2015 SAE AEROTECH CONGRESS & EXHIBITION

CALL FOR PAPERS

September 22 – 24, 2015 • Washington State Convention and Trade Center •Seattle, Washington, USA

The SAE AeroTech Congress and Exhibition provides a forum for the global aerospace community to meet and discuss current and future challenges, opportunities, and requirements of next-generation R&D, products, and systems. Technical sessions, panel discussions, and keynote presentations make up a program that provides value to industry and government engineers, scientists, designers, program managers, operators, educators, and students. The technical program will cover a broad spectrum of topics including avionics, environment, flight sciences, operations, manufacturing, materials, structures, propulsion, safety, and systems. AeroTech also provides a venue for engineers participating on SAE committees and advisory bodies to meet and discuss industry standardization efforts and best practices. The event also provides opportunities for networking and personal discussion with other industry experts through networking breaks, exhibits, awards luncheon, receptions, and banquet.

AEROSPACE OPERATIONS
- Systems Engineering & Design
- Aerospace Modeling & Simulation
- Airspace Systems Operations

AUTO FASTENING / ASSEMBLY & TOOLING
- Automated Drilling and Fastening Systems
- AdvancedPortableSemi-automatedDrillingandFastening Systems
- AssemblyMethodologies&AdvancedAssemblyFixturesand Tooling
- Composites Assembly and Fastening
- Composites/Heavy Drilling and Assembly
- LargeComponentAssembly,Sub-Assembly,MajorSectionJoin and Final Assembly
- Robotic Applications in Drilling, fastening and Assembly
- AdvancementsInDrillBit,TemporaryandPermanentFastening Technology

AVIATION CYBER-PHYSICAL SECURITY
- Threats and Risk Identification, Analysis, Mitigation, and Management
- AttackDetection,IncidentResponse,andSystemRecovery Solutions
- SecurityStandards/CertificationandStakeholderCollaboration Issues
- CommonCyber-physicalSecurityIssuesforTransportation

AVIONICS
- Advanced System Architectures and IMA
- Software Platforms & Middleware
- Airborne Electronics Hardware Certification and DO-254
- DO-178CandRelatedSupplementsImpactonCertification
- Aircraft Networks
- Model-based Avionics System, Software & Electronic Engineering
- COTS and Obsolescence Management
- Defense and Space Avionics
- Display Technology and Visualization
- Flight Management Systems, Navigation & Guidance
- CabinSystems,In-FlightEntertainmentandConnectivity
- System Testing, Integration and Simulation
- Avionics and Next-Generation Air Traffic Management

BUSINESS/ECONOMICS
- Aircraft for 2030 and Beyond
- Aerospace Business Models
- Future Propulsion Technology
- Government Programs
- Market Forecasts
- New Global Markets

ENVIRONMENT
- Aircraft Cabin Environment
- Aircraft Design for Environment
- Alternative Fuels and Energies
- Emissions
- Noise
- Sustainable Materials and Processes

FLIGHT SCIENCES
- Aircraft Design
- Flight Dynamics
- Aircraft Icing
- Aircraft Projects
- Computational Fluid Dynamics (CFD)
- General Aerodynamics
- Hybrid Flight Vehicle and Flying Cars
- LTA /Hybrid Airships

INTEGRATED VEHICLE HEALTH MANAGEMENT
- Data Fusion, Mining and Processing
- Health Management – Propulsion
- Health Management - Subsystems
- IVHM Business Case
- IVHM for Power and Battery Systems
- IVHM Standardization
- IVHM System Design and Benchmarking
- Physics of Failure Modeling
- Prognostics and Diagnostics
- Health Monitoring - Structures
- IVHM Validation, Verification and Metrics
- Vehicle Level Health Management

MANUFACTURING/MATERIALS/ STRUCTURES
- Advanced Low Cost Aircraft Structures
- Advanced Robotics Applications
- Aircraft Coatings, Polymers and Sealant Technologies
- Automated Composites Manufacturing
- Composites Fabrications and Joining
- Composites for Aircraft Interiors
- Direct Digital Manufacturing
- Future Challenges and Opportunities in Composites Simulation
- Lean Manufacturing, Six Sigma & Supply Chain
- Metals, Fabrication and Processing
- Metrology Automated Systems
- Out-of-Autoclave Processing
- Product Design and Manufacturing Integration
- RFID Applications in Aerospace
- Trimming, Drilling & Assembly of Composites Structures

MAINTENANCE, REPAIR AND OVERHAUL
- MRO Planning, Options and Programs Maintenance Management

POWER AND THERMAL SYSTEMS
- Power Systems for Aerospace Applications
- SystemsIntegration:OptimizedAerospaceVehicleEnergyUse
- Thermal Management for Aerospace Applications

PROPULSION
- Aircraft Integration
- Engine and Controls System
- Certification
- Powerplant Systems & Functionalities
- Propulsion and Integrated Controls
- Turbo-Machinery and Combustors

SAFETY
- Flight Operations Safety
- Ground Support Systems Safety
- Industry Safety Initiatives
- Infrastructure Safety
- Maintenance Safety
- Manned Space Flight Safety
- Reliability and Maintainability
- Safety Education
- System Architecture of Safety Critical Systems
- Systems Safety
- Unmanned Aerial Vehicle Safety

SYSTEMS ENGINEERING
- Systems Engineering

SUSTAINABILITY
- Vehicle Electrification Strategies for Sustainability
- Advances in Alternative Energy Sources for Sustainable Development in the Aerospace Sector
- SustainableandEnergyEfficientSystemsinManufacturingand End-of-Life

UNMANNED AERIAL SYSTEMS
- Aerodynamics
- Avionics,USA'sHuman-MachineInterfaceandSystemsIntegration
- Cooperative Systems
- Flight Sciences
- Guidance, Navigation and Control
- Materials, Structures and
- Manufacturing
- Micro Air Vehicles
- Propulsion
- Remote Sensing & Payloads
- Safety, Certification and Standards
- System Integration

VEHICLE SYSTEM
- Flight Controls System Technology
- Flight Controls System Architecture
- Flight Controls Augmentation and Control Laws

Abstracts for written papers and/or oral-only presentations should be submitted online at: www.sae.org/aerotech by: .....February 18, 2015

Review-Ready manuscript due date: .....April 1, 2015

Final manuscript due date: .....July 15, 2015

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