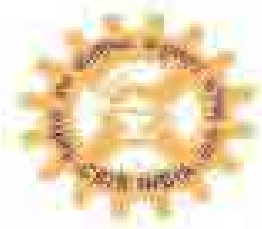
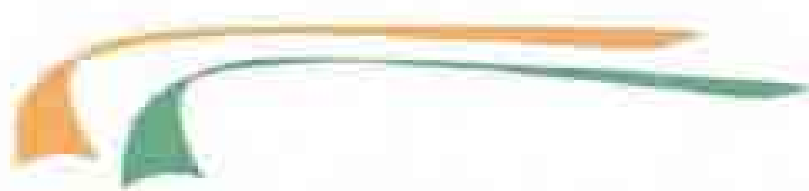
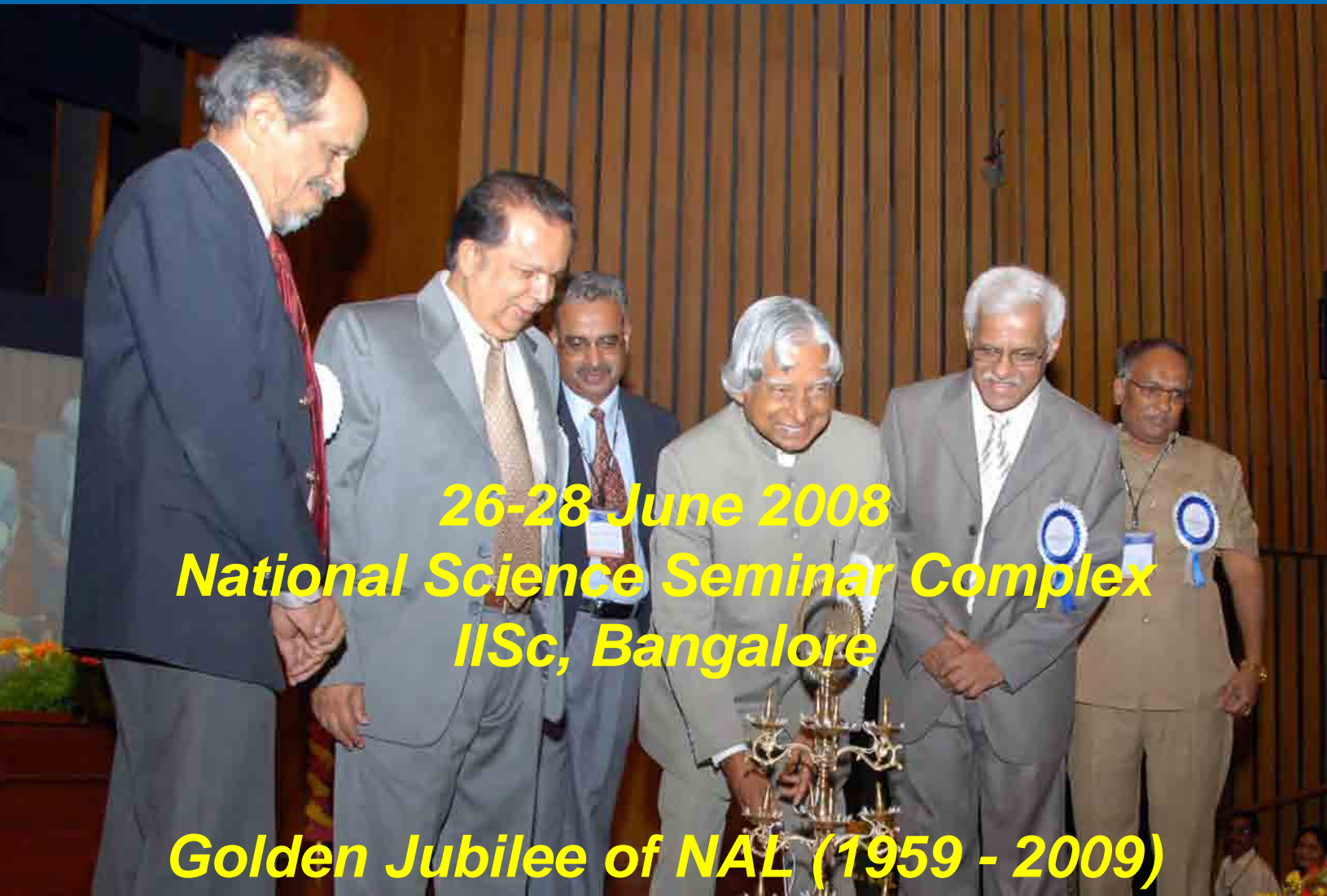


Proceedings of International Conference on Aerospace Science and Technology (INCAST)



NATIONAL AEROSPACE LABORATORIES

(Council of Scientific & Industrial Research)

Contents

Foreword

Introduction to the Conference

Plenary Session

- | | | |
|------|---|-------|
| PT01 | Aviation and Aeronautics in India: The way forward
<i>R Narasimha</i> | Photo |
| PT02 | The B-787 Dreamliner : Developing and Proving Advanced Composites Application
<i>Alan Miller</i> | Photo |
| PT03 | Review of the State of Art of Rotorcraft Aeromechanics and Future
<i>Inderjit Chopra</i> | Photo |
| PT04 | Large Eddy Simulation of Turbulent Flows : From Unsteady Aerodynamics to Aeroacoustics
<i>Sanjiva Lele</i> | Photo |
| PT05 | From Wind Tunnels to Fine Tuned Wings – Five Golden Decades of NAL
<i>A R Upadhya</i> | Photo |
| PT06 | Is there a Need to Develop a New Generation Regional Turbo Prop Aircraft A/C
<i>Kota Harinarayana</i> | Photo |

Invited talk

- | | | |
|------|---|-------|
| IT01 | Gas Turbine Technologies for Next Generation Aircraft
<i>K V L Rao</i> | Photo |
| IT02 | Multi functional, Adaptive and Intelligent Materials and Structures for Aerospace Application
<i>Damodar Ambur</i> | Photo |
| IT03 | Core Avionics - Future Trends and Technologies
<i>Menahem Donner</i> | Photo |
| IT04 | Aircraft Noise: An Overview
<i>K Viswanathan</i> | Photo |
| IT05 | On High Speed Jet Noise and its Suppression
<i>Anjaneyulu Krothapalli</i> | Photo |
| IT06 | Global Technology Strategy
<i>Naveed Hussain</i> | Photo |
| IT07 | Wake Vortex Interaction – Modelling and Control
<i>Stefan Levedag</i> | Photo |
| IT09 | Infrared Signature Studies Of Airborne Targets
<i>S P Mahulikar</i> | Photo |
| IT10 | Composites for Missile and Some Aircraft Applications
<i>G Balasubramanyam</i> | Photo |
| IT11 | Systems and Technologies for Missiles
<i>S K Chaudhri</i> | Photo |
| IT12 | Materials Development for Future Reusable Launch Vehicles
<i>M R Suresh</i> | Photo |

IT13	Development of the DLR TAU-Code for Aerospace Applications <i>Dieter Schwamborn et al.</i>	Photo
IT14	Impact of High-Performance Computing on Computational Aeroelasticity <i>G P Guruswamy</i>	
IT15	Multi-Sensor, Multi-Source Information Fusion- A Panoramic Overview of The Field And Its Applications <i>B V Dasarathy</i>	Photo
IT16	Image Based Experimental Methods for Multi-Diagnostics of Flow Fields in Wind Tunnel and Flight Testing <i>Juergen Kompenhans</i>	Photo
IT17	Special Test Techniques and Facilities Developed in IISc for Research in Hypersonics <i>K P J Reddy</i>	Photo
IT18	Advances in Net Shape Manufacturing <i>Gopal P Sinha, Ashis K Choudhury</i>	Photo
IT19	Eigenstructure Control: A Flight Vehicle Handling Qualities Design Tool <i>Srinath Kumar</i>	Photo
IT20	Advanced Coating Technologies For Aerospace Applications <i>G Sundararajan</i>	Photo
IT21	Rotor Dynamics Of Aircraft Gas Turbine Engines <i>J S Rao</i>	Photo
IT22	Aircraft Fatigue and Fracture <i>Kanchan Biswas</i>	Photo
IT23	Primus Apex – An Intuitive System for the Future <i>Manjith K Madar</i>	Photo
IT24	Loss-Lift Recovery In Compressible Dynamic Stall Control Using A Gurney Flap <i>M S Chandrasekhara</i>	Photo

- IT25 High-Speed Capabilities And Test Techniques In The Large Industrial Wind Tunnels Of ONERA France
Stephen Wolf **Photo**
- IT26 Ballistic Impact Behavior Of Polymer Matrix Composites
N K Naik **Photo**
- IT27 Transition in Gas Turbine Geometries
Paul Durbin **Photo**
- IT28 HPC Through Parallel Processing - Enhanced Capabilities For Simulation And Data Management
S C Purohit **Photo**
- IT29 Advanced Weather Surveillance for Airspace Capacity Enhancement
P R Mahapatra **Photo**
- IT30 Aerodynamic Database Validation and Update from Flight Data
R V Jategaonkar **Photo**

Contributed Papers

Session 1: Turbomachinery

- INCAST-001 Theoretical evaluation of flow through centrifugal compressor
S Ramamurthy, R Rajendra, R S Dileep Kumar **Photo**
- INCAST-002 Reduced Order Modeling of Choked Blade-Rows in Axial Flow Compressors
Sunil K Arolla, Giridhar Jothiprasad, Trevor H Wood, Andrew Breeze-Stringfellow **Photo**
- INCAST-003 Incompressible and compressible turbomachinery flow simulations using AUSM⁺-up Scheme
Vishnu Tatiparthi **Photo**
- INCAST-004 Viscous Flow Analysis in a Convergent-Divergent Nozzle
A A Khan, T R Shembharkar **Photo**
- INCAST-005 Design and Evaluation of a Controlled Diffusion Aerofoil Blade for a LP Compressor Stator
R Prathapanayaka, T R Shembharkar **Photo**

Session 2: Smart structures

- INCAST-006 Evolution based statistical optimization technique to design the smart structural system for large aerospace structures
D Dwarakanathan, S Raja, Shashikala Rajappa, B Balakrishnan **Photo**
- INCAST-007 Vibration Characteristics of Thin-Walled Magneto-Sensitive Elastomer Beams
Kunal Dushyantrao Patil, Kartik Venkatraman **Photo**
- INCAST-008 Identification Of High Control Effectiveness Zones In Clamped-Clamped Tapered Plates
A Joshi, S M Khot **Photo**

INCAST-009 Compact Field Programmable Gate Array (FPGA) Controller for Aircraft/ Aerospace Structures
Shashikala Prakash, D V Venkatasubramanyam, Bharath Krishnan, R Nagendra **Photo**

INCAST-010 Concept of Adaptive wing for future Transport Aircrafts
K T Ganesh **Photo**

Session 3: Avionics/software/hardware-I

INCAST-011 Indigenous Software Development for Civil Aircraft System
J Jayanthi, Manju Nanda, M R Nayak **Photo**

INCAST-013 Validation of Control Parameters for a Re-Configurable Algorithm for Flight Critical Avionics Application
C M Ananda **Photo**

INCAST-014 Application Of Enhanced Fusion Vision System In Avionics
P Karunakaran, M S Mohanan, R M Bhoopathy, T K Sateesh **Photo**

Session 4: Aero-acoustics

INCAST-015 Far-field Acoustic Investigation on Six Lobed Chevron Nozzles
P S Tide, K Srinivasan **Photo**

INCAST-017 Two Dimensional Unsteady Flow over an open Acoustic Cavity
J Vyas, Y V Mudkavi **Photo**

Session 5: Combustion

INCAST-018 Surface Coverage Effects on Catalytic Combustion Kinetics of SYNGAS on Platinum
Saurav Pathak, Corin Segal **Photo**

INCAST-019 Eco-Friendly and Alternate Fuel
Rupali Kaur **Photo**

- INCAST-020 A Novel Ignition Method for Cryogenic Rocket Engine Ignition System Application
Manish, Ramaswamy **Photo**
- INCAST-021 Experimental and Numerical Investigation of Cluster Nozzle Ejector Performance in a High Altitude Test Facility
S Balasubramanian, K Kumaresan, R Manikanda Kumaran, D Raja Manohar, S M Rajarathnam, T Sundararajan **Photo**
- INCAST-022 Experimental Investigations of Ramp-Cavity Based Supersonic Combustor
B V N Charyulu, R Manoj, B Rajinikant, D K Tripathi, A Rolex, Vikrant Satya, V Ramanujachari, S Panneerselvam **Photo**

Session 6: Non destructive testing & monitoring of composite structures

- INCAST-023 A portable digital holography system for non-destructive Testing of aerospace structures
Binu P Thomas, S Annamala Pillai **Photo**
- INCAST-024 Non-Destructive Evaluation of Co-Cured Wing For SARAS
V Srinivasa, Suresh Chand Jangid, M Ramesh Kumar, H V Ramachandra, H N Sudheendra, M R Madhava **Photo**
- INCAST-025 Analysis and Identification of Failure Mechanism in Composite rings using Acoustic Emission Monitoring
G Vaidyanathan, V Arumugam, A Joseph Stanley **Photo**
- INCAST-026 Damping Study Of Hybrid Nano Composites by Low Velocity Impact
R Velmurugan, P Jeyaprakas, G Balaganesan **Photo**

Session 7: Flight control - I

- INCAST-027 Adaptive Neuro-Fuzzy Based Control Surface Fault Detection and Reconfiguration
Shobha R Savanur, Sudesh K Kashyap, J R Raol **Photo**

INCAST-029 Co-Operative Control Of Reaction Control System And Thrust Vector Control During Homing Phase
A A Bhagat, V S Rao, C S Adishesha, N V Kadam, G Swathi **Photo**

INCAST-030 Design of Self-Dither Controller for an Electro-Pneumatic Fin Actuator of a Missile
Murali Mohan Gade, K K Mangrulkar, A B Mote **Photo**

Session 8: Advanced materials processing

INCAST-032 An Emerging, Energy-Efficient Cure Process for Rapid Composite Manufacture
Sandhya Rao, R M V G K Rao **Photo**

INCAST-033 3D Performing Technologies for Composite Applications
Naveen V Padaki, R Alagirusamy, B S Sugun **Photo**

Session 9: Heat transfer

INCAST-035 Performance Characteristics of a Gas Cooler in a High Altitude Test Facility
R Manikanda Kumaran, S Bala Subramanian, K Kumaresan, D Raja Manohar, S M Rajarathnam, T Sundararajan **Photo**

INCAST-036 Cooling Effectiveness Measurements of Film Cooling Configuration on the Suction and Pressure Surface of Nozzle Guide Vane
M Ravitej, V Kesavan, V Krishnamoorthy, J Felix, J Deepak **Photo**

INCAST-037 Effect of Recess on the Spray Characteristics of a Gas-Liquid Coaxial Swirl Injector
T John Tharakan, N K Gupta **Photo**

INCAST-038 Estimation Of Thermal Protection System (TPS) Thermal Properties from Simulated Temperatures
Rony C Varghese, Santosh Kumar Dehury, B Sundar, Priyankar Bandyopadhyay **Photo**

INCAST-039 Optimization of Recuperater Fin Geometry for Micro Gas Turbine
S Ramamurthy, Bharat Makwana **Photo**

Session 10: Design & manufacture of composite structure

INCAST-040 Isogrid Design Aspects for Cylindrical Shell
Sanjay Anand Khalane, Jagadish Babu, Ashish Kumar, R.K. Gupta **Photo**

INCAST-041 Cost-Effective Approach for the Manufacture of Fibre Metal Laminates (FML)
B S Sugun, R M V G K Rao, D V Venkatasubramaniam **Photo**

INCAST-042 Development of a Metallised Carbon Fibre Reinforced Plastics (CFRP) Antenna Reflector for Satellite Communication
A C Mathur, B S Munjal **Photo**

INCAST-043 Development of a Co-cured Composite Torque Shaft for Rudder of High Speed Aircraft
R S Rawat, D Karuppannan, B L Dharmappa M Subba Rao **Photo**

INCAST-044 Design of Spar Splice joint in Composite Wing Structures
Polagangu James, Gaddikeri Kotresh, D Murali Krishna, B Ramanaiah, Byji Varughese, M Subba Rao **Photo**

Session 11: Trajectory tracking

INCAST-045 Interacting Multiple Model Seeker Filter for Tracking Evasive Targets
Shanthakumar N, Sudesh K Kashyap, V P S Naidu, Girija G **Photo**

INCAST-047 Trajectory Tracking Controller: A Novel Approach for Autonomous Flight of high Speed Unmanned Aerial Target
M Suresh, S Balasubramanian, C D Deori, K V Srinivasan **Photo**

INCAST-048 Genetic Algorithm Guided Gradient Search For Launch Vehicle Trajectory Optimization.
C Geethaikrishnan, V Adimurthy, P M Mujumdar, K Sudhakar **Photo**

Session 12: Materials for space applications

INCAST-052 Development of high strength bulk ultrafine-grained magnesium alloy AZ31 by multi-pass warm rolling
S V S Narayana Murty, M C Mittal, P P Sinha **Photo**

Session 13: Aerospace CFD

INCAST-053 On the Development of a DSMC-CFD Hybrid Code
Saurav Pathak, Sourabh Jain **Photo**

INCAST-054 Numerical Simulations of Low Reynolds Number Flow Around Micro Air Vehicle
Deepak J Patil, Irshad Khan, Basant Kumar Gupta **Photo**

INCAST-056 RANS Computations for Flow Through a Variable Mach Number Flexible Nozzle at Mach 4
Vimala Dutta, P K Dutta, Sharanappa V Sajjan **Photo**

Session 14: Aircraft flutter and gust response analysis

INCAST-057 Dynamic and Aeroelastic Analysis of a Transport Aircraft
N G Vijaya Vittala, A C Pankaj, R Swarnalatha **Photo**

INCAST-058 Finite Element Studies on Supersonic Panel Flutter under High Thermal Environment With Arbitrary Flow Direction
Somenath Mukherjee, M Manjuprasad, Deepa Sakravarthini, R Avinash **Photo**

INCAST-059 Identification of Flutter onset Speed of Combat Aircraft
U P V Sudha, Kartik Venkatraman, Girish Deodhare **Photo**

INCAST-060 Aeroelastic Random Gust Response Analysis of Aircraft Structures in Time Domain Using Simulations
M Manjuprasad **Photo**

Session 15: Simulation

- INCAST-062 Combined Linear-Nonlinear Modeling Strategy For Level-D Helicopter Simulation
D Spira, P Martelli-Garon **Photo**
- INCAST-063 Situation Assessment in Air-Combat: A Fuzzy-Bayesian Hybrid Approach
P Narayana Rao, Sudesh K Kashyap, G Girija **Photo**
- INCAST-064 A Comparative Analysis of Real-Time Operating Systems on a Mini Aerial Vehicle Hardware-in-Loop-Simulation
Tarun Uppal, Hemendra Arya **Photo**
- INCAST-065 Real-Time Simulator (RTS) for Handling Qualities (HQ) Evaluation of a Combat Aircraft
V S Chandrashekar, B P Shashidhara, V Hemanth Kumar, G Mahesh **Photo**

Session 16: Advanced experimental techniques

- INCAST-066 Experimental Investigation of Heatflux And Pressure on Cone Flare Model at Hypersonic Speed
M Divakaran, Job Kurian **Photo**
- INCAST-067 Experimental study of Large Angle Blunt Cone with Telescopic Aerospike Flying at Hypersonic Mach Numbers
S Srinath, S Saravanan, K P J Reddy **Photo**
- INCAST-068 Experimental Investigation of Magnetic Field Interaction with High Enthalpy Flows in Free Piston Driven Hypersonic Shock Tunnel
C Nirupama, S Saravanan, K P J Reddy **Photo**
- INCAST-069 Effect Of Annular Rib Position on Suddenly Expanded Supersonic Flow
K Raja Guru Nathan, S Elangovan K Vijayaraja, E Rathakrishnan **Photo**

Session 17: High speed flows

- INCAST-070 Characteristics of a Supersonic Air-intake with Bleed
S Das, J K Prasad **Photo**
- INCAST-071 Implementation of Real Gas Effects in Hypersonic Flows
Saurav Pathak, Sourabh Jain **Photo**
- INCAST-072 Dynamics and the Trajectory of Rockets with a Wrap around Fin (WAF) Configuration using CFD
Sanjay Kumar, Sachin Pande, G Bhimashankar, Ankur Singhal **Photo**
- INCAST-074 An Experimental and Numerical Investigation of Supersonic Contour Nozzle Flow Separation
M Venkata Raman, C Senthil Kumar, S Elangovan **Photo**

Session 18: Advanced analysis of composite structures

- INCAST-075 Buckling Behaviour of Laminated Sandwich Plates With Soft Core Based on Improved Higher-Order Zig-Zag Theory
M K Pandit, B N Singh, A H Sheikh **Photo**
- INCAST-076 Finite Element Analysis of Segment Joint Sealing Efficiency used in Solid Rocket Boosters
V Sivakumar, R Palaninathan **Photo**
- INCAST-077 Bond-Thickness Effects in Mode I Brittle Fracture of Adhesive Joints
Ashwath Nayaka, Anuradha Banerjee **Photo**
- INCAST-078 Layer-by-Layer FE Analysis of Nonlinear Smart Plates
V L Sateesh, C S Upadhyay, C Venkatesan **Photo**
- INCAST-079 Analytical and Finite Element Modelling of Buckling and Post Buckling of Delaminated Orthotropic Plates
Lalitha Chattopadhyay, S Sridhara Murthy, Mahesh H **Photo**

Session 19: Flight control - II

- INCAST-080 Comparison of LQR, Feedback Linearization and Back Stepping Based Control Laws for Suppression of Wing Rock Motion
Gopal Jee, Sam K Zachariah, M V Dhekane, B B Das **Photo**
- INCAST-081 Robustness Study of a Dynamic Inversion Control Law for a High Performance Aircraft
Abha Tripathi, Radhakant Padhi **Photo**
- INCAST-082 Automatic Landing of unmanned aerial vehicles using dynamic inversion
Shashiprakash Singh, Radhakant Padhi **Photo**
- INCAST-083 Compensation on deployment of airbrakes and lessons learned from LCA flights
R Guruganesh, P V S Murthy, P Lakshmi, Vijay V Patel, G S Deodhare, Shyam Shetty **Photo**

Session 20: High temperature materials and surface technologies

- INCAST-084 High Temperature Erosion-Oxidation Behavior of Thermal Sprayed Nickel-Chromium and Chromium Carbide Coatings
C T Kuniوشي, O V Correa, L V Ramanathan **Photo**
- INCAST-085 Thermal Protection Materials for Re-Usable Launch Vehicles
M R Ajith, R Gopi, V Chandrasekaran, M C Mittal, P P Sinha **Photo**
- INCAST-086 High Temperature Erosion-Oxidation Behavior of Steels
S M C Fernandes, O V Correa, L V Ramanathan **Photo**
- INCAST-86A Rare Earth Oxide Gel Coatings for Improved H T Oxidation Resistance of Iron-Chromium Alloys
S M C Fernandes, L V Ramanathan **Photo**
- INCAST-087 Centrifugal Thermit Process-An Overview
A Arul Paligan, V Shubha, T G Ramesh **Photo**

Session 21: Mechanical aspects

- INCAST-089 Studies on the Residual Stresses due to Machining on Super alloy INCONEL-718
K Srinivasulu, B K Subhash **Photo**
- INCAST-090 Experimental Investigations on the Influence of Defect Size on Ball Bearing Vibration Using Wavelet Transform
M S Patil, Jose Mathew, P K Rajendra Kumar **Photo**
- INCAST-092 Experimental Methods for Identification of Aero Gas Turbine Engine Dynamics For Controller Design
Karthikeyan R, Ketan Daniel Tigga, A N Vishwanatha Rao, S Kathiresan **Photo**

Session 22: In-flight vibration measurements for test tailoring, notch fatigue and failure of adhesive joints

- INCAST-094 In-Flight Vibration and Temperature Measurements on a Typical Fighter Aircraft for Test Tailoring
N Chandra, C M Ananda, M V Shivaprasad, S R Rajan, Saraswathi Krishna, S Shivaprasad, D V Venkatasubramanyam, S Viswanath **Photo**
- INCAST-096 Failure Prediction of Adhesively Bonded Lap Joints Between Metal and Composite Adherends
P K Sahoo, C M Manjunatha, B Dattaguru **Photo**

Session 23: Avionics/software/hardware - II

- INCAST-098 Flight Data Acquisition And Analysis For Twin Turboprop SARAS Aircraft
Vineet Kumar, Gopal Krishna Panda, S R Rajan, Amit Kumar Khatri, S Sahoo **Photo**
- INCAST-099 Avionics Flight Testing of Light Transport Aircraft- Modern Trends and Challenges
R Srinivasa Rao, C M Ananda, K G Venkatanarayana, M Preme, M R Nayak **Photo**

INCAST-100 Perspectives on the use of Model Based Development Approach For Safety Critical Avionics Software Development
Rajanikanth N Kashi, Mohandas Amarnathan **Photo**

INCAST-101 Configurable flight Data Analysis for trends and statistics analysis of avionics systems - an embedded perspective of an efficient flight Data Analysis
C M Ananda, Rakesh Kumar **Photo**

Session 24: Unsteady flows

INCAST-103 Pressure Oscillations from Wall mounted cavities in supersonic flows
N S Vikramaditya, Job Kurian **Photo**

INCAST-104 Aeroelastic Modeling and Analysis of a Helicopter Rotor Blade Including Dynamic Stall and Wake Effects
V Laxman, C Venkatesan **Photo**

INCAST-105 Prediction of total pressure characteristics in the settling chamber of a supersonic blowdown wind tunnel
S R Bhoi, G K Suryanarayana **Photo**

Session 25: Facilities/measurements/energy system

INCAST-107 Design Process of an Aircraft Engine as a Complex System Architecture
A S Shaja, K Sudhakar **Photo**

INCAST-109 Design and Development of an Indigenous 55 HP Wankel Engine
K Manickavasagam Pillai, A J Steve Mithran, V K William Grips, K Satish Kumar, Umesh Kumar Sinha, M N Varadarajan, J J Issac, Y V S Murthy **Photo**

Session 26: Aircraft crash analysis & simulation of FGM structures

INCAST-112 Complete Contacts Involving Flat Punch Under Bulk Stress Dominated Loading
N Hamza, H Murthy **Photo**

INCAST-113 Finite Element Analysis for Thermal Buckling Behaviour in Functionally Graded Plates With Cut-Outs
D Saji, Byji Varughese, S C Pradhan **Photo**

Session 27: Flight mechanics/dynamics

INCAST-115 Estimation of Aircraft Fuel consumption for a mission profile using Neural Networks
Sheethal R M, Lathasreep **Photo**

INCAST-116 Identification of Stability SARAS Flight Stability and control characteristics
Jatinder Singh, Vineet Kumar, Basappa, Gopal Krishna Panda **Photo**

INCAST-117 Structural Stability Margin Criteria for Accelerated Clearance of Developmental Flights
Niranjan K Sura, Vijay V Patel, Girish Deodhare, Shyam Chetty **Photo**

Session 28: Special CFD problems

INCAST-119 Numerical Simulations of Staged Transverse Injection into Mach 2 Flow behind a Backward-Facing Step
A T Sriram, Debasis Chakraborty **Photo**

INCAST-121 A Reynolds Number Independent Relation in Constant Pressure Turbulent Boundary Layers
A C Mandal, J Dey **Photo**

INCAST-122 Numerical Studies on the Effect of Trenching on the Performance of a Transonic Axial Flow Compressor
M D Siddaraja, Q H Nagpurwala, M D Deshpande, S R Shankapal **Photo**

INCAST-123 Aeroelastic Study of Wind Turbine Blade
Rajendrakumar A Savanur, Vidyadhar Y Mudkavi **Photo**

Session 29: Parallel computing

INCAST-124 A Study on Interconnectivity for Flosolver Teraflop Parallel Machine
G Sundara Rao, T Venkatesh **Photo**

- INCAST-125 Analysis of Monsoon Rainfall and Wind Simulations
on Flosolver Using The Varsha 1.2 GCM
M Dhanya, B Anjali, T N Venkatesh **Photo**
- INCAST-126 Modeling of Un Segmented Cloud Point Data
Sanjay Kumar **Photo**
- INCAST-127 Three Layer Wind Vectors for Weather Forecast
Presentation Using Open GL
C Srinivasa, P B Radhika **Photo**
- INCAST-128 Assessment of SIMD Programming on Graphics Card
*S Nagendran, Mohammad Ashrafulla K, Jagadevi
Bakka* **Photo**
- INCAST-129 Qualitative Analysis of Varsha Forecasts using Various
Inputs - A Study at Flosolver
G Mrudula, K Bhagyalakshmi **Photo**

Session 30: Structural dynamics & fluid-structure interaction

- INCAST-133 Frequency and Modal Pressure Computation For Fluid
Structure Interaction Analysis
*Mohammed Ishaquddin, R Marimuthu,
S Balakrishnan, B Sivasubramonian, K L Handoo* **Photo**

Session 31: Electromagnetics

- INCAST-137 A Novel DF-GSC-Based Algorithm for Active
Cancellation of Hostile Probing Sources
Hema Singh, R M Jha **Photo**
- INCAST-138 A Novel Wire Grid Embedded C-Sandwich RADOME
Structure For Broadband Airborne Applications
R U Nair, R M Jha **Photo**
- INCAST-139 Air Substrate based shorted Rectangular Patch antenna
for Air Borne Vehicles
M Jayakumar, R Ramanathan, B Sabarish Narayanan **Photo**

Photographs

- **Registration**
- **Inaugural Session**
- **Plenary Session**
- **Contributed Speakers**
- **Banquet**
- **Invited Speakers**
- **Cultural Eve**
- **Others Contributed Speakers**
- **Concluding Session**