

2° Call for Papers Abstracts and Paper submission

The Conference is jointly promoted by ASME and ATI: it shall have a strong scientific content. The papers that will be prepared and issued to the Scientific Committee for approval shall have scientific contents. Possibly new ideas should be brought to the audience. Own experience, the way to solve problems, new ideas to solve old

problems, ways of behaving, technical proposals oriented to Norms and Standard and the approach to Public Authorities are part of the possible topics that can be matter of discussion during the Conference.

Papers should consider even partially what above indicated.

Papers will be published only if there is Conference attendance and only after conference attendance fee payment. The registration cost will be reduced if payment is made before February 28th, 2006.

Schedule for papers presentation Extended Abstract presentation deadline: November 16th, 2005 Papers acceptance: December 16th, 2005 Papers submittal (full write up): March 20th, 2006

Papers Abstracts and Final Papers Shall be addressed to:

Each abstract shall clearly include the Authors Names and Company appurtenance information. Each abstract shall clearly make reference to one of the Conference topics listed in this Call of Papers. Extended Abstracts shall be two page write up (including figures) ASME ATI Conference Milan Italy May 14th/17th 2006

Energy: production, distribution, and conservation

General

Overview of the World Energy scene. Overview of the USA Energy and Italy/Europe scene (similarities and differences). Availability of energetic resources; today and tomorrow.

Major technical areas - Fundamental:

- 1. Basic engineering thermal science.
- 2. Thermodynamic optimization.
- 3. Turbine gas path and blade cooling
- for high temperature operation. 4. Combustion analysis and experiment.
- 5. Multiphase flow and heat transfer.
- 6. Fundamental heat and mass transfer issues in fuel cells.
- 7. Radiation heat transfer in enclosures.
- 8. Heat transfer in nano scale systems.
- 9. Cryogenic energy system.
- 10. Electronic devices cooling.
- 11. Constructal (design as science) theory and design.

Major technical areas - Applied:

A. Energy production methods.

A.1	Gasification Technology.
	IGCC's, co-production of H2 and
	electricity, managing of CO2 in
	the gasification processes.
A.2	Combustion Technology.
	Coal fired boilers. Supercritical
	boiler technology update.
	Fluidized bed boiler technology
	update.
	Oxy-fuel fired boilers and their
	environmental performance.
	CO ₂ capture and sequestration
	technologies.
	High temperature combustion
	processes. Developments in gas
	turbines technology and
	combined cycles.
A.2	Energy from renewable sources:
	biomass, solar, wind, waves and
	hydroelectric power.
A.3	Fuel cell technology: applications,
	enabling technologies, heat
	transfer within fuel cell systems.
A.4	Nuclear energy.
	New nuclear power initiatives:
	new plant designs, thermal and
	breeder reactors, reemergence of
	plutonium recycle.
	Radioactive fuel and other wastes
	handling and storage. Solid
	waste disposal processes.
	Advances in safety and control of
	nuclear power systems.
	Strategies for retiring equipment.
	Designing new equipment for its
_	eventual retirement.
в.	Conservation of electrical, chemical,
	thermal and nuclear energy.
	Improved efficiency in home and
	factory equipment. Energy
	optimization of thermal materials

processing systems. Energy storage and retrieval.

- С. **Energy transportation and** transmission methods **Clean transportation methods for** energy; electric energy, hydrogen and hydrogen economy, hot/cold water, methanol. New developments in electric power distribution, superconducting distribution lines. Fuel distribution: hydrogen enrichment of natural gas, distribution technology. Materials, safety, efficiency. D. Pollution as a consequence of energy, environmental protection. Kyoto Accord, its implementation and implications. **Recent advances in environmental** technology. Latest SOx and NOx abatement technology. Heavy metal (mercury and lead) cleanup technologies. Particulates and their control. Ε. **Miscellaneous** Education: preparing the work force needed to meet tomorrow's energy needs. Enhancing security of plants and distribution systems against weapons and cyber attacks. New techniques in electric power
 - demand projections. Linking power distribution and
 - broadband information distribution (Internet).

SCIENTIFIC COMMITTEE

The Scientific Committee is in charge to:

- Define the technical structure of the conference
- Review the abstract provided and approve either the presentation during the conference or the inclusion in the conference proceedings

Review and approve the papers prepared The Members of the Scientific Committee are: Marino Avitabile ----- ENEA Adrian Bejan ----- Duke University Carlo De Michelis ----- CESI Sergio Faggiani ----- Universita' di Pisa Massimo Feola -Universita' Torvergata Roma Richard J.Goldstein - University of Minnesota Fabio Gori ----- Universita' Torvergata Roma Yogesh Jaluria ----- Rutgers University Jack Lloyd ------Michigan State University Ennio Macchi ----- Politecnico di Milano Arun Majumdar ----- UC Berkeley David Pai - Foster Wheeler Dev. Corporation Terry Simon ------ University of Minnesota Giorgio Sotgia ----- Politecnico di Milano

list of the attendants yes Tourist Program Pr Please indicate prefe in order to allow orga	City State City State Signature Signature reference ro reference rence and expected number of partecipant	The Conference is made before f conference proce Payments shall be ATI Sez.Lomb Banca Intesa 20121 Milance C.C. n° 6150
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e Registration fee is 450 Euro. Registration fee is reduced to 350 Euro if registration feb. 28th, 2006. Registration fee includes: registration, eedings, daily lunch buffets and Gala Dinner. be made to the following Bank Account number:

barda - Corso di Porta Nuova, 7 097620118 03069 - CAB 09420

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Conferece Location: Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci Via San Vittore, 21 - 20123 Milano www.museoscienza.org





DU=During Conference Time Schedule (Preliminary) DU1 - Monday May 15 morning

Hr. 10,30 am Milan sightseeing on a Tramcab Hr. 1,00 pm Lunch in Osteria in the Navigli Area (cost at charge of each participant). The Navigli, designed by Leonardo Da Vinci, have been one of the most important waterway, since they were constructed in the XVIth Century, up to the middle of last century The area is most trendy and full of "Milan flavour" DU2 - Tuesday May 16 Morning (spouses only) (cost to be defined) Hr. 10,30 am Visit to Brera Museum and Lunch in the Brera Area, very caracteristic area of Milan ancient downtown, full of art galleries, shops and small pubs. Hr 1,00 pm Lunch in the Area DU3 - Tuesday May 16 afternoon Hr. 4 to 6 p.m. Visit to the "Last Supper", Leonardo's most famous fresco, and adjacent Basilica Santa Maria delle Grazie. Group of only 20 people are admitted. Please book together with registration to secure entrance) **During Conference activities costs are not** included in the Conference Registration Fee. Payment instructions will be given

AF – After Conference

AF1 – Trip to Venice (Program will be defined later) AF2 – Trip to Florence (Program will be defined later) After Conference activities costs are not included in Conference registration fee

EX=Extra Conference Time Schedule (Prel.)

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EX1 – Sunday May 14th Monday Trip to Certosa di Pavia Lunch in a nearby restaurant EX2 - Monday May 15th afternoon Museo della Scienza e della Tecnologia (siege of the conference) At the end of the works visit to the Main Sections of the Museum: Energy, Transportation, (to be booked together with Registration) Non attendees accepted in limited number: please book in advance Visit will take around 1 hour EX3 - Monday May 15 evening Gala Dinner at 8,30 pm A Gala Dinner in one of Milan most significant place All attendees and spouses: please book together with registration. Cost for spouse: 80 Euro EX4 - Tuesday May 16 evening Opera or Ballet (program available in September) at La Scala Theatre. world most famous Opera House. Bookings to be made with very large advance to secure tickets. Cost available in September. **Extra Conference activities** Costs are not included in the Conference Registration Fee. Payment instructions will be given. Gala Dinner cost included in Conference registration fee for Conference attendees