

**IISc Centenary International Conference and Exhibition on
Aerospace Engineering (ICEAE'2009)
Indian Institute of Science, Bangalore, India
18 – 22 May 2009**

The Department of Aerospace Engineering at the Indian Institute of Science plans to hold an international conference in all areas of aerospace engineering during the centenary year of the Indian Institute of Science. The conference will be marked by several noteworthy events such as technical paper presentations and special sessions dedicated to key themes of current interest. Apart from these there will be special alumni and industry-interaction events. The conference is expected to be attended by a large number of scientists/engineers from academia, research and development organizations, and industry from India and abroad. This unique conference will showcase advanced research and development efforts in aerospace engineering in India as well as have a large number of contributions from the international community of researchers.

The Indian Institute of Science, established in 1909, is widely recognized to be a premier academic research institute in India. The year 2008-2009 is the centenary year of the institute. Established in 1942, the Department of Aerospace Engineering at the Indian Institute of Science is the largest and earliest established academic aerospace department in the country with a large faculty and many graduate research students. Since IISc is situated in Bangalore, which is the hub of the aerospace industry in India, members of the faculty have closely interacted with international and Indian aerospace industries and have contributed to a large number of national research and development programs. This department has also been one among the major sources of scientific talent for the Indian aerospace industry and research organizations. Its alumni have spread out across the globe and have held important positions in international academia and industry.

Patrons: P. Balaram (Director, IISc) and N. Balakrishnan (Associate Director, IISc)

Conference Chairman: B.N. Raghunandan

International Advisory Committee (*To be communicated shortly*)

Conference Secretary: S. Gopalakrishnan

Conference Treasurer: M. Seetharama Bhat

Technical Committee: D. Ghose (Convener), K. Venkatraman (Co-convener), B.N. Raghunandan, J. Mathew, D. Roy Mahapatra, D. Sivakumar

Resources and Exhibition Committee: K.P.J. Reddy (Convener), G. Jagadeesh, S.V. Raghurama Rao, S. Saravanan

Alumni Interaction and Awards Committee: C.R.L. Murthy (Convener), P.R. Mahapatra (Co-Convener), B. Dattaguru, V. Mani, D. Harursampath, S.B. Kandagal, G.N. Naik

Logistics Committee: B. Vasudevan (Convener), J. Dey, T.S. Seshadri, P.S. Kulkarni, P.C. Mathai, K. Nagashetty, S.S. Padabidri,

Information and Publicity Committee: N.K.S. Rajan (Convener), S.N. Omkar (Co-convener), C. Oommen, R. Babu

Publications Committee: P.J. Paul (Convener), R. Ganguli, N. Balakrishnan, R. Padhi, O.N. Ramesh

Finance Committee: M.S. Bhat (Convener), K.N. Lakshmisha, M.R. Bhat, D.V. Kubair, V. Surendranath

Technical Papers in General and Special Sessions

General Sessions

Papers are invited in all areas of aerospace engineering. In particular, papers are invited under the following broad areas:

Aerodynamics	Flight and Space Mechanics
Aerospace Materials and Structures	Aerospace Propulsion
Guidance, Navigation, and Control	

Papers in other areas related to aerospace engineering will also be considered.

Full-length papers (max 8 pages) for oral presentation will be considered. All accepted papers will appear in the proceedings. Papers have to be submitted in full and will be rigorously reviewed to ensure quality and relevance. Based upon the reviewers' comments, and at the discretion of the technical committee, some limited number of papers may be accepted for interactive poster sessions.

Special Sessions

Apart from the regular sessions with contributed papers, special sessions on the following theme areas will be organized. These sessions will have one or two invited talks and the rest will be contributed papers. The names of organizers to be contacted to submit papers for these theme sessions are also given below. The norms of submission are the same as the regular papers. Please note that if there are a large number of paper submissions in a special session then some of them may be moved into the general paper category.

(Special Session SP-A1) Hypersonics, Shockwaves, and Scramjets
K.P.J. Reddy (IISc) and G. Jagadeesh (IISc)
laser@aero.iisc.ernet.in

This special session is intended to attract the best research papers in the fields of hypersonics, shock waves and scramjet engine development. Equal preference is given to papers presenting numerical and experimental studies.

(Special Session SP-A2) Transition and Turbulence in Shear Flows
O.N. Ramesh (IISc)
onr@aero.iisc.ernet.in

For this special session we solicit papers related to fundamental studies on transition and turbulence as well as on applications to aeronautical fluid dynamics.

(Special Session SP-S1) Structural Dynamics and Aero-Elasticity
K. Venkatraman (IISc) and R. Ganguli (IISc)
kartik@aero.iisc.ernet.in

This special session will cover experimental, analytical, and computational methods for determining and controlling the response of aerospace structures to external and internal disturbances. It will also include aero-elasticity of fixed and rotary wing aircraft.

(Special Session SP-S2) Multifunctional Material Structures and Systems
S. Gopalakrishnan (IISc) and D. Roy Mahapatra (IISc)
krishnan@aero.iisc.ernet.in

Computational and experimental methods will be the focus of this session. Aerospace related work on mathematical modeling, computational methods, experimental methods, sensors, structural health monitoring, MEMS, and control systems, are of special interest.

(Special Session SP-C1) Advances in UAV Research
M. Seetharama Bhat (IISc) and K.V. Srinivasan (ADE)
msbdcl@aero.iisc.ernet.in

This special session will focus on innovative research related to design of UAVs and MAVs, sensors and actuators, intelligent payloads, autonomous navigation and control strategies, innovative applications, and path planning and coordination algorithms.

(Special Session SP-C2) Guidance and Control of Aerospace Vehicles
R. Padhi (IISc) and A. Bhattacharjee (DRDL)
padhi@aero.iisc.ernet.in

The focus of this special session will be on evolving guidance and control methods as applied to aerospace vehicles, with special emphasis on launch vehicles and missiles. Innovative trajectory optimization algorithms will also fall within the purview of this session.

(Special Session SP-P1) Engine Spray Dynamics
D. Sivakumar (IISc) and B.N. Raghunandan (IISc)
dskumar@aero.iisc.ernet.in

This special session will cover fuel/propellant injection systems, fundamentals of atomization and sprays, and combustion of sprays in engines as well as diagnostics related to these topics.

(Special Session SP-P2) Advanced Aerospace Propulsion
P.J. Paul (IISc)
paulpj@cglpl.iisc.ernet.in

This session will focus on propulsion systems for one/two stage vehicles to orbit, reusable launch vehicles, hypersonic cruise missiles, etc. Concepts related to supersonic combustion ramjets, combined cycle engines, and pulse detonation engines are also of interest.

Important Dates

Paper submission deadline	30 November, 2008
Review decision	30 January, 2009
Final submission of papers	15 March, 2009

Submission Format

The papers should be in PDF format and should be printable in A4 size paper, with 1.5 cms clearances on left and right margins and 2.5 cms clearances on top and bottom margins, formatted in double column, single spacing, and times roman with 11 pt font for the main body, 11 pt bold face font for sub-section headings, 12 pt bold face font for section headings, 12 pt font for author names and affiliation, and 16 pt bold face font for the paper title. The title and author names, affiliations, and emails should be centered across the two columns. These are general guidelines and style files for submissions will be available on the conference website shortly. Submissions in the general category can be sent to ICEAE_PAPER@aero.iisc.ernet.in with “ICEAE2009 paper submission + lead author name” in the subject line. Papers in the theme sessions can be sent to the organizer’s email with an appropriate message in the subject line identifying the special session.

Publication of Proceedings

The proceedings of the conference will be brought out in electronic CD format. We are presently negotiating with several specialized journals in aerospace engineering to publish some high quality papers from the papers presented in the conference. These papers would be selected after another round of peer reviews to meet the requirements of the journal. The list of journals and specialized areas will be made available shortly.

Alumni Events

Several Alumni events will be organized during the conference. This conference is intended to serve as a venue for our alumni in India and abroad, and current faculty and students, to meet and interact. Also, the Department of Aerospace Engineering intends to use the platform of this international conference, held during the centenary year of the institute, to showcase its past achievements and present research activities with the hope that these technical interactions will lead to a long-term vision for the department so that it continues to play a leading role in fostering innovative, path-breaking, and cutting edge research at the frontiers of aerospace science and technology.

Industry-Interaction Events

Interaction avenues will be available through exhibitions and stalls. Specialized sessions covering research areas specific to the industry are also planned. We expect large participation from ISRO, DRDO, and CSIR laboratories, as well as other industries and R&D organizations from India and abroad.

Registration Information

Authors/presenters of accepted papers are required to register for the conference.

Early-bird registration 30 April, 2009
Late and on-site registration From 1 May, 2009

Registration fees

Indian Delegates		International Delegates	
Students	INR 1000	Students	USD 75
Academics	INR 4000	Non-students	USD 250
Industry/R&D	INR 5000	Accompanying	
Accompanying		Guest	USD 150
Guest	INR 2500		

Contact Information

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Conference Website

<http://www.aero.iisc.ernet.in/iceae>
