

ASSOCIATED ORGANISATIONS

Association of Czech Mechanical Engineers (CZ)
Associazione Termotecnica Italiana (ATI) (IT)
Power Engineering Committee, Polish Academy of Sciences (PL)
Koninklijke Vlaamse Ingenieursvereniging (BE)
Institution of Engineers in Ireland (IE)
Institution of Mechanical Engineers (IMEchE) (GB)
Norsk Forening for Termiske Strømningsmaskiner (NFTS) (NO)
Österreichischer Ingenieur- und Architekten – Verein (AU)
Royal Institution of Engineers in The Netherlands (KIVI) (NL)
Association Française de Mécanique (AFM) (FR)
Svenska Mekanisters Riskförbund (SE)
VDI-Gesellschaft Energietechnik (DE)



11th EUROPEAN CONFERENCE ON TURBOMACHINERY

FLUID DYNAMICS AND THERMODYNAMICS

EUROTURBO ORGANISING COMMITTEE THE EUROPEAN TURBOMACHINERY SOCIETY

Chairman of the Committee :

Prof. Francesco Martelli, University of Florence (IT)

Chairman of the Local Organising Committee :

Dr. Raúl Vázquez Díaz, Industria de Turbo Propulsores (ES)

Paper Review Chairman :

Prof. Mete Sen, Istanbul Technical. University (TR)

Secretary :

Prof. Tony Arts, von Karman Institute (BE)

Euroturbo Members:

Prof. T. Arts, VKI, Rhode-St-Genèse (BE)
Prof. J. Backman, Univ. of Tech., Lappeenranta (FI)
Prof. L. Bakken, NTNU, Trondheim (NO)
Prof. G. Bois, Arts et Métiers-ParisTech, Lille (FR)
Prof. B. Cukurel, Technion, Haifa (IL)
Prof. P. Doerffer, Polish Academy of Science (PL)
Dr. M. Dumas, Snecma, SAFRAN, Villaroche (FR)
Prof. T. Fransson, KTH, Stockholm (SE)
Prof. V. Gnesin, NASU, Kharkov (UA)
Dr. A. Granovskiy, ALSTOM Power Uniturbo (RU)
Prof. F. Heitmeir, Graz Univ. of Technology (AU)
Prof. H. Jericha, Graz Univ. of Technology (AU)
Prof. O. Léonard, Univ. Liège (BE)
Prof. M. Manna, Univ. Naples (IT)

Prof. F. Martelli, Univ. Florence (IT)
Dr. R. Miller, Univ. Cambridge (GB)
Prof. R. Niehuis, Univ. Munich (DE)
Dr. P. Ott, EPFL, Lausanne (CH)
Dr. N. Pilis, Aeromaritime Ind., Hal Far (MT)
Prof. J. Polanský, Univ. West Bohemia, Pilsen (CZ)
Prof. R. Corral Garcia, Univ. Politecnica, Madrid (ES)
Mr. C. Scrivener, Consultant Rolls-Royce Derby (GB)
Prof. M. Sen, Istanbul Tech. Univ. (TR)
Prof. J. Seume, Univ. Hannover (DE)
Prof. C.H. Sieverding, VKI, Rhode-St-Genèse (BE)
Dr. J. Vad, Univ. Budapest (HU)
Prof. J.P. Van Buijtenen, Delft Tech. Univ. (NL)
Dr. R. Vázquez Díaz, ITP, Madrid (ES)



CALL FOR PAPERS

23-26 MARCH 2015
MADRID SPAIN



POLITÉCNICA

Universidad Politécnica
de Madrid



INTRODUCTION

Following the successful first ten conferences on turbomachinery held in Erlangen (DE) 1995, in Antwerpen (BE) 1997, in London (GB) 1999, in Florence (IT) 2001, in Prague (CZ) 2003, in Lille (FR) 2005, in Athens (GR) 2007, in Graz (AU) 2009, in Istanbul (TR) 2011 and in Lappeenranta 2013 (FI), the eleventh will take place in March 2015 in Madrid (ES). The conference will be of primary interest to researchers, design engineers and users of turbomachinery. It is intended to be a primary event for technology transfer across Europe in this field through the presentation of the latest developments and best practice.

SCOPE STATEMENT

The scope of the conference covers from a scientific and engineering perspective, the fluid dynamics and thermodynamics involved in improving the performance, stability and sustainability characteristics in the design, development and operation of axial, mixed flow and radial turbomachines:

Aero-engines, jet engines
Industrial gas turbines, Steam turbines
Compressors and Fans
Hydraulic Turbines and Pumps
Non conventional turbines (wind, Wells, Arrhenius,)

Particular emphasis will be given to the following areas:

Aerodynamic and Hydrodynamic Flows
Turbulent and transitional flows
Two phase and wet steam flows
Particle paths, deposition and erosion effects
Real working fluid flows

Thermodynamics, Heat Transfer, Cooling and Leakage
Heat transfer and turbine cooling
Turbine internal and external (film) cooling flows and losses
The effects of rotation, unsteadiness and temperature non uniformities
Leakage and sealing flows

Unsteady Flows and Interactions
Surge, stall and transients
Rotor-stator interactions and multi-row effects
Components interactions (combustor/turbine, fan/HPC, HPT/LPT)
Vibration, forced response, flutter and aero-elasticity
Separation and cavitation
Aero-acoustics, noise generation and reduction

Turbomachinery Design, Performance and Operation
Design, analysis and optimisation
Performance predictions
Active and passive flow control, including MEMS
Testing, measurement techniques and experimental validation
Operational experience and performance monitoring
Diagnostics, deterioration and residual performance/life prediction

The papers should describe new experimental and/or theoretical research emphasise contributions to theory, design methods and optimisation, reliability and operability aspects, where thermodynamics and/or fluid flow are visible contributors to the analysed problem. For example, the latest experimental and computational developments in analysis of three-dimensional flows, unsteady flows and interaction effects would be of prime interest. Consistent with the objective of European technology exchange, the European Commission strongly encourages researchers involved in EC R&D programmes to take this excellent opportunity to present papers demonstrating the technical progress of their projects.

OFFERS OF ABSTRACTS - PAPERS

Abstracts (1 page) of papers should be received no later than 7 April 2014. Authors are asked to indicate the category in which their paper should be included in the abstract submission system available on the web:

<http://www.euroturbo.eu>

Selected authors will be invited to submit full papers of up to ten pages, including references and diagrams, by 15 September 2014.

The conference papers will be written and presented in English. All papers will undergo a thorough review process. All offers of papers will be considered by the Organising Committee, but final acceptance will depend on the Committee's decision based on the revised printable file and subject to its receipt by 30 January 2015.

Contributors are required to present their paper at the conference.

PUBLICATION - AWARD

Papers selected for inclusion in the conference programme will be published by U.P.M. (Local Conference Organiser's Institution) in the conference proceedings, which will be issued to the participants at the conference. Selected papers of journal quality will be published in a special Turbomachinery volume of the IMechE Journal of Power and Energy. All other papers accepted and presented at the conference will appear on the ETC website within 12 months after the conference. The ETC Best Paper Award will be attributed, during the conference, in recognition of excellence among the best contributions.

**ETC Secretariat – Professor T. Arts
von Karman Institute for Fluid Dynamics
Turbomachinery & Propulsion Department
72, Chaussée de Waterloo
B-1640 Rhode Saint Genèse – Belgium**

Tel : 32-(0)2.359.96.11 (direct line : 96.05)
Fax : 32-(0) 2-359.96.00
Email : etc.secretariat@euroturbo.eu

EXHIBITION & SPONSORSHIP

In addition to the conference, there will be a small number of exhibition stands available. There will also be a variety of corporate sponsorship opportunities possible, which will offer substantial promotion and publicity for your organization. If you are interested in receiving details of the exhibition or sponsorship opportunities, please tick the appropriate box on the reply form. Alternatively, please contact the local organizer, Dr. Raúl Vázquez Díaz, for further details:
Email: etc11Madrid@gmail.com.