1st Indo-US Joint Workshop

on

Advanced Turbo-Machinery:
Power Generation and Transportation for a Sustainable and Environmentally Responsible Future

Announcing the first joint workshop on the research challenges and opportunities in use of turbo-machineries for sustainable pathways for efficient and clean power generation and aviation to be held at the Indian Institute of Technology (IIT) Bombay on January 6 & 7, 2014 . This workshop will bring together eminent scholars and known subject matter experts from universities, governmental agencies, and industries in India and USA to organize a two-day of panel discussions and keynote speeches. The workshop will cover the topics of:

(1) Alternative fuels for transportation

(2) Advanced cycles and turbines for solar thermal power

(3) Long-term reliability for on-shore and off-shore wind turbines

(4) CAES (compressed air energy storage) for integration with wind and solar power

(5) Higher efficiency, lower emissions and carbon capture technologies in conventional power generation through concurrent, multi-disciplinary innovation

(6) Rural distributed generation through micro-turbines

DATES

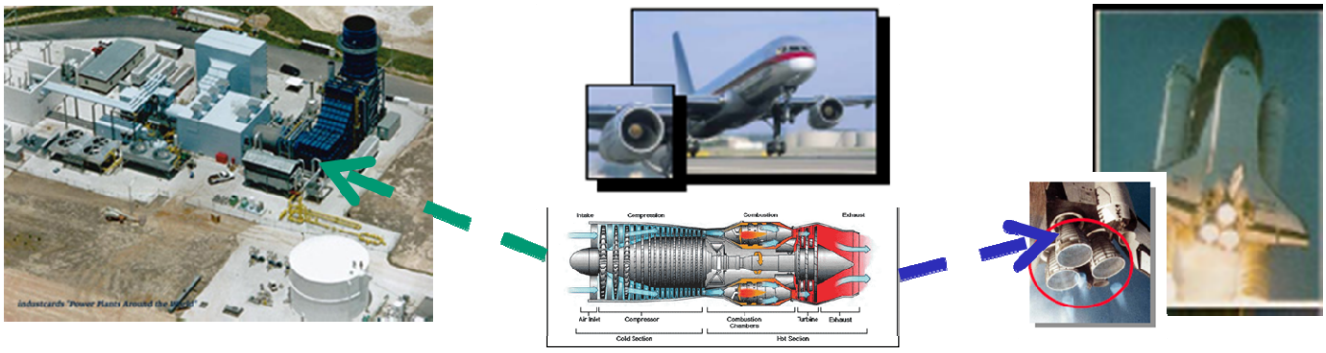
JAN 6&7, 2014

VENUE

IIT BOMBAY

MUMBAI, INDIA

Each topic will start with a keynote speech, followed by a panel discussion involving experts from India and USA, and from academia, industry and government agencies, in order to have a balance of viewpoints between what sciences can provide, what can be effectively converted into real products and what society is willing to pay for. Each discussion session will end with a break-out session to identify research and development (R&D) topics of mutual and immediate interest to both India and USA, and to both academia and industry. The break-out session will be attended by the panelists and some members of the audience, and will be tasked to provide a written list of the R&D topics that will be published as one outcome of the workshop. The research posters will be used to promote interaction between all attendees, resulting in more Indo-US partnership and more joint peer reviewed journal publications, technology development and patents. The proposed workshop is intended to lay the foundation for vigorous discussion resulting in concrete plans for bilateral collaboration. Such a workshop is very timely and necessary as energy is touted as one of the grand challenges facing human civilization. For sponsorship, participation, and poster submissions contact the Organizing Committee members listed below.



ORGANIZING COMMITTEE

Prof A M Pradeep
Department of Aerospace Engineering
Indian Institute of Technology Bombay,
Powai, Mumbai – 400 076, INDIA
E-mail: ampradeep@aero.iitb.ac.in
Phone: +91-22-2576 7125
(local coordinator India)

Prof. Bhaskar Roy
Department of Aerospace Engineering
Indian Institute of Technology Bombay,
Powai, Mumbai – 400 076, INDIA
E-mail: aeroyia@aero.iitb.ac.in
Phone: +91-22-2576 7115

Prof. Jayanta Kapat
Director, Center for Advanced Turbomachinery and Energy Research (CATER)
Mechanical and Aerospace Engineering
University of Central Florida, Orlando, FL, USA
Email: jayanta.kapat@ucf.edu
(chief coordinator India & USA)

Prof. Subith Vasu
Center for Advanced Turbomachinery and Energy Research (CATER)
Mechanical and Aerospace Engineering
University of Central Florida, Orlando, FL, USA
Email: subith@ucf.edu
(local coordinator USA)

Indo-US Joint Workshop on

Advanced Turbomachinery: Power Generation and Transportation for a Sustainable and Environmentally Responsible Future

6-7th January 2013, IIT Bombay, Mumbai ,India

Programme Schedule(Tentative)

6th January 2013	
0900-0930 hrs.	Inaugural session (TBD)
0930-1000 hrs.	Coffee break
1000-1200 hrs.	**Advanced cycles and turbines for solar thermal power:** Amitava Dutta, (Jadavpur University): Thermodynamics of Advanced cycles Jayanta Kapat (UCF): Solar/CO2 Cycle Optimization
1200-1230 hrs.	Panel discussions
1230-1400 hrs.	Lunch break
1400-1530 hrs.	**Rural distributed generation through micro-turbines; Long-term reliability for on-shore and off-shore wind turbines**: Rangaswamy (Tata Power): Micro turbines for power generation
1530-1600 hrs.	Coffee break
1600-1700 hrs.	**CAES (compressed air energy storage)** Jihua Gou (UCF) - Composite collapsible structure for CAES
1700-1730 hrs.	Panel discussions
1930-2200 hrs.	Banquet Dinner
7th January 2013	
0930-1100 hrs.	**Biofuels Production:** B N Raghunandan (IISc) – TBD Vimal Chaitanya (New Mexico State)- Algal biofuels Richard Blair (UCF) – Catalysts for advanced fuel production and conversion
1100-1130 hrs.	Coffee break
1130-1230 hrs.	**Efficient combustion for transportation:** Craig Taatjes (Sandia) –Fuel chemistry of alternative fuels Subith Vasu (UCF)- Experimental techniques for fundamental combustion studies
1230-1300 hrs.	Panel discussions
1300-1400 hrs.	Lunch break
1400-1530 hrs.	**Higher efficiency, lower emissions and carbon capture technologies in conventional power generation through concurrent, multi-disciplinary innovation** Bhaskar Roy (IITB): Advanced Turbomachines for improved efficiency: BVSSS Prasad (IIT Madras): Advanced heat transfer and cooling mechanisms for turbines
1530-1600 hrs.	Coffee break
1600-1700 hrs.	A M Pradeep (IITB): Active, Passive and Reactive flow control for improved turbomachine performance
1700-1730 hrs.	Workshop closure discussions (TBD)