

NAL Golden Jubilee
'International Conference on Civil Aeronautics'
(INCCA 2009)
25 – 27 May 2009, Bangalore, India

THEME/ TRACK 1: AIRCRAFT DESIGN

Tentative Sessions 1-4:

Topics/ Specializations Proposed:

- Conceptual Design
- Aerodynamics & Flight Mechanics
- Aircraft Performance
- Design Optimization
- Power Plant integration
- Ergonomics
- Multi-Disciplinary Analysis & Optimization (MDAO)
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THEME/ TRACK 2: MATERIALS AND STRUCTURES

Tentative Sessions 5-8:

Topics/ Specializations Proposed:

- Physical, Chemical & Mechanical Characterization
- Advances in Materials & nano-technologies etc
- Metal and Composite Structures
- Multifunctional and Smart Structures
- Analysis, Testing & Optimization of Airframes
- Ageing of Aircraft Structures
- Structural Health Monitoring (SHM)
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THEME/ TRACK 3: MANUFACTURING

Tentative Sessions 9 & 10:

Topics/ Specializations Proposed:

- Manufacturing Technologies
- Virtual Manufacturing (CAD/CAM/CAE)
- Concurrent Engineering
- Integrated Production & Process Engineering
- Low Cost Manufacturing of Primary/ Composite Aircraft Structures
- Product Life Cycle Management
- Rapid Prototyping
- Concept of Group Technology (Commonality) in Manufacturing of Components
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THEME/ TRACK 4: SYSTEMS

Tentative Sessions 11-14:

Topics/ Specializations Proposed:

- Aircraft Systems & Equipment
- Avionics/Electrical/Hydraulic and Mission Systems
- Flight Mechanical and Control Systems
- Aircraft System Integration
- Propulsion Systems
- System optimization in Air Transportation
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THEME/ TRACK 5: FLIGHT TESTING

Tentative Sessions 15-16:

Topics/ Specializations Proposed:

- Thrust & Drag Prediction/ Flight Test Techniques
- Parametric Estimation Techniques
- Instrumentation Techniques
- Vibration & Flutter Testing
- Navigation and Communication
- Flight Test Data Reduction & Analysis
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THEME/ TRACK 6: CERTIFICATION

Tentative Session 17:

Topics/ Specializations Proposed:

- Civil Transport Aircraft Certification
- Regulatory Issues
- Equipment Certification
- Certification of Composite Structures
- Simulation Techniques Towards Certification
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THEME/ TRACK 7: AIRLINE / AIRPORT OPERATIONS - ECONOMICS - PERFORMANCE, AIR TRANSPORT MODELING

Tentative Sessions 18-21:

Topics/ Specializations Proposed:

- Simulation and Training
- Noise and Environment
- Aviation Safety and Security issues
- Policy, Regulations & Connectivity to Remote Regions
- Regional Airline Operations
- Demand Forecasting and Modelling
- Operations Research in Air Transport: Modelling and Applications/ Network Analysis and Optimization
- Multi-Modal Transport Systems
- Air Traffic/ Airspace Management (ATM/ ATC)
- Simulation & Optimization Methods for Air Traffic Management
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THEME/ TRACK 8: MAINTENANCE, REPAIR AND OVERHAUL (MRO)

Tentative Session 22:

Topics/ Specializations Proposed:

- Aircraft Operation and Maintenance
- On-line/Off-line Maintenance & Data Generation
- Novel Maintenance Techniques of Airframes & Systems
- MRO Business Models
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THEME/ TRACK 9: FUTURE SCENARIO FOR CIVIL AERONAUTICS AND AVIATION INDUSTRY

Tentative Session 23:

Topics/ Specializations Proposed:

- Value and Market Analysis
- Future Customers and Markets
- Optimum Aircraft Size for Serving Regional Sectors
- Air Transportation System Modernization
- Cargo Transportation
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THEME/ TRACK 10: FUTURE CONCEPTS IN AIRCRAFT DESIGN

Tentative Session 24:

Topics/ Specializations Proposed:

- Systems Engineering & Optimization
- Next Generation Propulsion systems/ Alternative Fuels
- Next Generation Transport Aircraft
- Economies in Air Transportation
- Turbo-Prop Regional Transport Aircraft
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