics including new materials, nondestructive evaluation, joining at high temperature, gas turbine combustion, aerodynamic design, and future civil aviation powerplants. Shanghai25 will feature 153 papers, presented across more than 30 technical sessions, attracting a global community of engineers and researchers. Collectively, these sessions provide insights crucial for developing more efficient, reliable, and sustainable systems.

Following GPPS tradition, the CFD Workshop engages top scientists in addressing emerging multi-physics and multi-scale challenges in turbomachinery simulations. Based on two open benchmark cases—the compressor cascade from Northwestern Polytechnical University and the high-speed compressor from Leibniz Universitaet Hannover—this workshop drives innovation through collaborative validation.

The conference venue offers an excellent environment for networking, including lunch and coffee breaks, a welcome reception, and conference dinner.

As a global and inclusive metropolis, Shanghai warmly welcomes participants from around the world.

Together with the Conference Co-Chair Prof. Stephen Spence, review Chair Prof. Dingxi Wang, review co-chair Prof. Budimir Rosic, GPPS EC Chair Prof. Mehdi Vahdati, Advisor Prof. Lixi Huang, GPPS MICE Manager Ms. Daphne Kampanari, we invite you to enjoy a rewarding conference experience and an unforgettable stay in Shanghai.

Prof. Yan Li
Conference Chair of GPPS Shanghai25
Dean, School of Aerospace Engineering and Applied Mechanics,
Tongji University

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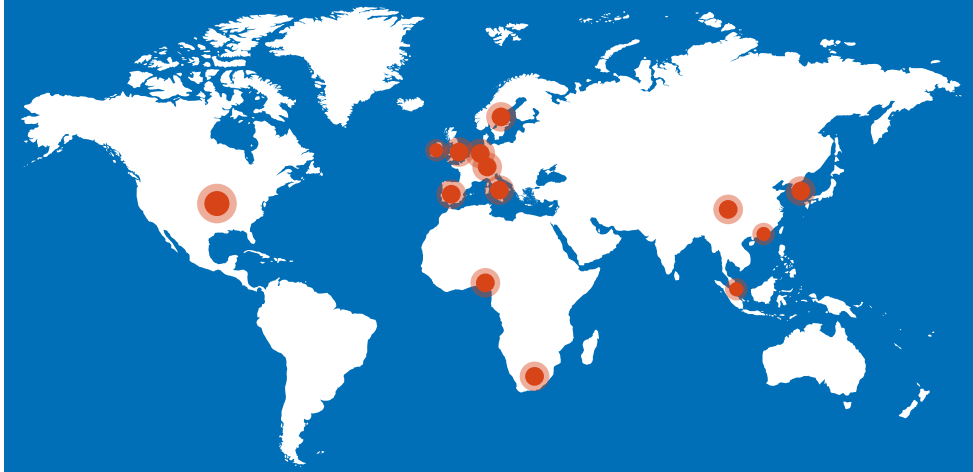
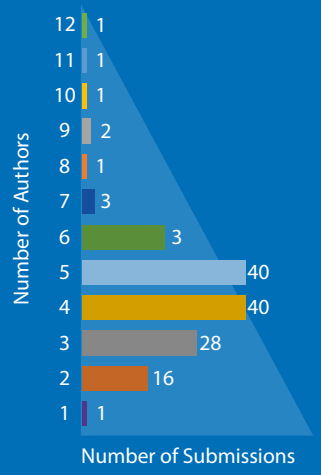
Conference Statistics

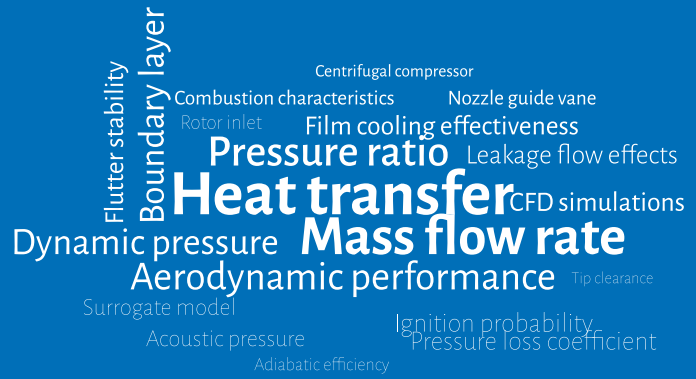
154 papers 220 Participants from 15 Countries



Authors per Submission



Top Keyphrases



Shanghai25 Organizing Committee

A heartfelt thank you to our organizing committee for their exceptional dedication and hard work. The combined expertise of each member, all the fruitful discussions, and unwavering efforts were crucial to bring the GPPS Shanghai25 conference to life.

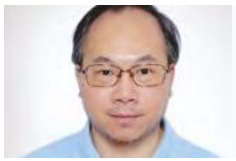
Conference Chair
Prof. Yan Li
Tongji University, Shanghai, China

Co-Conference Chair
Prof. Stephen Spence
Trinity College Dublin, Ireland

Review Chair
Prof. Dingxi Wang
Northwestern Polytechnical University, China

Co-Review Chair
Prof. Budimir Rosic
University of Oxford, UK

GPPS EC Vice Chairman & Advisor
Prof. Mehdi Vahdati
TU Hamburg, Germany



Advisor
Prof. Lixi Huang
The University of Hong Kong, China

Local Coordinators

We thank our organizers at Tongji University, Shanghai, for their outstanding work in making our technical conference possible.

Haoran Du
Yiling Gong
Jing Ni
Xinyu Wang
Yiqun Xu

Sponsors

We are grateful to our industry sponsors for their invaluable support in making this technical conference a success.

Shanghai25 Silver Sponsor

YORK TECH

York Technology operates across major Chinese cities, exclusively distributing specialized industrial systems, delivering integration, development, and support services for manufacturing, energy, research, and educational institutions nationwide.
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Shanghai25 Bronze Sponsors

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Chongqing Xinrui Power Machinery specializes in high-efficiency turbomachinery, offering advanced design, wide gas handling, and proven engineering solutions, supported by Zhejiang Yaguang Technology's strong R&D and resources.

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www.rankyee.cn

Visit the
GPPS Homepage
www.gpps.global

GPPS Global Power & Propulsion Society

The Global Power & Propulsion Society

The GPPS Mission Statement

Our mission at the Global Power and Propulsion Society (GPPS) is to unite a global community of experts and leaders to address the evolving challenges in power and propulsion.

GPPS is an organization fulfilling its mission to create an environment that facilitates in-depth interaction among various stakeholders from business, science, technology, and policy sectors, focusing on transforming our societal infrastructure.

Exploring key global drivers—such as Europe's energy transition, China's One Belt One Road initiative, aviation's business and environmental shifts, and LNG's role as a transition fuel—we continuously assess future opportunities and risks. Our events, responsive to global changes, facilitate idea exchange among thought leaders while expanding participants' networks.

By balancing diverse international stakeholders, GPPS supports executive forums, academic and technical congresses backed by our open-access journal, and regional activities. Since 2016, we've aimed to develop strong relationships between global influencers and emerging industry talent. Through interactive events, we provide a platform for academics, professionals, and executives to forge lasting relationships and collaborations.

GPPS Global Power & Propulsion Society | FORUM 2026 ZURICH SWITZERLAND

January 14-15, 2026 | Zurich, Switzerland

Geopolitical Changes & Evolving Priorities

Challenges, opportunities and focus for power and propulsion.

The world is experiencing an increasing state of flux, reflected in growing demands for competitiveness, resilience, and sovereignty. This forum will explore how these dynamics impact existing net-zero strategies and how the current geopolitical shift presents both threats and opportunities for the power and propulsion industry. It will address future fuels, power demand, and technology and investment priorities across various application sectors.

Forum Organizing Committee

Forum Chair
Renaud Le Pierres
Business Development Engineer at Heatric, Meggitt

Forum Co-Chair
Hervé Morvan
Chief of Future Platforms & Global Chief Hydrogen Technology, Rolls-Royce

Advisor
Klaus Brun
Director, Research & Development at Elliott Group, Ebara Corp, USA

Advisor
Rainer Kurz
Principal of RKSBenergy LLC and an Adjunct Professor at San Diego State University

GPPS Committees

Executive Committee

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Ansaldo Energia, Switzerland

Vice Chairman & Treasurer
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TU Hamburg, Germany

Prof. Piero Colonna
TU Delft, Netherlands

Christopher Johnston
PSM, a Hanwha Company, USA

Dr. Rainer Kurz
Solar Turbines, USA

Dr. Vince Sidwell
Pratt & Whitney, USA

Prof. Susumu Teramoto
University of Tokyo, Japan

Prof. Shan-Tung Tu
East China University of Science and Technology, China

Dr. Zuozhi Zhao
Siemens Energy, China

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Advisory Board Chairman
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Solar Turbines, USA

Prof. Reza Abhari
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Dr. Tim Allison
Southwest Research Institute, USA

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Elliott Group, Ebara Corp, USA

Dr. Jinzhang Feng
Aero Engine Corporation of China (AECC), China

Greg Gammon
Texas A&M Turbo Lab, USA

Prof. Lixi Huang
The University of Hong Kong, China

Dr. Dai Kato
IHI Corporation, Japan

Prof. Kazuyoshi Miyagawa
Waseda University, Japan

Prof. Hervé Morvan
Rolls-Royce, UK

Prof. Budimir Rosic
University of Oxford, UK

Prof. Joerg Seume
University of Hannover, Germany

Prof. Seung Jin Song
Seoul National University, Korea

Matt Taher
Bechtel Corporation, USA

Bernhard Winkelmann
S&B Enterprises, USA

Dr. Karl Wygant
Elliott Group, Ebara Corporation, USA

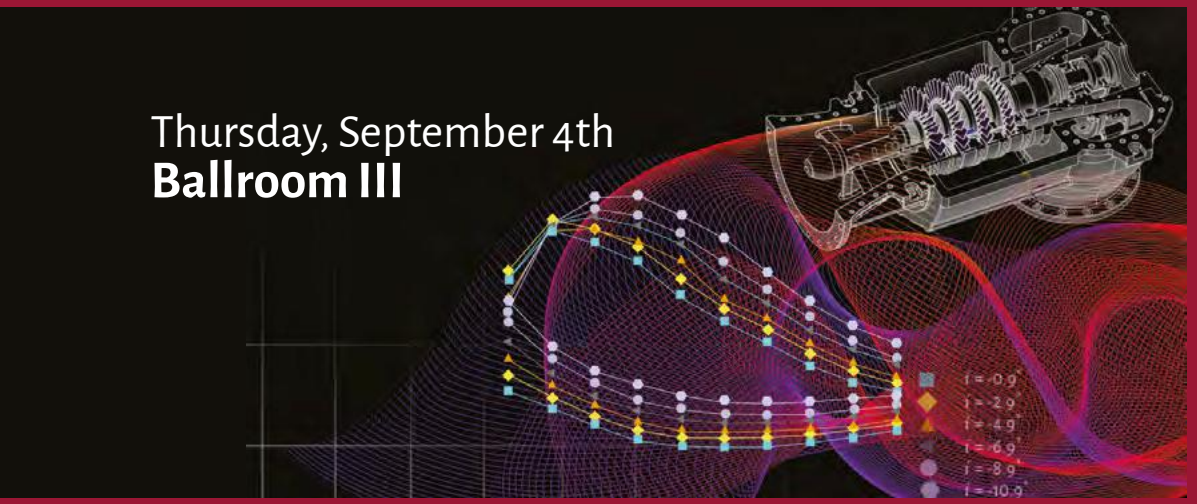
GPPS University Members

ETH zürich

서 울 대 학 교
SEOUL NATIONAL UNIVERSITY

GPPS Global Power & Propulsion

CFD WORKSHOP 2025 SHANGHAI CHINA



Thursday, September 4th
Ballroom III

We would like to invite you to join us during the CFD Workshop in Shanghai 2025. The workshop will center on two key cases: the Northwestern Polytechnical University cascade cases, and the Institute of Turbomachinery and Fluid Dynamics (University of Hannover) test case.

Taking place on Thursday 4th September in Ballroom III these sessions are in-depth discussions and collaborative efforts, contributing to the continued progress of computational fluid dynamics.

See the Online Presentation Schedule

Workshop Organizers

Prof. Xiao He
(Shanghai Jiaotong University, China)

Prof. Mehdi Vahdati
(TU Hamburg, Germany)

Prof. Ruiyu Li
(Northwestern Polytechnical University, China)

Dr. Dajan Mimic
(Leibniz Universität Hannover, Germany)

Prof. Dingxi Wang
(Northwestern Polytechnical University, China)

Prof. Liming Gao
(Northwestern Polytechnical University, China)

Program at-a-Glance

Thursday, September 4th

08:00 | Author Briefing: Located in each presentation room

08:00 - 09:00 | Banquet Foyer
Morning Coffee

09:00 - 09:15 | Ballroom III
Opening Ceremony GPPS Shanghai25

09:15 - 10:45 | Ballroom III
Panel Discussion

10:45 - 11:15 | Banquet Foyer
Coffee Break

11:15 - 11:30 | Ballroom III
Sponsor Presentation: York Technologies Ltd.

11:30 - 12:15 | Ballroom III
Plenary Keynote

12:15 - 14:00 | Market Café, 1st floor
Lunch Break

14:00 - 16:05 | Ballroom III + Events Rooms 1-5
Paper Presentations & CFD Workshop

16:05 - 16:30 | Banquet Foyer
Coffee Break

16:30 - 18:35 | Ballroom III + Events Rooms 1-5
Paper Presentations & CFD Workshop

18:40-21:00 | Ballroom II
Welcome Reception

Friday, September 5th

08:30 | Author Briefing: Located in each presentation room

08:00 - 09:00 | Banquet Foyer
Morning Coffee

09:00 - 10:30 | Ballroom III
Panel Discussion

10:30 - 11:00 | Banquet Foyer
Coffee Break

11:00 - 12:30 | Ballroom III
Plenary Keynotes

12:30 - 14:00 | Market Café, 1st floor
Lunch Break

14:00 - 15:40 | Ballroom III + Events Rooms 1-5
Paper Presentations

15:40 - 16:10 | Banquet Foyer
Coffee Break

16:10 - 17:50 | Ballroom III + Events Rooms 1-5
Paper Presentations

18:00 - 21:30 | Guang Fulin Prime Hotel Shanghai
Dinner

Saturday, September 6th

08:30 | Author Briefing: Located in each presentation room

08:00 - 09:00 | Banquet Foyer
Morning Coffee

09:00 - 10:30 | Ballroom III
Plenary Keynotes

10:30 - 11:00 | Banquet Foyer
Coffee Break

11:00 - 12:30 | Ballroom III
Technical Keynotes

12:30 - 14:00 | Market Café, 1st floor
Lunch Break

14:00 - 16:05 | Ballroom III + Events Rooms 1-5
Paper Presentations

16:05 - 16:30 | Banquet Foyer
Coffee Break

16:30 - 18:10 | Ballroom III + Events Rooms 1-5
Paper Presentations

18:15 | Ballroom III
Closing Ceremony Apero + Best Paper Awards Chania24

Check the online Program

Networking & Registration

Networking Events

Welcome Reception
Thursday 4th September, 18:40 - 21:00
Location: Ballroom II (see map page 9)

Coffee & Networking
4th September - 6th September
Location: Banquet Foyer (see map page 9)

Daily Lunches
4th September - 6th September
Location: Market Café, 1st floor

GPPS Conference Dinner
Friday 5th September
Buses departs from the hotel entrance 18:00
Dress code: Casual evening wear
Location: Guang Fulin Prime Hotel Shanghai (transportation will be provided to and from the restaurant)

Closing Ceremony Apero
Saturday 6th September, 18:15
Location: Banquet Foyer

Registration

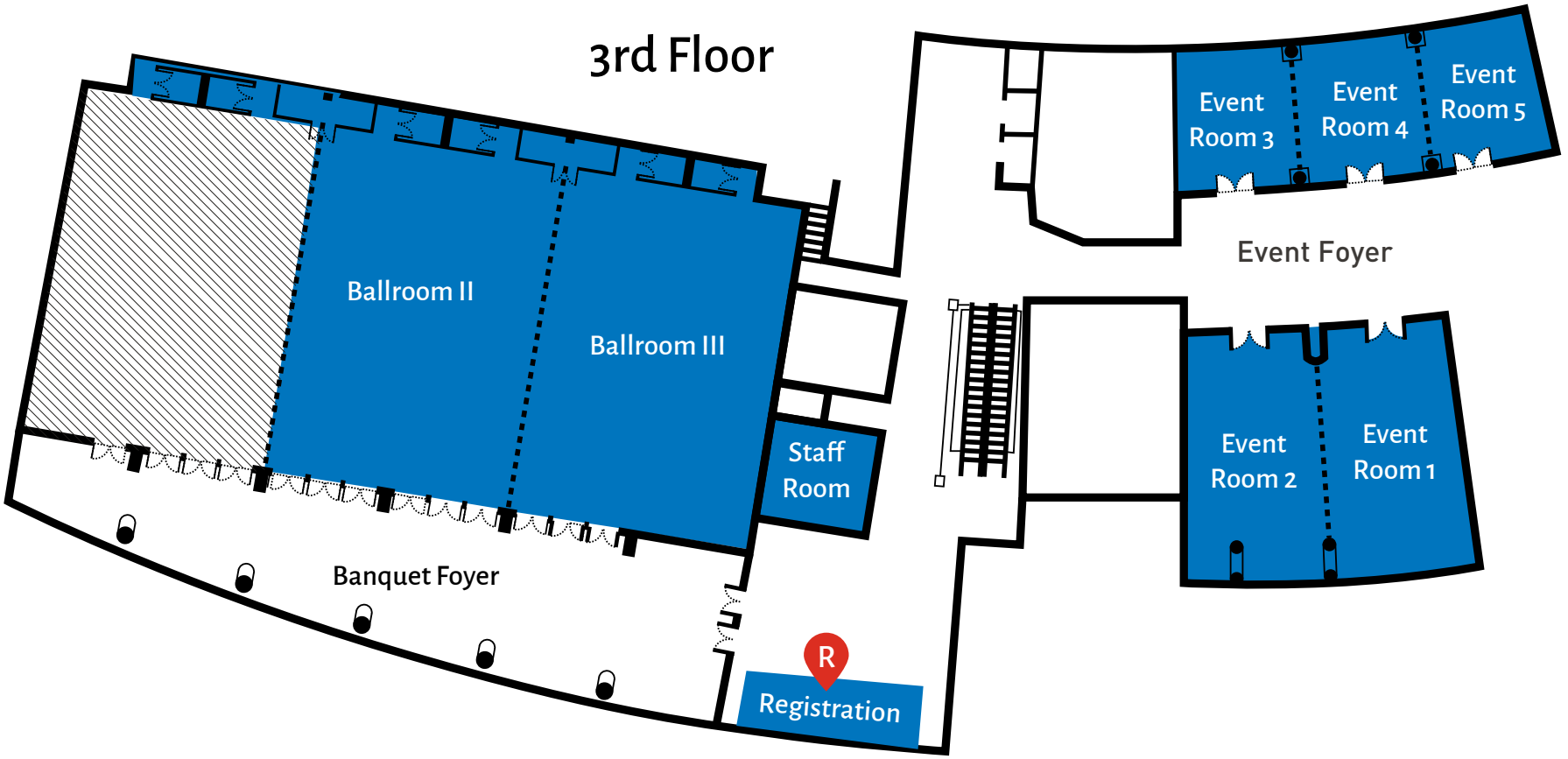
Registrants will be provided
- → Name badge and welcome package
- → Access to every session in registered event
- → Data for all of the final papers of GPPS Shanghai25
- → Access to all coffee breaks, lunches, the opening reception, closing ceremony apero and the Conference dinner
- → Access to GPPS CFD Workshop Sessions

Registration Hours @ Conference Center
7:30 - 17:30 Thursday 4th September
8:30 - 17:30 Friday 5th September
8:30 - 17:30 Saturday 6th September

The Registration Desk, Information Center,and Lost and Found (R on floor plan, page 9) are located in the main entrance hall of the Banquet Foyer. Name badges are required for admission to all conference sessions and meal functions.

Lost your name badge? Go to the registration desk to obtain a replacement.

Hyatt Regency Shanghai Songjiang Conference Center



Location

Hyatt Regency Shanghai Songjiang
Block 3, 599 Guangfulin Road,
Songjiang District,
Shanghai,
201613 China

T. +86 21 6788 1234

Panel Speakers (Alphabetical order)

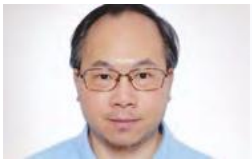
Panel 1: Title: Engineering the Engineers of the Future

Thursday 9:15-10:45

Moderator:
Prof. Seung Jin Song
(Seoul National University, Korea)

Prof. Reza Abhari
(ETH Zurich, Switzerland)

Dr. Jinzhang Feng
(Aero Engine Corporation of China)



Prof. Lixi Huang
(The University of Hong Kong, China)

Panel 2: Dynamics of Power Generation Decarbonization

Friday 9:00-10:30

Moderator:
Prof. Thomas Povey
(University of Oxford, UK)

Dr. John Gülen
(Bechtel, USA)

Dr. Bin Ru
(Shanghai Electric Group Central Academy, Shanghai, China)

Dr. Satoshi Mizukami
(Mitsubishi Heavy Industries, Ltd., Hyogo, Japan)

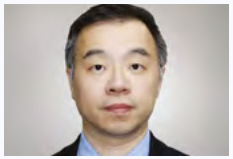
Dr. Zuozhi Zhao
(Siemens Energy, China)

Plenary Keynote Speakers (Chronological order)

Thursday | 11:30 - 12:15
Speaker: Prof. Zhongqing Su
(Hong Kong Polytechnic University, Hong Kong)
Title: Optoacoustics-enabled Nondestructive Evaluation for Turbofan Engine Blades

Friday | 11:00 - 11:45
Speaker: Prof. Shan-Tung Tu
(East China University of Science and Technology, Shanghai, China)
Title: Joining for Better Performance at High Temperature

Friday | 11:45 - 12:30
Speaker: Dr. Khawar Syed
(Crosstown H2R, Baden, Switzerland)
Title: The Impact of Decarbonization on Gas Turbine Combustion



Saturday | 9:00 - 9:45
Speaker: Dr. Peng Wang
(COMAC, China)
Title: The Requirement for Civil Aviation Power-plant System Development

Saturday | 9:45 - 10:30
Speaker: Prof. Chong Pan
(Beihang University, China)
Title: Progress in Velocity Field and Density Field Measurement Technologies for Compressible Flows

Technical Keynote Speakers (Chronological order)

Saturday | 11:00 - 11:30
Speaker: Prof. Edmond Walsh
(University of Oxford, UK)
Title: Thermal Management of Power Systems on Future Aircraft

Saturday | 11:30 - 12:00
Co-speaker: Dr. Stefano Chiocchini
(Sesta Lab, Italy)
Title: Rayleigh Thermometry Experiments and Dissociated Ammonia Combustion for Low-Emission Gas Turbines

Saturday | 11:30 - 12:00
Co-speaker: Giulio Grassi (Sesta Lab, Italy)
Title: Rayleigh Thermometry Experiments and Dissociated Ammonia Combustion for Low-Emission Gas Turbines

Saturday | 12:00 - 12:30
Speaker: Dr. Matthias Schleer
(Howden, a Chart Industries Company, Germany)
Title: Development of Compressors and Turbofans for the Decarbonization of Industrial Steam Applications

Track Overview

Track Code + Title		Day	Page
AN	Aeroacoustics & Noise	Thur, Fri	18, 19, 20, 24, 25
CC	Combustor & Combustion	Thur, Sat	16, 17, 18, 27, 28
DEFIGT	Deposition, Erosion, Fouling & Icing in Gas Turbines	Sat	30
DNECII	Ducts, Nozzles, Exhausts & Component Interaction and Integration	Thur,	16, 17, 18, 19, 20
ETR	Energy Transition & Renewables	Sat	29, 31
HTGI	Heat Transfer: General Interest	Thur,	16, 17
HTFC	Heat Transfer: Film Cooling	Fri, Sat	22, 23, 24, 25, 27, 28, 29
HTIC	Heat Transfer: Internal Cooling	Thur,	17, 18, 19
HTDAM	Heat Transfer: Design & Analysis Methods	Thur,	19,20
ICTMD	Instrumentation, Control, Testing, Monitoring & Diagnostics	Sat	27, 28, 29, 30
MMSV	Mechanics & Materials: Stress & Vibration	Fri, Sat	22, 23, 28, 29, 30
MMFFL	Mechanics & Materials: Fatigue, Fracture & Life	Fri, Sat	22, 31
MMSBD	Mechanics & Materials: Seal/Bearing Dynamics	Sat	27, 30
SASS	Secondary Air System & Sealing	Sat	29, 30
SC	Supercritical CO_2	Fri, Sat	23, 30
TCPP	Thermodynamic Cycles for Power & Propulsion	Thur, Fri	16, 22, 23, 24, 25
TAAFCF	Turbomachinery Aerodynamics: Axial-Flow Compressors/Fans	Thur, Fri, Sat	16, 17, 18, 19, 20, 22, 23, 24, 27, 28, 29, 30, 31
TARMFC	Turbomachinery Aerodynamics: Radial/Mixed-Flow Compressors	Sat	29, 30
TAARFT	Turbomachinery Aerodynamics: Axial/Radial-Flow Turbines	Thur, Fri	19,20, 22, 23
TAWT	Turbomachinery Aerodynamics: Wind Turbines	Fri	25
TATSTNA	Turbomachinery Aerodynamics: Turbochargers, Small Turbomachines, New Applications	Sat	31
TADAM	Turbomachinery Aerodynamics: Design & Analysis Methods	Thur,	16, 17, 18,19, 20
TAE	Turbomachinery Aeroelasticity	Fri	22, 23, 24, 25
TUAGI	Turbomachinery Unsteady Aerodynamics: General Interest	Sat	27
TUABRIID	Turbomachinery Unsteady Aerodynamics: Blade Row Interaction & Inlet Distortion	Fri	24, 25
TUARSRIS	Turbomachinery Unsteady Aerodynamics: Rotating Stall, Rotating Instability & Surge	Sat	28, 29, 30, 31
TUADAM	Turbomachinery Unsteady Aerodynamics: Design & Analysis Methods	Sat	27, 28

Track Chairs

The organizers would like to express their appreciation to the Shanghai25 Track Chairs for their help, support and dedication throughout the review process and beyond.

Aeroacoustics & Noise
Xiaoyu Wang
Beihang University
Hanru Liu
Northwestern Polytechnical University
Liang Yu
Northwestern Polytechnical University

Combustor & Combustion
Song Cheng
The Hong Kong Polytechnic University
Xiao Han
Beihang University
Yi Gao
Shanghai Jiaotong University

Deposition, Erosion, Fouling & Icing in Gas Turbines
Zheyan Jin
Tongji University
Haihu Liu
Xi'an Jiaotong University

Ducts, Nozzles, Exhausts & Component Interaction and Integration
Nafiz Chowdhury
University of Oxford
Paul Beard
University of Oxford

Energy Transition & Renewables
Valerio Francesco Barnabei
Sapienza Università di Roma

Heat Transfer: General Interest
Yinbo Mao
Tongji University

Heat Transfer: Film Cooling
Yuewen Jiang
Institute of Engineering Thermophysics
Penghao Duan
City University of Hong Kong
Lin Ye
Northwestern Polytechnical University

Heat Transfer: Internal Cooling
Min Yao
Tsinghua University

Heat Transfer: Design and Analysis Methods
Kun Du
Northwestern Polytechnical University

Instrumentation, Control, Testing, Monitoring & Diagnostics
Fangyuan Lou
Tsinghua University
Bin Yang
Tongji University
Yongjun Zhao
Fudan University

Mechanics and Materials: Stress and Vibration
Xingguo Zhou
University of Strathclyde
Chao Zhang
Northwestern Polytechnical University
Lulu Liu
Nanjing University of Aeronautics and Astronautics
Weidong Yang
Tongji University

Mechanics and Materials: Fatigue, Fracture and Life
Jianfeng Wen
East China University of Science and Technology

Mechanics and Materials: Seal/Bearing Dynamics
Jian Xiong
Harbin Institute of Technology

Secondary Air System & Sealing
Mauro Carnevale
University of Bergamo

Supercritical CO2
Mingyang Yang
Shanghai Jiaotong University

Thermodynamic Cycles for Power and Propulsion
Dajan Mimic
Leibniz Universitaet Hannover
Stavros Vouros
Mälardalen University
Xiaodong Ren
Tsinghua University

Turbomachinery Aerodynamics: Axial-Flow Compressors/Fans
Xiao He
Shanghai Jiaotong University
Junying Wang
Taihang Lab
Viacheslav Sedunin
University of Cambridge
Zhiyuan Cao
Northwestern Polytechnical University
Xiaochen Mao
Northwestern Polytechnical University
Ryosuke Seki
Mitsubishi Heavy Industries
Xiangjun Li
Dalian Maritime University

Turbomachinery Aerodynamics: Radial/Mixed-Flow Compressors
Yaping Ju
Xi'an Jiaotong University
Ruihong Qin
Shenyang Aerospace University

Turbomachinery Aerodynamics: Axial/Radial-Flow Turbines
Bijie Yang
Loughborough University
Yifan Wang
Beihang University

Turbomachinery Aerodynamics: Wind Turbines
Michael Pekris
University of Surrey

Turbomachinery Aerodynamics: Turbochargers, Small Turbomachines, New Applications
Pangbo Ren
University of Cambridge

Turbomachinery Aerodynamics: Design and Analysis Methods
Hangkong Wu
Xi'an Jiaotong University
Atsushi Tateishi
IHI Corporation
Davide Lengani
University of Genoa
Feng Wang
Shanghai Jiaotong University

Turbomachinery Aeroelasticity
Mai Zhang
AECC Commercial Aircraft Engine Co. Ltd
Tomokazu Miyakozawa
GE Aviation
Hangkong Wu
Xi'an Jiaotong University

Turbomachinery Unsteady Aerodynamics: Blade Row Interaction and Inlet Distortion
Hanan Lu
Beihang University

Turbomachinery Unsteady Aerodynamics: Rotating Stall, Rotating Instability and Surge
Fanzhou Zhao
Imperial College
Wenqiang Zhang
Beijing Institute of Technology

Turbomachinery Unsteady Aerodynamics: Design and Analysis Methods
Dingxi Wang
Northwestern Polytechnical University

Presenting Authors

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Detailed Schedule

Thursday, September 4th

08:00 **Author briefing @ Located in each presentation room**

08:00 **Morning Coffee @ Banquet Foyer**

Ballroom III

Opening Ceremony GPPS Shanghai25

09:00 Welcome Speech: **Dr. Albert Kammerer** (GPPS Chairman, Ansaldo Energia, Switzerland), **Prof. Yan Li** (Tongji University, Shanghai, China) **& Prof. Stephen Spence** (Trinity College Dublin, Ireland)
Special Award: **Presented by Prof. Dingxi Wang** (Northwestern Polytechnical University, China)

Ballroom III

Panel Discussion

09:15 Title: **Engineering the Engineers of the Future**
Moderator → **Prof. Seung Jin Song** (Seoul National University, Korea)
Panelists → **Prof. Reza Abhari** (ETH Zurich, Switzerland), **Prof. Lixi Huang** (The University of Hong Kong, China), **Dr. Jinzhang Feng** (Aero Engine Corporation of China)

10:45 **Coffee Break @ Banquet Foyer**

Ballroom III

11:15 **Sponsor Presentation: York Technologies Ltd.**

Ballroom III

Plenary Keynote

11:30 Title: **Optoacoustics-enabled Nondestructive Evaluation for Turbofan Engine Blades**
Speaker → **Prof. Zhongqing Su** (Hong Kong Polytechnic University, Hong Kong)

Thursday, September 4th

12:15

Lunch Break @ Market Café, 1st floor

Ballroom III + Events Rooms 1 - 5

Paper Presentations & CFD Workshop

Ballroom III
Session Chairs
Xiao He

14:00

CFD Workshop

Moderator: → Prof. Xiao He (Shanghai Jiaotong University, China)

14:25

CFD Workshop

Invited Talk
Development of High Order Numerical Schemes: Towards High Fidelity Simulations for Large-Scale, Multi-Scale Problems

Speaker: → Dr. Yi Lu (Rankyee Technology, China)

Event Room 1
Session Chairs
Min Yao + Zhaokai Ma

[HTGI-046]
Large Eddy Simulation of a Ceramic Matrix Composites Surface

→ Yifan Yang
→ Xinrong Su
→ Xin Yuan

Tsinghua University, China

[HTGI-133]
Transient Thermal Measurement of Film Cooling Performance for Transonic Flow Over a Flat Plate in a Shock Tunnel

→ Yizhi Fang
→ Wei Zeng
→ Jiabo Cui
→ Haiteng Ma

Shanghai Jiao Tong University, China

Event Room 2
Session Chairs
Ruihong Qin + Stephen Spence

[TAAFCF-096]
Impact of Leading-Edge Probes on the Losses of a High-Pressure Compressor Vane in a Linear Cascade

→ Lukas Schäflein [1]
→ Daniel Jung [1]
→ Stefan Henninger [1]
→ Peter Jeschke [1]
→ Roland Wunderer [2]

[1] RWTH Aachen University, Germany
[2] MTU Aero Engines AG, Germany

[TAAFCF-153]
Assessment of Numerical Uncertainty in Compressor Cascade CFD Validation: Effects of Blade Models With and Without Axial Velocity Density Ratio (AVDR)

→ Ruiyu Li
→ Weiqi Tang
→ Limin Gao
→ Ming Cai

Northwestern Polytechnical University, China

Event Room 3
Session Chairs
Wenwu Zhou + Nafiz Chowdhury

[DNECII-099]
Coanda-Coflow Based Fluidic Thrust Vectoring Nozzle for a Mid-Size UAS

→ Nils Schwagerus
→ Jonas Remiger
→ Marcel Stößel
→ Dragan Kožulović

Universität der Bundeswehr München, Germany

[DNECII-089]
A method of boundary layer flow control in inner channel based on the parametric design of intertidal bottom sand ripple

→ Wang Yuqi
→ Liu Xiangyang
→ Ma Lingyan
→ Xu Yibing

Nanjing University of Aeronautics and Astronautics, China

Event Room 4
Session Chair
Hangkong Wu + Li He

[TADAM-125]
A Multistage Body Force Model for Evaluating the Impact of Geometric Variations on the Aerodynamic Performance of a High-Pressure Compressor

→ Benedikt Schulten
→ Marcel Seidler
→ Jonas Grubert
→ Ingo Voissel
→ Jens Friedrichs
→ Jan Goeing

Technische Universität Braunschweig, Germany

[TADAM-142]
A Data-Driven Method for Constructing Stator Cascade Datasets Based on Flow Field Separation Criteria in Axial Compressors

→ Yufan Ding
→ Donghai Jin
→ Jiancheng Zhang
→ Xingmin Gui

Beihang University, China

Event Room 5
Session Chairs
Khawar Syed + Dingxi Wang

[Invited Talk]
H2GT Demonstrations in South Korea

→ Nicolas Demougeot [1]
→ Teo Cho [2]
→ Tim Bullard [1]
→ Bryan Kalb [1]
→ Fred Hernandez [1]
→ Martin Spalding [1]
→ Matt Yaquinto [1]
→ Gabriele Soffritti [3]
→ Franklin van den Hout [3]
→ Dong Ki Lee [2]
→ Jun Won Hwang [2]

[1] Power Systems Mfg, LLC (PSM), USA
[2] Hanwha Power Systems (HPS), Korea
[3] Thomassen Energy B.V. (TEN), The Netherlands

[CC-098]
Mixing Control in Supersonic Cavity Combustor by Two Types of Plasma Actuators

→ Renjie Zhang
→ Hong Yan
→ Fuzhen Chen
→ Fan Liu

Northwestern Polytechnical University, China

Thursday, September 4th

Ballroom III
Session Chairs
Xiao He

14:50

CFD Workshop

[TAAFCF-224]
TFD-4AC Open Test Case: 4½-stage High-speed Axial Compressor

→ Marcel Stoewer
→ Pascal Franke
→ Joerg R. Seume
→ Dajan Mimic

(Leibniz Universitaet Hannover, Germany)

15:15

CFD Workshop

Invited Talk
Release of Standard High-Load Compressor Cascade Data and Associated CFD Evaluation Results

Speaker: → Prof. Ruiyu Li (Northwestern Polytechnical University, China)

Event Room 1
Session Chairs
Min Yao + Zhaokai Ma

[HTGI-191]
Study on Turing-constrained Topology Optimization Method for Heat Exchanger Distribution Header

→ Shengquan Zhong
→ Kaibin Hu
→ Jingnan Li
→ Yang Li

Shanghai Jiao Tong University, China

[HTIC-059]
The Effective Utilisation of a Combination of Perforated Blockages and Pin-Fins for Internal Turbine Blade Cooling

→ Sjouke Schekman [1]
→ Tongbeum Kim [2]

[1] University of the Witwatersrand, South Africa
[2] Nanjing University of Aeronautics and Astronautics, China

Event Room 2
Session Chairs
Ruihong Qin + Stephen Spence

[TAAFCF-168]
Competitive Mechanism of Corner Separation and Mid-span Separation in a Compressor Cascade at Low Reynolds Number

→ Peiqiang Lu
→ Qiang Liu

Northwestern Polytechnical University, China

[TAAFCF-196]
Influence of solidity and inlet flow angle on the performance of a supersonic fan rotor two-dimensional blade profile

→ Zhipeng Li [1]
→ Qinpeng Gu [1]
→ Na Yang [1]
→ Zhiyuan Cao [1]
→ Quan Ding [2]
→ Yongfan Li [2]
→ Jianbing Cai [2]
→ Xuan Chen [2]
→ Botao Zhang [2]
→ Bo Liu [1]

[1] Northwestern Polytechnical University, China
[2] Taihang Laboratory, China

Event Room 3
Session Chairs
Wenwu Zhou + Nafiz Chowdhury

[DNECII-008]
Automatic Focal Sweep Based Phosphor Thermometry For Thermal Performance Evaluation Of Film-Cooled Turbine Vane

→ Xinhao Yu [1]
→ Tianlun Zhang [1]
→ Yuting Liao [2+3]
→ Binghua Pan [3]
→ Tao Cai [1]
→ Wenwu Zhou [1]
→ Song Liu [3+4]
→ Yingzheng Liu [1]

[1] Shanghai Jiao Tong University, China
[2] Xiamen University, China
[3] AECC Sichuan Gas Turbine Establishment, China
[4] Beihang University, China

[DNECII-107]
Dynamic Flow Distortions in a Highly Bent Engine Intake: A Comparative Analysis of Compressor Influence on Flow Distortion Characteristics

→ Andreas Grois
→ Luis Oberthür
→ Julian Scheibel
→ Marcel Stößel
→ Michael Krummenauer
→ Dragan Kozulovic

University of the Bundeswehr Munich, Germany

Event Room 4
Session Chair
Hangkong Wu + Li He

[TADAM-145]
Incorporating the Unsteady Lift Effect of Compressor into Throughflow Solutions

→ Yu Hao
→ Jin Donghai
→ Gui Xingmin

Beihang University, China

[TADAM-147]
Reinforcement Learning-based Mean-Line Design for Axial Compressor Repeating Stage

→ Xinkai Jia
→ Xiuquan Huang
→ Dingxi Wang

Northwestern Polytechnical University, China

Event Room 5
Session Chairs
Khawar Syed + Dingxi Wang

[CC-266]
A Comparative Study on the Ignition Performance of Sustainable Aviation Fuels in a Low Emission Combustor under Cold-start Conditions

→ Wenjie Tao
→ Ruixin Wang
→ Songyang Li

AECC Commercial Aircraft Engine CO., LTD, China

[CC-071]
Research on Flame Structure and Oscillatory Combustion Characteristics of Hydrogen-Enriched Premixed Combustor

→ Hongxia Liang
→ Wenpu Huang
→ Hongyu Ju
→ Siwen Zhang
→ Jianqin Suo

Northwestern Polytechnical University, China

Thursday, September 4th

15:40

CFD Workshop

Participants & Discussion

[HTIC-060]
Aerodynamic Investigation of Impingement/Effusion Double-Wall Cooling Using Time-Resolved Large Eddy Simulation (LES) Data

→ Riko Haase [1]
→ Thomas Jackowski [2]
→ Jonas Schmid [1]
→ Hans-Jörg Bauer [1]

[1] Karlsruhe Institute of Technology, Germany
[2] Capgemini Engineering Deutschland S.A.S. & Co. KG, Germany

Invited Talk
Aerodynamic and Aeroelastic Coupled Design Optimization of Turbomachinery Blades Using a Discrete Adjoint Harmonic Balance Method

→ Hangkong Wu

Xi'an Jiaotong University, China

[TADAM-016]
Impact of multiple roughness parameters on the turbulent channel flow using direct numerical simulation

→ Xian Zeng [1]
→ Jiaqi Luo [1]
→ Yang Zhang [1]
→ Zuoli Xiao [2]

[1] Zhejiang University, China
[2] Peking University, China

[CC-076]
Experimentally-Resolved Flow and Thermal Fields at the Exit of an Annular Non-Reacting Combustor Sector

→ Jinze Li
→ Xing Yang
→ Xiangyu Wang
→ Qingxuan Li
→ Qun Wang
→ Zhenping Feng

Xi'an Jiaotong University, China

16:05

Coffee Break @ Banquet Foyer

Ballroom III
Session Chairs
Sergey Karabasov + Dingxi Wang

16:30

[AN-014]
Adapting Turbofan Noise Modelling Tool Using Neural Networks

→ Chenzhao Li
→ Evangelia Maria Thoma
→ Xin Zhao

Chalmers University of Technology Gothenburg, Sweden

Event Room I
Session Chairs
Haiteng Ma + Gregory Vogel

[HTIC-199]
Integrated Optimization of Serpentine Cooling Channels: Enhancing Heat Transfer Efficiency in Turbine Blades

→ Zecheng Wang
→ Kaibin Hu
→ Li Yang

Shanghai Jiao Tong University, China

Event Room 2
Session Chairs
Shijun Sun + Viacheslav Sedunin

[TAAFCF-052]
Effect of Circumferential Groove Axial Position on a Transonic Fan Rotor at Varying Reynolds Numbers

→ Jiangbin Zhao
→ Xu Dong
→ Xingen Lu
→ Ge Han
→ Ziliang Li

Chinese Academy of Sciences, China

Event Room 3
Session Chairs
Yadong Wu + Dajan Mimic

[DNECII-127]
Simulated conical diffuser performance charts for organic working fluids

→ Yannik Schulz
→ Maximilian Oliver Szulik
→ Dajan Mimic

Leibniz Universitaet Hannover, Germany

Event Room 4
Session Chair
Yaping Ju + Shine Win Naung

[TADAM-075]
Investigation on Aerodynamic Data Fusion for Low-Reynolds-Number Compressors Based on Multi-Fidelity Deep Neural Networks

→ Ruoyu Chen
→ Xuyang Ren
→ Ziliang Li
→ Jianshe Zhang
→ Mingyang Wang
→ Xingen Lu

Chinese Academy of Sciences, China

Event Room 5
Session Chairs
Xinrong Su + Yanfeng Zhang

[TAARFT-007]
High-Fidelity Simulation and Loss Mechanism Analysis About a Turbine Blade With Thick Trailing Edge

→ Jiawei Guo [1]
→ Xinrong Su [2]
→ Liming Song [1]
→ Xin Yuan [2]

[1] Xi'an Jiaotong University, China
[2] Tsinghua University, China

Thursday, September 4th

Ballroom III
Session Chairs
Sergey Karabasov + Dingxi Wang

16:55

[AN-167]
Using GPU-accelerated wall-modelled LES and ANN-based surrogate models for optimisation of installation effects in Distributed Propulsion Systems

→ Hussain Ali Abid [1]
→ Igor Solntsev [2]
→ Sergey Karabasov [1]
→ Lorenzo Burghignoli [3]
→ Francesco Centracchio [3]
→ Umberto Iemma [3]

[1] Queen Mary University of London, UK
[2] GPU-Prime Ltd., Germany
[3] Roma Tre University, Italy

17:20

[AN-172]
Study of the Characteristics of Noise Radiation from Rectangular Nozzles and Its Influencing Parameters

→ Xinyi Yang [1]
→ Jianxin Lian [1]
→ Wen Zhang [1]
→ Bi Wen [2]
→ Jinhu Tian [2]
→ Weiyang Qiao [1]

[1] Northwestern Polytechnical University, China
[2] Taihang Laboratory, China

Event Room 1
Session Chairs
Haiteng Ma + Gregory Vogel

[HTIC-208]
Double-Wall Internal-External Cooling Design with Integrated Topology and Parameter Optimization

→ Hu Kaibin
→ Wang Zecheng
→ Zhong Shengquan
→ Yang Li

Shanghai Jiao Tong University, China

[HTDAM-040]
A Solution-Propagation-Based Two-Scale Framework towards High-Fidelity, Low-Computational-Cost Modelling of Film Cooling Applications

→ Jiazheng Fan
→ Penghao Duan

City University of Hong Kong, China

Event Room 2
Session Chairs
Shijun Sun + Viacheslav Sedunin

[TAAFCF-018]
Influence of sand particles on blade erosion of a transonic fan rotor

→ Kunbin Jin [1]
→ Xian Zeng [1]
→ Jiaqi Luo [1]
→ Zuoli Xiao [2]

[1] Zhejiang University, China
[2] Peking University, China

[TAAFCF-041]
Impact Mechanism of Surface Roughness on Aerodynamic Performance and Stability in a Transonic Axial Compressor

→ Shulin Lai [1]
→ Huihui Li [2]
→ Kailong Xia [1]
→ Mingmin Zhu [1]
→ Jinfang Teng [1]

[1] Shanghai Jiao Tong University, China
[2] ECC Commercial Aircraft Engine Co.LTD, China

Event Room 3
Session Chairs
Yadong Wu + Dajan Mimic

[DNECII-036]
Effects of ITD Geometry on Duct Aerodynamic, Boundary Distortion and Turbine Performance

→ Jingwei Huang
→ Qingfu He
→ Yue Xiao
→ Zhongran Chi

Shanghai Jiao Tong University, China

[DNECII-049]
Adaptive Optimal Control Method for Hydrogen-Mixed Gas Turbine Based on Model Predictive Control

→ Yuxuan Lai
→ Duxing Wang
→ Deming Chen
→ Yadong Wu
→ Xinze Zhang

Shanghai Jiao Tong University, China

Event Room 4
Session Chair
Yaping Ju + Shine Win Naung

[TADAM-128]
Design and Performance of a Scaled Low-Hub-to-Tip Ratio Turbofan Rotor with Shape-Morphing Capability

→ Marcel Seidler [1]
→ Felix Kleinwechter [2]
→ Jens Friedrichs [1]
→ Hans Peter Monner [2]
→ Thomas Ruminy [1]

[1] Technische Universität Braunschweig, Germany
[2] DLR Braunschweig, Germany

[TADAM-262]
Uncertainty Analysis of Centrifugal Compressor Based on Adaptive Ensemble and Nested High-Dimensional Model Representation

→ Xiangxue Ge
→ Yaping Ju
→ Zhen Li
→ Xiawen Zhang
→ Chuhua Zhang

Xi'an Jiaotong University, China

Event Room 5
Session Chairs
Xinrong Su + Yanfeng Zhang

[TAARFT-019]
Investigation of Internal Flow Mechanisms and Loss Characteristics in Novel Variable-Shape Turbine Blade

→ Mai Li
→ Jun Liu
→ Wenying Ju
→ Pei Wang
→ Hengdong Zhuang
→ Hang Yuan
→ Xingen Lu

Chinese Academy of Sciences, China

[TAARFT-021]
Numerical Study on the Influence of Leading Edge Geometry on the Adaptability of Ultra-High Load Turbine Blade Angle of Attack and Reynolds Number

→ Qiao Duan [1]
→ Jun Liu [2]
→ Wenying Ju [2]
→ Mai Li [2]
→ Pei Wang [2]
→ Pengfei Wang [2]
→ Wenshuai Yang [1]

[1] Research Center of Fluid Machinery Engineering and Technology, China
[2] Chinese Academy of Sciences, China

Thursday, September 4th

Ballroom III
Session Chairs
Sergey Karabasov + Dingxi Wang

17:45

[AN-166]
Research on the broadband noise characteristics of fan annular cascade based on flow-field/ acoustic-field hybrid model

→ Hongmei Wang [1]
→ Liangji Zhanga [1]
→ Jianxin Lian [1]
→ Jinhu Tian [2]
→ Weiyang Qiao [1]

[1] Northwestern Polytechnical University, China
[2] Sichuan Gas Turbine Research Establishment, China

18:10

[AN-201]
Comparative Study of Prediction Methods for Tonal Noise Radiated by Periodic Flow in Turbomachinery

→ Cheng Kang [1]
→ Mao Yijun [1]
→ Xu Chen [2]
→ Zhang Yongqi [1]

[1] Huazhong University of Science and Technology, China
[2] Ocean and Energy Power Engineering, Wuhan University of Technology, China

Event Room I
Session Chairs
Haiteng Ma + Gregory Vogel

[HTDAM-086]
Managing Additive Manufacturing Variabilities in Cooling Design Analysis

→ Gregory Vogel
→ Michele Borja

Power Systems MGF., LLC, USA

[HTDAM-171]
Data-Driven Design Methodology Development and Extended Experimental Validation for High-Temperature sCO_2 Precoolers: From Empirical Analysis to Engineering Applications

→ Zhongfu Tang
→ Xin Qi
→ Yiming Chen
→ Huoxing Liu

Beihang University, China

Event Room 2
Session Chairs
Shijun Sun + Viacheslav Sedunin

[TAAFCF-044]
Design and Aerodynamic Performance Analysis of an Ultra-Wide Range Adjustable Fan Utilizing a Variable Tandem Stator Configuration

→ Haoran Wang
→ Shengfeng Zhao
→ Qiaodan Luo
→ Wenhao Su
→ Xingen Lu

Chinese Academy of Science, China

[TAAFCF-179]
Interpretability Analysis of Compressor Blade Profiles Generated Using Vaegan Model

→ Xiao Xie
→ Zixuan Li
→ Shijun Sun

Beijing Institute of Technology, China

Event Room 3
Session Chairs
Yadong Wu + Dajan Mimic

[DNECII-102]
Experimental Investigation of a Blown Wing with an Integrated Electric Ducted Fan

→ Ruibo Niu [1]
→ Chengjun Zhou [2]
→ Xiaoyu Zhou [3]
→ Yu Hu [4]
→ Viacheslav Sedunin [5]

[1] Tsinglan School, China
[2] International School of Nanshan Shenzhen, China
[3] The Experimental School of Shenzhen Institute of Advanced Technology, China
[4] Basis International School at Park Lane Harbor, China
[5] University of Cambridge, UK

[DNECII-152]
Experimental Study on Aerodynamic Propulsion Performance of Distributed Ducted Fan Power Wing System

→ Chongsen Mo
→ Fuqiang Song
→ Yuxuan Luo
→ Zhenbo Lu
→ Han Meng

Sun Yat-sen University, China

Event Room 4
Session Chair
Yaping Ju + Shine Win Naung

[TADAM-240]
Endwall design and loss mitigation for incidence-tolerant turbine blading

→ Zhang Ruifeng
→ Zhang Weihao
→ Jiang Chiju
→ Fu Xiaoxi
→ Deng Ji

Beihang University, China

[TADAM-165]
Enhanced Physics-Informed Neural Networks Using Adaptive Residual Weighting for Flow Simulations

→ Yiming Lu
→ Hua Zhou
→ Min Yao
→ Zhuyin Ren

Tsinghua University, China

Event Room 5
Session Chairs
Xinrong Su + Yanfeng Zhang

[TAARFT-054]
Analysis of the Influence of Swirl Circumferential Position on the Aerothermal Performance of Turbine Blades

→ Xuan Wu [1]
→ Yuxiang He [2]
→ Yanfeng Zhang [1]
→ Junqiang Zhu [2]
→ Miaoyi Zhu [1]

[1] University of Science and Technology of China, China
[2] Institute of Engineering Thermophysics, China

18:40-21:00

Ballroom II
Welcome Reception

Friday, September 5th

08:00 **Morning Coffee @ Banquet Foyer**

08:30 **Author briefing @ Located in each presentation room**

Room: Ballroom III

Panel Discussion

09:00 Title: **Dynamics of Power Generation Decarbonization**
Moderator → **Prof. Thomas Povey** (Oxford, UK)
Panelists → **Dr. John Gülen** (Bechtel, USA), **Dr. Bin Ru** (Shanghai Electric Group Central Academy, Shanghai, China), **Satoshi Mizukami** (Mitsubishi Heavy Industries, Ltd., Hyogo, Japan), **Dr. Zuozhi Zhao** (Siemens Energy, China)

10:30 **Coffee Break @ Banquet Foyer**

Room: Ballroom III

Plenary Keynotes

11:00 Title: **Joining for Better Performance at High Temperature**
Speaker → **Prof. Shan-Tung Tu** (East China University of Science and Technology, Shanghai, China)

11:45 Title: **The Impact of Decarbonization on Gas Turbine Combustion**
Speaker → **Dr. Khawar Syed** (Crosstown H2R, Baden, Switzerland)

12:30 **Lunch Break @ Market Café, 1st floor**

Friday, September 5th

Paper Presentations

Ballroom III
Session Chairs
Xiaojing Wang + Budimir Rosic

14:00
[TAARFT-072]
Numerical investigation of periodicity in adjustable guide vane sector cascade via clearance control
→ Kewen Xu [1]
→ Youfu Song [2]
→ Bin Qu [3]
→ Guochao Mao [1]
→ Guoqiang Yue [1]
[1] Harbin Engineering University, China
[2] East China University of Science and Technology, China
[3] AECC Hunan Aviation Powerplant Research Institute, China

14:25
[TAARFT-162]
Numerical study on the endwall flow of variable geometry turbine with adjustable flap and rotating envelope endwall
→ Xinyu Zhao [1]
→ Zichao Yang [1]
→ Xingyu Li [1]
→ Hongchuan Tan [2]
→ Weipeng Xue [2]
→ Weiyang Qiao [1]
[1] Northwestern Polytechnical University, China
[2] AECC Sichuan Gas Turbine Research Establishment, China

Event Room I
Session Chairs
Yuewen Jiang + Kirttayoth Yeranee

[HTFC-006]
Conjugate Heat Transfer Simulations Of Vortex Chamber With Diamond-Type TPMS Effusion For Gas Turbine Blade Leading Edge Cooling
→ Kirttayoth Yeranee
→ Qiuru Zuo
→ Yu Rao
→ Yuli Cheng
Shanghai Jiao Tong University, China

[HTFC-009]
Comparative Analysis of Surface Morphology in Turbine Blade Cooling Features: Additive Manufacturing Versus Electrical Discharge Machining
→ Ji Zhang [1]
→ Yang Li [2]
→ Weichen Huang [1]
→ Yihong He [2]
→ Wenwu Zhou [1]
→ Yingzheng Liu [1]
[1] Shanghai Jiao Tong University, China
[2] AECC Hunan Aviation Powerplant Research Institute, China

Event Room 2
Session Chairs
Seung Jin Song + Sofia Medina Cassillas

[TAAFCF-084]
Numerical Study on the Impact of Herringbone Riblets on a Compressor Cascade Boundary Layer at Low Reynolds Number
→ Xinsheng Song
→ Qiang Liu
Northwestern Polytechnical University, China

[TAAFCF-065]
Adjoint-based Aero-Structural Multidisciplinary Design Optimization of a Rotor Blade using an Equivalent Stress Model
→ Jiaxing Li
→ Jiaqi Luo
Zhejiang University, China

Event Room 3
Session Chairs
Yongjun Zhao + Joachim Kurzke

[TCPP-114]
Design-Point selection of fuel cell propulsion systems under consideration of off-design performance analysis
→ Sebastian Lück [1]
→ Frederic Kernchen
→ Patrick Meyer
→ Jens Friedrichs
→ Jan Göing
Technische Universität Braunschweig, Germany

[TCPP-223]
Optimization Method for Engine Thermodynamic Cycle Design Parameters Considering Full Life Cycle Cost
→ Ruizhe Cao [1]
→ Chao Fu [2]
→ Zhengping Zou [2]
→ Lixi Huang [1]
[1] The University of Hong Kong, China
[2] Beihang University, China

Event Room 4
Session Chair
Ruixian Ma + Loic Salles

[MMSV-137]
Vibration Analysis of a Micro Turbojet Engine under Two Impeller Structural Faults
→ Zhiming Yang [1]
→ Ruixian Ma [1]
→ Linyuan Jia [1]
→ Yongkui Lei [1]
→ Sara Alseiari [2]
→ Heba Youssef [2]
→ Maryam Almheiri [2]
[1] Northwestern Polytechnical University, China
[2] Technology Innovation Institute, United Arab Emirates

[MMFFL-164]
Influence of deflected abrasive waterjet process on surface integrity and fretting fatigue properties of Ti-6Al-4V titanium alloy dovetails
→ Ning Wang
→ Heng Zhang
→ Shu-Lei Yao
→ Zhi-Yun Wang
→ Xian-Hao Zhu
→ Yu-Xin Chi
→ Xi-Ting Zeng
→ Xian-Cheng Zhang
→ Shan-Tung Tu
East China University of Science and Technology, China

Event Room 5
Session Chairs
Yun Zheng + Carlos Martel

[TAE-005]
Effect of Nacelle Lip on Aeroelastic Stability of Fan Blades
→ Panaer Nuerbaheti [1]
→ Yun Zheng [1]
→ Hui Yang [1]
→ Hongrui Dong [2]
[1] Beihang University, China
[2] Shenyang Engine Research Institute, China

[TAE-113]
Investigation on the Aerodynamic Damping of A Stator in Tandem Arrangement
→ Jingjie Yang [1]
→ Bernd Beirow [1]
→ Thomas Giersch [2]
→ Seif Elmasry [2]
→ Bernd Becker [2]
[1] BTU Cottbus-Sentftenberg, Germany
[2] Rolls-Royce Deutschland Ltd & Co KG, Germany

Friday, September 5th

Ballroom III
Session Chairs
Xiaojing Wang + Budimir Rosic

Event Room I
Session Chairs
Yuewen Jiang + Kirttayoth Yeranee

Event Room 2
Session Chairs
Seung Jin Song + Sofia Medina Cassillas

Event Room 3
Session Chairs
Yongjun Zhao + Joachim Kurzke

Event Room 4
Session Chair
Ruixian Ma + Loic Salles

Event Room 5
Session Chairs
Yun Zheng + Carlos Martel

14:50

[TAARFT-212]
Bayesian Neural Network-Based Uncertainty Quantification of Impact of Geometric Deviations on Ultra-High-Lift Low-Pressure Turbine Blades

→ Xiaojing Wang [1]
→ Hao Chen [1]
→ Yifei Wu [2]
→ Zhengping Zou [3]

[1] Chang'an University, China
[2] Nanchang Hangkong University, China
[3] Beihang University, China

[HTFC-028]
Experimental study on the film cooling effectiveness of turbine blade with light-field multispectral radiation thermometry

→ Hua Fang [1]
→ Chunhui Yao [1]
→ Shulin Xue [2]
→ Wei Zhang [1]
→ Fei Zeng [2]
→ Shengxian Shi [1]

[1] Shanghai Jiao Tong University, China
[2] Aero-Engine Corporation of China, China

[TAAFCF-079]
Windmill aerodynamics following a fan blade off event

→ Sofia Medina Cassillas
→ Cesare Hall

University of Cambridge, UK

[TCPP-252]
Modeling and Analysis of Distributed Propulsion System Based on Gas-driven Multi-Fans

→ Linyuan Jia [1]
→ Changsheng Qi [1]
→ Xuanyu Yao [2]
→ Xiaochen Wang [3]
→ Yuchun Chen [1]

[1] Northwestern Polytechnical University, China
[2] Aero Engine Academy of China, China
[3] AECC Commercial Aircraft Engine Co., Ltd., UK

[MMSV-023]
Numerical Analysis on Tightening Strategy of Long Bolts in a Multi-Stage Compressor

→ Haoqin Chen
→ Yong Chen

Shanghai Jiao Tong University, China

[TAE-177]
Efficient Flutter Analysis in a Multi-row Environment Using the Harmonic Balance Method

→ Yixiong Liu [1+2]
→ Hangkong Wu [1]
→ Dingxi Wang [1]

[1] Northwestern Polytechnical University, China
[2] AECC Shenyang Aeroengine Research Institute, China

15:15

[SC-030]
Comparison between Radial-Outflow and Radial-Inflow Turbines for Different sCO2 Power Cycles Applications

→ Mohammed Al Moghazy
→ Zhengping Zou
→ Lichao Yao

Beihang University, China

[HTFC-033]
Investigation on the impact of non-uniform cross-flow in cooling channel of film cooling characteristics

→ Ruilin Chen [1]
→ Yaolong Qin [2]
→ Juan du [2]
→ Yuewen Jiang [2]

[1] North China Electric Power University, China
[2] Chinese Academy of Sciences, China

[TAAFCF-092]
Influence of Measuring Probes on Compressor Performance under Circumferential Distorted Inflow

→ Caifeng Zhang [1]
→ Wenqiang Zhang [2]
→ Jichao Li [1]
→ Boning Fan [1]
→ Xiaowen Xuan [3]

[1] Chinese Academy of Sciences, China
[2] Beijing Institute of Technology, China
[2] Nanjing Normal University, China

[TCPP-067]
Single Gas Turbine Propulsion Options for Short-to-Medium Range Aircraft

→ Moritz Georg Kolb
→ Arne Seitz
→ Mirko Hornung

Bauhaus Luftfahrt e.V., Germany

[TAE-248]
Effects of intake length on flutter stability of a fan blade

→ Venkata Y.T. Chennuru [1]
→ Fanzhou Zhao [2]
→ Roque Corral [1]
→ Mehdi Vahdati [1]

[1] Universidad Politécnica de Madrid, Spain
[2] Imperial College London, UK

15:40

Coffee Break @ Banquet Foyer

Friday, September 5th

Ballroom III
Session Chairs
Lixi Huang + Qiang Liu

Event Room I
Session Chairs
Kun Du + Michael David Atkins

Event Room 2
Session Chairs
Jichao Li + Jun Yao

Event Room 3
Session Chairs
Linyuan Jia + Seyfettin Can Gulen

Event Room 4
Session Chair
Le Han + Wenqiang Zhang

Event Room 5
Session Chairs
Xu Dong + Yuxuan Zhang

16:10

[AN-156]
Design of a low-speed anechoic wind tunnel and its aerodynamic and aeroacoustic performance

→ Fuqiang Song
→ Chongsen Mo
→ Zhenbo Lu
→ Han Meng
→ Xinliang Li

Sun Yat-sen University, China

[HTFC-097]
Experimental Jet in Crossflow Analysis for the 777 Shaped Hole

→ Valerio Vicano [1]
→ Weichen Huang [2]
→ Wenwu Zhou [2]
→ Yingzheng Liu [2]
→ Chuangxin He [2]
→ Zhihan Xu [2]

[1] Shanghai Jiao Tong University, Italy
[2] Shanghai Jiao Tong University, China

[TAAFCF-088]
Research on Compressor Performance Prediction Based on PINN

→ Wei Yan
→ Qun Zheng
→ Bin Jiang

Harbin Engineering University, China

[TCPP-056]
Dynamic Modeling of an Integrated SOFC Hybrid Propulsion System with Variable Power Distribution

→ Jinghui Xu
→ Zepeng Wang
→ Xizhen Wang
→ Kaiqiang Yang
→ Juanzhang Xie
→ Yongjun Zhao

Fudan University, China

[TUABRIID-026]
Impact of Strut Clocking on the Flow Interaction Between OGV and Strut in Compressor Transition Ducts

→ Zhenliang Liu
→ Yadong Wu
→ Zihuan Zhu
→ Xinze Zhang
→ Hua Ouyang

Shanghai Jiao Tong University, China

[TAE-002]
Aeroelastic Stability of the Fan Blade of a High-Bypass-Ratio Engine

→ Xiaohe Yang [1]
→ Zhuo Kou [2]
→ Bo Cao [1]
→ Yuze Zhu [3]
→ Dingxi Wang [3]
→ Ying Zhu [1]

[1] AECC Commercial Aircraft Engines Co., Ltd, China
[2] Tsinghua University, China
[3] Northwestern Polytechnical University, China

16:35

[AN-157]
Numerical study of flow and acoustic modal characteristics of fan tonal source based on DMD

→ Liangji Zhang
→ Hongmei Wang
→ Weiyang Qiao

Northwestern Polytechnical University, China

[HTFC-104]
Film cooling jet lift-off under a streamwise pressure gradient at differing blowing ratios

→ Marc Gomez-Olive Fernandez [1]
→ Michael D. Atkins [1]
→ Sjouke Schekman [1]
→ Tongbeum Kim [2]

[1] University of the Witwatersrand, South Africa
[2] Nanjing University of Aeronautics and Astronautics, China

[TAWT-155]
Transitional RANS and HRLM simulations for DU-91-W2-250 at high Reynolds number

→ Haitian Lin [1]
→ Siya Jiang [2]
→ Song Fu [1]

[1] Tsinghua University, China
[2] Software Center for High Performance Numerical Simulation, China

[TCPP-027]
Analysis of anode architectures for the hydrogen supply of PEM fuel cell-based propulsion systems

→ Lars Hinz [1]
→ Markus Pollak [2]
→ Lisa Busche [2]
→ Xenia Strocka [2]
→ Jens Friedrichs [1]
→ Jan Goeing [1]

[1] Technische Universität Braunschweig, Germany
[2] TLK-Thermo GmbH, Germany

[TUABRIID-239]
Influence of angle of attack on fan-intake aerodynamic interaction

→ Fanzhou Zhao
→ Freyr Hlynsson

Imperial College London, UK

[TAE-195]
Computation of bladed disk response with nonlinear friction effects

→ Carlos Martel Escobar
→ Javier González-Monge
→ Salvador Rodriguez-Blanco

Universidad Politécnica de Madrid, Spain

Friday, September 5th

Ballroom III
Session Chairs
Lixi Huang + Qiang Liu

17:00

[AN-159]
Research on broadband noise mode identification technology of annular cascade

→ Lian Jianxin [1]
→ Wang Hongmei [1]
→ Zhang Liangji [1]
→ Du Jun [2]
→ Qiao Weiyang [1]

[1] Northwestern Polytechnical University, China
[2] AECC Sichuan Gas Turbine Research Establishment, China

17:25

[AN-194]
The methodology to excite acoustic modes in the cylindrical duct with small axial gradients of diameter and temperature

→ Jianqiang Pan
→ Kang Gao
→ Weikang Jiang

Shanghai Jiao Tong University, China

Event Room 1
Session Chairs
Kun Du + Michael David Atkins

[HTFC-119]
Nozzle guide vane endwall metal effectiveness: decoupling contributions from film cooling and inlet radial temperature profile

→ Matthew S. Stokes
→ Nafiz H. K. Chowdhury
→ Thomas Povey

University of Oxford, UK

[HTFC-132]
Scaling of Film Cooling Performance Considering the Effects of Temperature Ratio by Numerical Simulations

→ Jiabo Cui
→ Siming Dai
→ Haiteng Ma

Shanghai Jiao Tong University, China

Event Room 2
Session Chairs
Jichao Li + Jun Yao

[TAWT-230]
BEMT+: Improvements to the Blade Element Momentum Theorem using insights from CFD.

→ Stephen Orritt [1]
→ Mohammad Rahmati [1]
→ Shine Win Naung [2]

[1] The University of the West of England, UK
[2] Shanghai Jiao Tong University, China

[TAWT-244]
Aeroelastic Analysis of a Wind Turbine Operating in the Wakes of an Upstream Wind Turbine

→ Shine Win Naung [1]
→ Myo Tun Kyaw [1]
→ Kai Zhang [2]
→ Yufeng Yao [1]
→ Jun Yao [1]
→ Mohammad Rahmati [3]

[1] The University of the West of England, UK
[2] Shanghai Jiao Tong University, China
[3] Northumbria University, UK

Event Room 3
Session Chairs
Linyuan Jia + Seyfettin Can Gulen

[TCPP-078]
Mission-Level Analysis of a Fluidic Thrust Vectoring System for a UAS Application with a Low-Bypass Turbofan

→ Jonas Remiger
→ Nils Schwagerus
→ Marcel Stößel
→ Dragan Kožulović

Universität der Bundeswehr München, Germany

[TCPP-109]
Practice-relevant teaching of gas turbine performance

→ Joachim Kurzke

Kurzke Consulting, Germany

Event Room 4
Session Chair
Le Han + Wenqiang Zhang

[TUABRIID-121]
Turbomachinery Unsteady Aerodynamics: Rotating Stall, Rotating Instability and Surge 2

→ Cheng Tian [1]
→ Song Fu [1]
→ Siya Jiang [2]
→ Xinzui Wang [1]

[1] Tsinghua University, China
[2] CAEP Software Center for High Performance Numerical Simulation, China

Event Room 5
Session Chairs
Xu Dong + Yuxuan Zhang

[TAE-242]
Impact of Variable Stator Vane Schedule on Non-Synchronized Vibration

→ Mehdi Vahdati [1]
→ Lei Wang [2]

[1] TU Hamburg, Germany
[2] Xi'an ShaanGu Power Co. Ltd, China

[TAE-264]
Investigation on Flutter Boundary under Different Tip Clearances Using a Multi-Passage Energy Method

→ Le Han
→ Hailong Tang
→ Dasheng Wei
→ Xin Zhao

Beihang University, China

18:00 - 21:30

18:00: Buses depart from the hotel entrance

Shanghai25 Conference Dinner @ Guang Fulin Prime Hotel Shanghai

21:30: Buses return to Hyatt Regency Shanghai Songjiang Hotel

Saturday, September 6th

08:00 **Coffee Break @ Banquet Foyer**

08:30 **Author briefing @ Located in each presentation room**

Ballroom III

Plenary Keynotes

09:00 Title: **The Requirement for Civil Aviation Powerplant System Development**
Speaker: **Dr. Peng Wang** (COMAC, China)

09:45 Title: **Progress in Velocity Field and Density Field Measurement Technologies for Compressible Flows**
Speaker: **Prof. Chong Pan** (Beihang University, China)

10:30 **Coffee Break @ Banquet Foyer**

Ballroom III

Technical Keynotes

11:00 Title: **Thermal Management of Power Systems on Future Aircraft**
Speaker: **Dr. Edmond Walsh** (Oxford, UK)

11:30 Title: **Rayleigh Thermometry Experiments and Dissociated Ammonia Combustion for Low-Emission Gas Turbines**
Speaker: **Dr. Stefano Chiocchini** (Sesta Lab, Italy) and **Giulio Grassi** (Sesta Lab, Italy)

12:00 Title: **Development of Compressors and Turbofans for the Decarbonization of Industrial Steam Applications**
Speaker: **Dr. Matthias Schleer** (Howden, a Chart Industries Company, Germany)

Saturday, September 6th

12:30

Lunch Break @ Market Café, 1st floor

Ballroom III
Session Chairs
Alexander Molokanov + Qiang Liu

14:00

[CC-130]
Numerical investigation of the upscaling of a new type of H2-O2 burner with water-cooled combustion
→ Dennis Sanders [1]
→ Lars Eichhorn [2]
→ Friedrich Dinkelacker [2]
→ Karsten Oehlert [1]

[1] Jade University of Applied Sciences, Germany
[2] Leibniz University Hannover, Germany

14:25

[CC-025]
Study of Dynamic Properties of Laser-Induced Cavitation Bubbles in Water
→ Chengyan Wang
→ Hong Yan
→ Mu Li
→ Fan Liu

Northwestern Polytechnical University, China

Event Room 1
Session Chairs
Yadong Wu + Yuxuan Zhang

[TAAFCF-055]
Joint optimization of aerodynamic and mechanical of A transonic compressor rotor based on neural network algorithm
→ Chen Ting [1]
→ Wu Yadong [1]
→ Xu Qiang [2]

[1] Shanghai Jiao Tong University, China
[2] Shanghai Electric Power Generation Group, China

[TAAFCF-141]
Numerical Simulation on Single-Stage Transonic Axial Compressor
→ Xinzui Wang
→ Cheng Tian
→ Song Fu

Tsinghua University, China

Event Room 2
Session Chairs
Yixiong Liu + Clara Henkel

[MMSV-017]
Consideration of Balancing within the Fan-Blisk Design Process
→ Clara Henkel [1]
→ Dieter Bestle [1]
→ Peter Flassig [2]
→ Christian Janke [3]
→ Michal Slaby [3]

[1] BTU Brandenburg University of Technology, Germany
[2] THB Brandenburg University of Applied Sciences, Germany
[3] Rolls-Royce Deutschland, Germany

[MMSV-024]
Failure simulation of Dovetail Elements in Laminated Composite Fan Blades under coupled tension-bending loads
→ Yuhan Sang
→ Yong Chen

Shanghai Jiao Tong University, China

Event Room 3
Session Chairs
Thomas Povey + Yongjun Zhao

[ICTMD-200]
A ViTCNA network for cross-domain fault diagnosis of aeroengine gas path
→ Xizhen Wang
→ Zepeng Wang
→ Bokun Zhao
→ Jinghui Xu
→ Yongjun Zhao

Fudan University, China

[ICTMD-057]
Unmeasurable Aero-engine Gas Path Parameters Reconstruction based on Generation Diffusion Model
→ Zepeng Wang
→ Jinghui Xu
→ Xizhen Wang
→ Jinxu Cai
→ Yongjun Zhao

Fudan University, China

Event Room 4
Session Chair
Fanzhou Zhao + Hangkong Wu

[TUAGI-116]
GPU-accelerated wall-modelled Large Eddy Simulations for scale-resolving modelling of combustor-turbine interface flows
→ Igor Solntsev [1]
→ Hussain Abid [1]
→ Annabel Markesteijn [1]
→ Sergey Karabasov [1]
→ Simla Saglam [1]
→ Budimir Rosic [1]

[1] GPU-Prime.Ltd, Germany
[2] Queen Mary University of London, UK
[3] University of Oxford, UK

[TUADAM-186]
Spatial Compressed Spectral Proper Orthogonal Decomposition based on Spectrum Translation Property
→ Guanzhong Ma
→ Shiyan Lin
→ Ruiyu Li
→ Limin Gao

Northwestern Polytechnical University, China

Event Room 5
Session Chairs
Penghao Duan + Sjouke Schekman

[HTFC-146]
Low Cost Optimization of Gas Turbine Endwall Film Cooling Based on Geometric Prior Knowledge
→ Xingcheng Liu
→ Qi Wang
→ Li Yang
→ Yu Rao

Shanghai Jiao Tong University, China

[HTFC-074]
Parameter Sensitivity in Conjugate Heat Transfer Performance of the Film Cooled Structure
→ Siyuan Zhang
→ Xueying Li
→ Jing Ren

Tsinghua University, China

Saturday, September 6th

Ballroom III

Session Chairs
Alexander Molokanov + Qiang Liu

14:50

[CC-149]
Large-eddy simulation of combustion dynamics in an integrated afterburner

→ Longfei Wang
→ Siyu Ding
→ Min Zhu
→ Xingjian Wang

Tsinghua University, Beijing, China

15:15

[CC-150]
Global stability analysis of jets in crossflow at supercritical pressures

→ Siyu Ding
→ Longfei Wang
→ Zikang Weng
→ Qingzhou Lu
→ Xingjian Wang

Tsinghua University, Beijing, China

Event Room I

Session Chairs
Yadong Wu + Yuxuan Zhang

[TAAFCF-103]
A Case Study Of Spanwise Traversing In An Industrial Multi-stage Axial Compressor

→ Viacheslav Sedunin [1]
→ Daniil Antropov [2]
→ Ilya Kalinin [2]
→ Yurii Marchenko [2]
→ Oleg Komarov [2]

[1] University of Cambridge, UK
[2] Ural Federal University, Russia

[TAAFCF-129]
Impact of Leading-Edge Probes on the Performance of a Multi-Stage Axial Compressor

→ Lukas Schäflein [1]
→ Kareem Bahgat [1]
→ Daniel Jung [1]
→ Stefan Henninger [1]
→ Peter Jeschke [1]
→ Roland Wunderer [2]

[1] RWTH Aachen University, Germany
[2] MTU Aero Engines AG, Germany

Event Room 2

Session Chairs
Yixiong Liu + Clara Henkel

[MMSV-029]
Calculation of equivalent mechanical properties of unit cells based on Saint-Venant's principle

→ Zhangshuo Xu
→ Yong Chen

Shanghai Jiao Tong University, China

[MMSBD-138]
Numerical and Experimental Investigation of Influencing Factors on Blow-Down Effect in Brush Seal

→ Dan Sun
→ Zhi Xu

Shenyang Aerospace University, China

Event Room 3

Session Chairs
Thomas Povey + Yongjun Zhao

[ICTMD-254]
Decoupled Power and Speed Control of eVTOL Piston Engine Generators Using Multi-Objective Complementary Control

→ Xiao Yang
→ Jincen Jiang
→ Jiashuai Liu
→ Xiangyang Wang
→ Zhongzhi Hu

Tsinghua University, China

[ICTMD-210]
An intelligent 3D defect detection method for aeroengine blade utilizing robotic vision technique

→ Xiaoqia Yin
→ Haonan Cheng
→ Huayi Cheng
→ Dechang Kong
→ Xiancheng Zhang
→ Shandong Tu

East China University of Science and Technology, China

Event Room 4

Session Chair
Fanzhou Zhao + Hangkong Wu

[TUADAM-236]
Numerical analysis of a low speed axial fan using finite elements based Space Time Variational Multi-Scale method

→ Alessio Castorrini [1]
→ Alessandro Corsini [1]
→ Valerio Barnabei [1]
→ Johan van der Spuy [2]

[1] Sapienza University of Roma, Italy
[2] Stellenbosch University, South Africa

[TUARSRIS-134]
Stall Analysis Based on Reduced-Order Variational Mode Decomposition for a Counter-Rotating Axial Compressor

→ Fei Chen [1]
→ Xiaochen Mao [1]
→ Lei Fu [2]
→ Limin Gao [1]
→ Bo Liu [1]

[1] Northwestern Polytechnical University, China
[2] Aero-Engine Academy of China, China

Event Room 5

Session Chairs
Penghao Duan + Sjouke Schekman

[HTFC-241]
Effects of Endwall Cooling on Film Cooling Performance and Leakage Flow Characteristics in Adjustable Turbine Guide Vanes

→ Ji Deng
→ Weihao Zhang
→ Chiju Jiang

Beihang University, China

[HTFC-256]
Study on the Influence of Trailing-Edge Cooling Film on Turbine Vibration Performance

→ Guoyan Zhou
→ Weifeng Shu
→ Changli Liu
→ Xiancheng Zhang
→ Shan-Tung Tu

East China University of Science and Technology, China

Saturday, September 6th

15:40

[ETR-106]
Development and Optimization of Alternative Fuels for Aviation and Turbomachinery

→ Alexander Molokanov [1]
→ Mikhail Kuzmin [1]
→ Renat Badykov [1]
→ Weixing Zhou [1]
→ Igor Averkov [2]
→ Aleksey Stolnikov [2]
→ Vladimir Raznoschikov [2]
→ Nikolay Plishkin [2]
→ Leonid Yanovskiy [2]

[1] Harbin Institute of Technology, China
[2] Federal Research Center of Problems of Chemical Physics & Medicinal Chemistry of RAS, Russia

[TAAFCF-181]
Performance Degradation of a Multi-Stage Compressor at High Altitude

→ Xiangyu Gong
→ Xiuquan Huang
→ Qiang Liu

Northwestern Polytechnical University, China

[MMSBD-140]
Novel Suppression Disturbance Brush Seal Buoyancy Effect Fluid-Structure Interaction Numerical Research

→ Dan Sun
→ Enyu Liu

Shenyang Aerospace University, China

[TUARSRIS-213]
The Improved CNN-BiLSTM Hybrid Model for Predicting Compressor Stall

→ Ruiyang Lian
→ Hefang Deng
→ Xiaoqing Qiang

Shanghai Jiao Tong University

[HTFC-250]
Experimental Study on the Law of Phase Change Transpiration Cooling

→ Wentao Li [1]
→ Guoyan Zhou [1]
→ Xing Luo [2]
→ Shantung Tu [1]

[1] East China University of Science and Technology, China
[2] Gottfried Wilhelm Leibniz University of Hannover, Germany

16:05

Coffee Break @ Banquet Foyer

Ballroom III
Session Chairs
Ruihong Qin + Shijun Sun

16:30

[TARMFC-095]
Research on the impact of rain ingestion considering s-shaped inlet distortion on the performance of a centrifugal compressor

→ He Wang
→ Fengming Wang
→ Yibing Xu
→ Xiangyang Liu
→ Yawen Wang

Nanjing University of Aeronautics and Astronautics, China

Event Room I
Session Chairs
Mingmin Zhu + Mehdi Vahdati

[TAAFCF-061]
Direct Numerical Simulation of Separation Control Mechanism in Low-Re Compressor Cascades Using Streamwise Riblets

→ Xiangwen Chen
→ Qiang Liu

Northwestern Polytechnical University, China

Event Room 2
Session Chairs
Chengwei Fan+ Loic Salles

[MMSV-080]
On the influence of mistuning on the occurrence of coupled modes in radial rotors

→ Marios Sasakaros [1]
→ Pietro Testa [1]
→ Manfred Wirsum [1]
→ Arthur Zobel [2]
→ Damian Vogt [2]

[1] RWTH Aachen Institute of Power Plant Technology, Germany
[2] University of Stuttgart, Germany

Event Room 3
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Budimir Rosic + Yingxue Chen

[ICTMD-253]
Asynchronous Model Predictive Control in Aircraft Engines

→ Feng Xu
→ Shengyi Liu
→ Xiangyang Wang
→ Zhongzhi Hu

Tsinghua University, China

Event Room 4
Session Chair
Wenqiang Zhang + Alessandro Corsini

[TUARSRIS-051]
Numerical Investigation on Rotating Instability in a Transonic Compressor Under Low Reynolds Number Conditions

→ Xinze Zhang
→ Yadong Wu
→ Zhenliang Liu
→ Zihuan Zhu
→ Hua Ouyang

Shanghai Jiao Tong University, China

Event Room 5
Session Chairs
Lifen Zhang + Roque Corral

[SASS-031]
Effects of Slotted Front Plate on Inlet Swirl and Stability in Brush Seals

→ Benzhuang Yue [1]
→ Yuxin Liu [2]
→ Xiaozhi Kong [2]
→ Cunliang Liu [2]

[1] Dalian Maritime University, China
[2] Northwestern Polytechnical University, China

Saturday, September 6th

Ballroom III
Session Chairs
Ruihong Qin + Shijun Sun

16:55

[TARMFC-225]
Study on the Flow Loss Mechanism of Mixed-Flow Compressors at Low Reynolds Numbers

→ Xiao Xie
→ Shijun Sun
→ Liu Yanming

Beihang University, China

17:20

[SC-263]
Impact of Inlet Thermodynamic Conditions on sCO_2 Compressor Performance

→ Sanghyun Lee [1]
→ Jin Mo Ku [1]
→ Youngkuk Yoon [1]
→ Kilyoung Kim [2]
→ Seung Jin Song [1]

[1] Seoul National University, South Korea
[2] Hanwha Power System, South Korea

Event Room I
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Mingmin Zhu + Mehdi Vahdati

[TAAFCF-063]
Influence of Angular Acceleration on Transonic Compressor rotor Aerodynamic Performance During Transition Processes

→ Xiangyang Liu
→ Yibing Xu
→ Fengming Wang
→ He Wang
→ Lingyan Ma

Nanjing University of Aeronautics and Astronautics, China

[TAAFCF-066]
Integrated Flow Simulation across the Fan Stage and Bypass Duct in a Mixed UHBR Turbofan Engine

→ Niraj Iyer
→ Marit Blanke
→ Christoph Bode
→ Jens Friedrichs

Technical University of Braunschweig, Germany

Event Room 2
Session Chairs
Chengwei Fan+ Loic Salles

[MMSV-001]
Preliminary Design Method For 2d Digital Gas Turbine Engine Structure

→ Daqian Luo [1]
→ Jinfeng Zhang [1]
→ Renat Badykov [2]
→ Aleksandr Molokanov [2]

[1] AECC Commercial Aircraft Engine Co., LTD., China
[2] Harbin Institute of Technology, China

[MMSBD-197]
Structural Analysis of Interlocked Low-Pressure Turbine Blades: Influence of Contact Conditions and Pretwist Angles

→ Chengwei Fan [1]
→ Javier Gonzalez-Monge [2]
→ Salvador Rodriguez-Blanco [2]
→ Carlos Martel [2]
→ Giulio Deiana [3]

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[2] Universidad Politécnica de Madrid, Spain
[3] University of Florence, Italy

Event Room 3
Session Chairs
Budimir Rosic + Yingxue Chen

[ICTMD-255]
Physics-Informed Neural Network Based Onboard Model for Aero-engine

→ Shengyi Liu
→ Feng Xu
→ Jincen Jiang
→ Xiangyang Wang
→ Zhongzhi Hu

Tsinghua University, China

[DEFIGT-124]
Measuring Solid Particle Motion and Size under Jet Engine Compressor Boundary Conditions

→ Qi Qi
→ Stephan Staudacher

Institute of Aircraft Propulsion Systems, University of Stuttgart, Germany

Event Room 4
Session Chair
Wenqiang Zhang + Alessandro Corsini

[TUARSRIS-047]
Analysis of stall formation mechanism of multistage axial flow compressor under low speed condition

→ Shimin Wang [1]
→ Hefei Li [2]
→ Bin Jiang [1]
→ Runze Li [1]
→ Wei Yan [1]

[1] Harbin Engineering University, China
[2] The Institute of Xi'an Aerospace Solid Propulsion Technology, China

[TUARSRIS-082]
Numerical Study on the Flow Mechanism of Coupling Intake-Compressor with Real Flight Conditions

→ Boning Fan
→ Jichao Li
→ Caifeng Zhang
→ Xiaoyu Zhang
→ Wentao Wang
→ Cheng Liang

Chinese Academy of Sciences, China

Event Room 5
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Lifen Zhang + Roque Corral

[SASS-032]
Numerical Simulation of Fluid–Solid–Thermal Coupling in Multistage Brush Seals

→ Yanfei Bao [1]
→ Yuxin Liu [2]
→ Xiaozhi Kong [2]
→ Cunliang Liu [2]

[1] Dalian Maritime University, China
[2] Northwestern Polytechnical University, China

[SASS-238]
The application of swirl reducing features to brush seals in high shaft speed locations

→ Abdullah Aboseada
→ Michael Pekris
→ John Chew

University of Surrey, UK

Saturday, September 6th

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[TATSTNA-010]
The Influence of Rim Motor Clearance on The Performance of a High-Load Helium Compressor

→ Longhui Zhao
→ Zhitao Tian
→ Huawei Lu

Dalian Maritime University, China

[TAAFCF-183]
Non-Uniform Profile Tolerance Design of a High Subsonic Cascade Based on Aerodynamic Performance Requirements

→ Limin Gao
→ Guang Yang
→ Panpan Tu
→ Yue Dan
→ Ruiyu Li

Northwestern Polytechnical University, China

[MMFFL-151]
Effect of Pre-exposure on Fatigue and Damage in MCrAlY-Coated Fourth-Generation Ni-Based Single-Crystal Superalloys

→ Pengpeng Liu
→ Kangkang Wang
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→ Shilong Yang
→ Junhao Wang
→ Hongchen Li
→ Yangguang Liu
→ Kaibin Li

East China University of Science and Technology, China

[ETR-237]
Enabling Flexible Power Generation Systems: Experimental Facility and Novel Numerical Tools for Thermal Field Optimization

→Godwin Chukwuemeka Nwangele [1]
→ Mark Baker [1]
→ Koichi Tanimoto [2]
→ Ryo Egami [2]
→ Budimir Rosic [1]

[1] University of Oxford, UK
[2] Mitsubishi Heavy Industries, Japan

[TUARSRIS-085]
The Influence of Inlet Distortion on the Stall Route in a High Load Compressor

→ Cheng Liang
→ Jichao Li
→ Feng Peng
→ Boning Fan

Chinese Academy of Sciences, China

18:15

Closing Ceremony Apero @ Banquet Foyer

Closing Remarks
Prof. Yan Li (Shanghai25 Conference Chair, Tongji University), **Prof. Mehdi Vahdati** (TU Hamburg, Germany), **and Prof. Dingxi Wang** (Northwestern Polytechnical University, China)

Best Paper Awards Chania24
Presenter: **Dr. Vladimir Navrotsky** (Siemens Energy Industrial Application Service, Sweden)

Session Chairs

We thank our Session Chairs for their dedication during the paper presentation sessions, as their hard work and technical expertise are truly invaluable.

Michael David Atkins
Sofia Medina Cassillas
Yingxue Chen
Nafiz Chowdhury
Roque Corral
Alessandro Corsini
Xu Dong
Kun Du
Penghao Duan
Chengwei Fan
Seyfettin Can Gulen
Le Han
Li He
Xiao He
Clara Henkel
Lixi Huang
Linyuan Jia
Yuewen Jiang
Yaping Ju
Sergey Karabasov
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Carlos Martel
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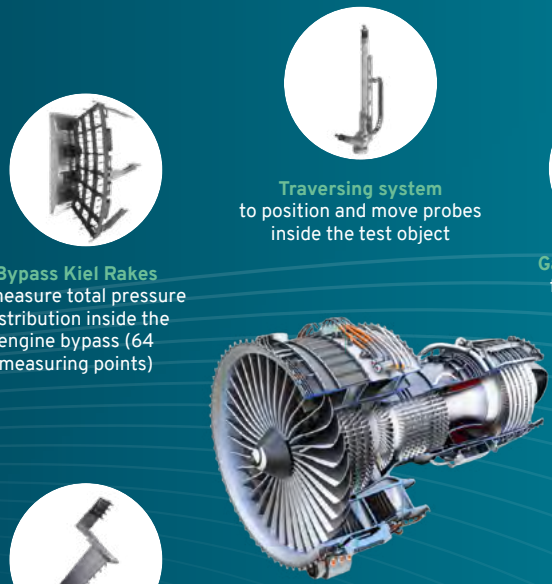

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to measure total pressure distribution inside the engine bypass (64 measuring points)

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for turbine performance measurements

Fast Response Probes
e.g., for compressor aerodynamics

Notes:

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