EVENT GUIDE

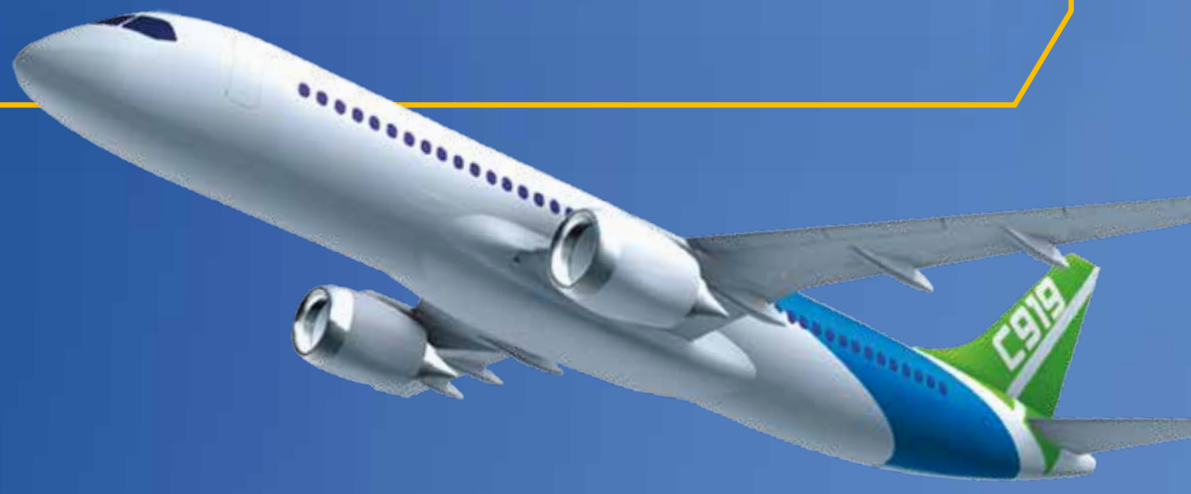
Includes Final Program and Exhibit Directory

SAE 2015 AVIATION TECHNOLOGY FORUM

June 9 - 10, 2015

Renaissance Shanghai Pudong Hotel,
Shanghai, China

www.sae.org/events/atf



SAE INTERNATIONAL

SAE 2015 AEROTECH CONGRESS & EXHIBITION

September 22-24, 2015
Washington State Convention Center
Seattle, Washington, USA

sae.org/aerotech

Congress Delegation Announcement

SAE Shanghai Office will organize a delegation to attend SAE 2015 Aerotech Congress & Exhibition.

More Details, Please Contact:

April Wang
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April.Wang@sae.org

Deadline: August 7, 2015

Executive Leadership provided by

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WHATS INSIDE

SAE 2015 Aviation Technology Forum

Emergency Procedures During the SAE 2015 Aviation Technology Forum

During the SAE 2015 Aviation Technology Forum attendees are to follow the established emergency guidelines of the facility where the emergency occurs. **Based on the location of the incident, report emergencies to the nearest venue representative and/or security personnel if available, or report to the SAE operations office located in the Registration Center.**

Should a catastrophic event occur, attendees should follow the safety and security instructions issued by the facility at the time of the event. This includes listening for instructions provided through the public address system and following posted evacuation routes if required.

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HOSTS INTRODUCTION

The Commercial Aircraft Corporation of China, Ltd. (COMAC) is a state-owned company, which is formed with the approval of the State Council and jointly invested by the State-owned Assets Supervision and Administration Commission (SASAC) of the State Council, Shanghai Guosheng (Group) Co., Ltd., Aviation Industry Corporation of China (AVIC), China Aluminum Corporation (CHINALCO), Baosteel Group, and Sinochem Group.

COMAC functions as the main vehicle in implementing large passenger aircraft programs in China. It is also mandated with the overall planning of developing trunk liner and regional jet programs and realizing the industrialization of civil aircraft in China. COMAC is engaged in the research, manufacture and flight tests of civil aircraft and related businesses such as marketing, servicing, leasing and operations of civil aircraft. The company has six member organizations: COMAC Commercial Aircraft Co., Ltd. (ACAC), Shanghai Aircraft Design and Research Institute (SADRI), Shanghai Aircraft Manufacturing Co., Ltd. (SAMC), Shanghai Aircraft Customer Service Co., Ltd., Beijing Civil Aircraft Technology Research Center (BCATRC), and Shanghai Aviation Industrial (Group) Co., Ltd. (SAIGC).

SAE International is a global association of more than 145,000 engineers and related technical experts in the aerospace, automotive and commercial-vehicle industries. SAE International's core competencies are life-long learning and voluntary consensus standards development.

SAE International has been facilitating the development of global standards for the aerospace industry since its introduction of the first interchangeable spark plug standard. And while known for producing the most mobility engineering standards, the fueling of a century worth of aerospace industry advancement has helped earn SAE the position of being the world's largest, most respected aerospace SDO.

Global standards are essential for aircraft certification airworthiness and interoperability. As the leading aerospace SDO, SAE International works with industry, government, and regulatory agencies throughout the world to create an extensive family of international standards that form the technical basis of regulations and government requirements.

SAE's global standard development role can be seen in its technical committee rosters, which include 7,000 experts from 56 countries—with European committee participation instances alone totaling 3,678. Its 250 committees—representing industry (airframers, suppliers, operators, MROs), regulatory authorities, military agencies, researchers, and consultants—serve the full spectrum of aerospace businesses in both the commercial and military sectors thereby meeting the engineering, advanced technology, safety, regulatory, and defense needs of a world market.

Organizers:

Ocean Communications Limited

Media:

CSEI 中国战略新兴产业

EVENT OVERVIEW

TIME	JUNE 9, 2015 TUESDAY	JUNE 10, 2015 WEDNESDAY
9:00	**Forum Opening & Welcome**	
9:15	**KEYNOTE SPEECHES:** Forecasting the China Aerospace Market	**TECHNICAL SESSION:** Environmental Factors: Noise, Vibration, and Emissions
9:45		
10:15		
10:45	Tea Break	Tea Break
11:15	**TECHNICAL SESSION:** Challenges / Opportunities in Aircraft Development	**TECHNICAL SESSION:** Electronics Design and Certification
11:45		
12:15	Lunch	Lunch
12:45		
13:15	**TECHNICAL SESSION:** Lessons Learned from ARJ21 to C919 / Wide-Body Aircraft Project	**TECHNICAL SESSION:** Electronics Design and Certification (continued)
13:45		
14:15		
14:45	Tea Break	Tea Break
15:15	**TECHNICAL SESSION:** Aerospace Materials – Alloys & Composites	**Panel Discussion:** Complex Systems Integration
15:45		
16:15		
16:45	**PANEL:** TSO Status Harmonization of Standards Between US & China	
17:15		
17:45		
18:15		

The purpose of this session is to provide an open exchange of ideas. Remarks made by participants or members of the audience cannot be quoted or attributed to the individual or their company unless express permission has been granted by the individual and their company. Any record of remarks, discussion, or photographs may not be used unless express permission has been granted by the individual and their company.

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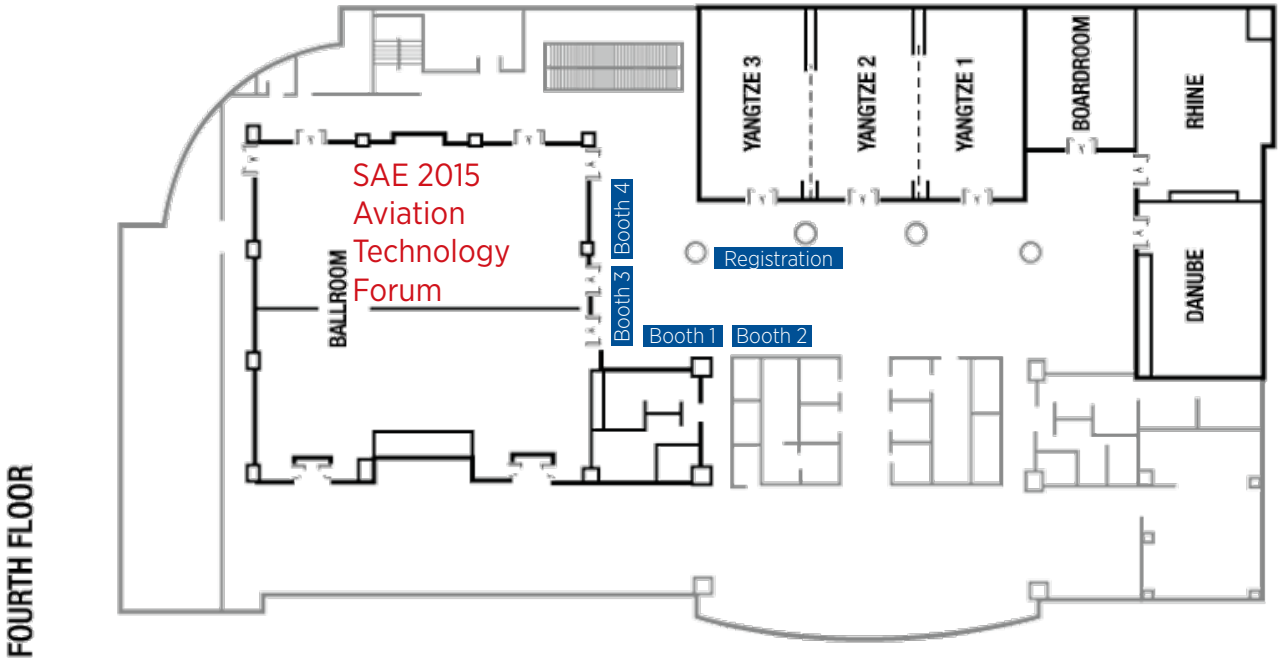
Registration

June 8	Monday	12:45 - 17:00	Hotel Lobby, 1st Floor
June 9	Tuesday	08:00 - 18:00	Ballroom Foyer, 4th Floor
June 10	Wednesday	08:00 - 13:00	Ballroom Foyer, 4th Floor

FLOOR PLAN



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TUESDAY
JUNE 9

FORUM OPENING AND WELCOME

09:00

Alan AO, *Manager of Business & Engagement at SAE International*
Guanghui WU, *Vice President at COMAC*

KEYNOTES: FORECASTING THE CHINA AEROSPACE MARKET

09:15

China Aviation Market Outlook
Yang YANG, *Director of Marketing Research Center at COMAC*

10:00

Aircrafts and Helicopters Market Outlook
David Prevor, *Head of Market Research and Forecast at Airbus Helicopters*

CHALLENGES / OPPORTUNITIES IN AIRCRAFT DEVELOPMENT

11:15

Aircraft More Electric Architectures: Operating Cost Drivers and Key Technologies
Henry Claeys, *Senior Technology Fellow at Honeywell*

11:45

Strategy for COMAC MEA Development
Yuanli KANG (Kathy), *Director of More Electric System Department at COMAC BASTRI*

LESSONS LEARNED FROM ARJ21 TO C919 / WIDE-BODY AIRCRAFT PROJECT

13:15

Positive Interaction Between Aircraft Certification and Evolution of Airworthiness Regulations
Yao LU, *Director of Aircraft Airworthiness Institute, Center of Aviation Safety Technology at CAAC*

13:45

ARJ21-700 Type Certification Summary
Yong CHEN, *General Designer of ARJ-21 at COMAC*

14:15

System Integration and Certification Considerations for IMA Systems
Qin ZHU (Amy), *Systems Certification & Airworthiness Engineer at Aviage Systems*

AEROSPACE MATERIALS – ALLOYS & COMPOSITES

15:15

Advanced Composite Structures Research and Development - An Australian Perspective
Murray L. Scott, *Managing Director at Advanced Composite Structures Australia Pty Ltd.*

15:45

Additive Manufacturing (3D printing) and Innovative Design
Weidong HUANG, *Director, The State Key Laboratory of Solidification Processing, Northwestern Polytechnical University, China*

16:15

Quality Assurance of Major Aerospace Components through Automated Process Capability Analysis
Liang MA (Martin), *Executive Director at ETA-China (Engineering Technology Associates (China), Inc)*

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PANEL: TSO STATUS HARMONIZATION OF STANDARDS BETWEEN US & CHINA

16:45

Moderator: **Eric Peterson,** Vice-chairman of SAE International S-18 Committee, Vice-President Systems and Safety for Electron International, Inc.

Panelists: **Yong CHEN,** General Designer of ARJ-21 at COMAC
Yao LU, Director of Aircraft Airworthiness Institute at CAAC
Vahid Navidi, Chief Engineer's Office Leader at Aviage Systems
Chunjing WANG (Jenny), Certification Manager at Honeywell
Alex Wilson, Director Business Development at Wind River
Yunming WANG, General Manager at Shanghai Aviation Technologies Co., Ltd.

ENVIRONMENTAL FACTORS: NOISE, VIBRATION, AND EMISSIONS

WEDNESDAY
JUNE 10

09:00

LEAP-1C Program

John LIU, *LEAP-1C Program Director at GE Aviation/CFM International*

09:45

Aircraft Noise & Emission: Meeting all expectations

Cyrille Breard, *C919 Noise & Emission Manager at COMAC*

10:15

Industry Internet and Big Data Analytics

Patrick WANG, *Executive Engineering Leader at GE Aviation China*

ELECTRONICS DESIGN AND CERTIFICATION

11:00

Update on ARINC 653 and EUROCAE ED-124 / RTCA DO-297 Avionics Standards

Alex Wilson, *Director, Aerospace and Defense at Wind River*

11:30

Maximizing Tools Interoperability to Achieve a Continuous Validation Process of Complex Systems. A Concrete Use Case for Avionics Platforms.

Nicolas Favarcq, *Director Marketing & Innovation at Spherea Test & Services*

12:00

Development and Certification of Airborne Systems

Yunming WANG, *General Manager at Shanghai Aviation Technologies Co., Ltd.*

13:30

Cross-Industry Considerations on Advanced Integrated Systems and IMA: Impact on Aerospace Industry

Mirko Jakoljevik, *Solution Architect - Integrated Critical Systems at TTTech Computertechnik AG*

14:00

Continuous Engineering - An Advanced Engineering & Lifecycle Platform for Connected Complex Systems.

Eran Gery, *Distinguished Engineer at IBM*

PANEL DISCUSSION: COMPLEX SYSTEMS INTEGRATION

14:45

Moderator: **Susan YING,** Chief Integration Officer at COMAC

Panelists: **Eric Peterson,** Vice-chairman of SAE International S-18 Committee, Vice-President Systems and Safety for Electron International, Inc.
John HSU, AIAA Fellow, ESEP (INCOSE)
Susan Martin, Senior Fellow at Center for Advanced Defense Studies (C4ADS)
Henry Claeys, Senior Technology Fellow at Honeywell
Eran Gery, Distinguished Engineer at IBM
Neil Partridge, Consultant
Johan Andreasson, CEO at Modelon Asia
Qing LI, Strategy Director at Siemens PLM STS

Guanghui WU
Vice President
COMAC

WELCOME SPEECH

JUNE 9

Mr. Wu Guanghui, born in February 1960 in Wuhan of Hubei Province, holds a Doctorate Degree. He graduated from Nanjing Aeronautical Institute majoring in aircraft design with a Bachelor's Degree of Engineering in 1982; and from Beijing University of Aeronautics and Astronautics majoring in aircraft design with a Doctorate Degree of Engineering in 2008.

Mr. Wu joined Xi'an Aircraft Design Institute in 1982, serving successively as Designer, Deputy Director and Director of General Design Department, and in 2003 Vice President of the First Aircraft Design Research Institute of AVIC I. Since 2006, while at First Aircraft Design and Research Institute, he has served successively as President, Chief Designer of ARJ21. He was appointed as Vice President of COMAC, Chief Designer of C919 in March 2008.

He was awarded the Prize for Outstanding Contributions in High-tech Project by the CPC Central Committee, the State Council and the Central Military Commission and won a gold medal in 2007. He received the Special Government Allowance awarded by the State Council. He was awarded with Special National Prize for Process in Science and Technology in 2011, and occupied the No. 1 position.

Member of the 11th and 12th National Committee of the Chinese People's Political Consultative Conference (CPPCC).

Huiying LI (Alicia)
Executive Assistant of Chief Integration, COMAC
Shanghai Aircraft Design and Research Institute

MODERATOR

JUNE 9

Huiying Li is the Executive Assistant for the Chief Integration Officer of COMAC. She supports the CIO to establish the Systems Engineering and Integration Center of Excellence (CoE), including strategizing, planning, and organizing the capability teams. Prior to this role, Ms. Li worked as the Lead of Project Management Office for wide-body aircraft, managing the Electromagnetic Environmental Control design for ARJ21-700 aircraft. Ms. Li joined the COMAC division Shanghai Aircraft Design and Research Institute (SADRI) in 2008 and worked in Integrated Avionics Department. In 2011, Ms. Li was selected to attend Cranfield University by COMAC. She received her Master Degree from Department of Fluid Mechanics and Computational Science Group (FMCS), School of Engineering in 2013. The thesis title is 'Visual Cueing for Collision Avoidance System'.

Yang YANG
Director of Marketing Research Center, COMAC

China Aerospace Market Outlook

JUNE 9

After graduation in 1997, Yang Yang began his career in General Aerodynamic Office, Aircraft Design Research Institute of China National Guizhou Aviation Industry Group. He was Deputy Director of Key Client Program in Shanghai Aircraft Design and Research Institute from 2010 to 2012. Since June 2012, he joined COMEC Market Research Center as Center Director, responsible for aerodynamic design, market research, customer analysis, economy research and other related research work.

ABSTRACT

This presentation will give a review of China's aerospace market environment by analyzing the development of China's economy and aerospace industry in the past 20 years, the development of aircraft transportation and other major transportations in China, the development of urbanization and aircraft transportation, development of airports and aircraft fleets in China, and the influence of "one-belt-and-one-way" strategy on China's aerospace industry in future. Prediction of China's market in 20 years will also be given, by predicting the market demands of regional jetliners, single-aisle jetliners and double-aisle jetliners in the next 20 years.

David Prevor
Head of Market Research and Forecast, Airbus Helicopters

Aircrafts and Helicopters Market Outlook

JUNE 9

David Prevor leads the Marketing Analysis and Forecast department in the Airbus Helicopters Strategy & Marketing directorate where he is responsible for market studies that underpin Airbus helicopter product strategy. In this role, David and his team charged with deriving an understanding of the future commercial & military helicopter market .His team is also responsible for assessing short and medium term market trends (demand) for helicopters in order to evaluate the impact on bookings and on design changes. Over the longer term David and his team forecast demand for use in defining generic helicopter design and establishing business plans for new helicopter launches.

Before, David was leading the Market Research and Forecasts department within the Airbus Strategy and Future Programmes directorate that he joined eleven years ago.

David began his Airbus career as a marketing analyst working on aircraft investment cash flow analysis model. He then became an IT project manager, overseeing software development for Airbus and airlines. Later he joined the Airbus flight test directorate involved in the development, validation, and certification of auto flight systems (AFS) for the Airbus A340-600/-500 and A330/A340 enhanced programs.

David graduated from the National School of Civil Aviation (ENAC) as an aeronautical engineer with a specialization in Air Transport Economy (economics, fleet planning, forecasting, financing, and statistics) and Aeronautical Techniques (flight operations, aeronautics, avionics, and control systems).

ABSTRACT

The fixed wings industry and the helicopter industry are growing. Every day more and more passengers are traveling, more and more helicopters are operated all over the world. Planes and helicopters transport passengers and freight, but helicopters perform also other types of missions such as aerial work, search and rescue, emergency medical services translating in a more diverse and complex market .

The presentation will illustrate some key drivers and key regions to the market potential of both industries while providing some key figures related to the market size on the medium / long term.

Henry Claeys
Senior Technology Fellow, Honeywell

Aircraft More Electric Architectures: Operating Cost Drivers and Key Technologies

JUNE 9

Mr. Claeys has nearly 30 years of aerospace experience spanning technology, systems engineering, systems integration, program management, engineering management / leadership. In his current role as technology fellow, he is responsible for technology strategy, technology development, systems integration and technology transition for Air and Thermal Management systems.

Mr Claeys developed an appreciation and understanding of the China commercial aerospace when he led the formation of a customer focused Aircraft Systems Integration group, arriving in Shanghai in April 2008, even before the establishment of COMAC. He worked closely with COMAC in the early Joint Engineering team studies for the COMAC C919 across multiple mechanical systems as well as control integration concept studies across ATA chapters. He worked with many other Aircraft manufacturers and equipment and system suppliers including Xi'an Aircraft Company in early concept design studies and potential JV explorations. His son was born in Shanghai in 2009.

On his return from 3 years in China, he took overall Chief Engineering responsibility for the large integrated systems for Airbus A350 Extended Mechanical Systems Perimeter (EMSP) presiding in that role from critical design review until certification and entry into service. This integrated perimeter included Auxiliary Power, Cabin Pressure, Bleed Air Control, Wing Anti-ice, Overheat and Bleed Air Leak Detection, Air Conditioning and Temperature Control, Conditioning System for fuel tank inerting, air Ventilation and Control system, and centralized Secondary (galley) cooling system.

Previous responsibilities included Environmental Control Systems (ECS) Chief Engineer, Commercial ECS director, Military ECS Sr Technical Manager and Technology Development Manager and Program Manager. He led the technology development of integrated power and thermal management systems that included integration of high speed starter generator technology in a power and cooling turbo-machine. Sophisticated electric power controls were developed to integrate this system with the rest of the electric power system. This technology made its way to production in a major US military program. He was awarded the Honeywell individual Premier Achievement Award in 2003, the highest honor at Honeywell. He is considered Honeywell's expert in not only cross-system integration, but also Air management and associated systems systems. He is Honeywell's technical expert in integrating bleed leak detection systems into composite aircraft, having seen two systems through development, qualification and certification.

Mr Claeys has a Masters Degree in Mechanical Engineering from Stanford University and a Bachelor's degree in Mechanical Engineering from the University of Virginia.

ABSTRACT

Top level trends and scope of future more electric aircraft are summarized. Considerations of electric driven environmental control systems, electric engine start, and electric wing ice protection, as well as longer term potential electrification options are outlined. Cost benefit trades are made to predict the cross-over point to equivalency to current state of the art architectures, by considering the improvement trends in both electric, engine and pneumatic technologies. Power system weight drivers, electrical system weight drivers and mission fuel burn are outlined.

Strategy for COMAC MEA Development

JUNE 9

Yuanli KANG (Kathy)
Director of More Electric System Department of BASTRI COMAC.

Kang has 15 years experiences in aircraft system development and product design, specializing in aircraft power supply system: Starter/Generator control system, Power conversion and power distribution system design. Her major is power system, motor control and power electronics respectively for her bachelor, Master and Doctor Degree. Her current research area mainly for the more electric aircraft (MEA) technique including the conceptual design for the e-ECS, e-actuator, WIPS , E-brake system , system simulation and integration.

Kang is also holding MBA from Rotman Business School, University of Toronto

ABSTRACT

MEA becomes a trend for the "new/advanced technologies" employed for next generation aircraft. Airbus and Boeing have advanced their research and application 30 years or earlier than China does. COMAC as a major and only civil aircraft manufacturer in China has lagged behind in this area, even for the conventional civil aircraft. To make competitive aircraft, COMAC can play an important role in applying and promoting the new technologies for next generation aircraft. Open policy, global talents plan, domestic market and national level emphasis on marking own civil aircraft, makes COMAC an important OEM. Suppliers need to market to assess their technology, OEM want to have completive airplane. An innovative collaboration between OEM and suppliers is required to achieve win-win situation. MEA research plan towards short and long term goal will be presented. The potentials for MEA application for COMAC next generation aircraft will be explored and assessed from presenter's viewpoint. The key to the success will be projected in the end.

Positive Interaction Between Aircraft Certification and Evolution of Airworthiness Regulations

JUNE 9

Yao LU
Director of Aircraft Airworthiness Institute, Center of Aviation Safety Technology, CAAC

Mr. LU has received his master degree in material science and technology from the Beijing University of Aeronautics & Astronautics, and works for the China Academy of Science and Technology of Civil Aviation Science and Technology. He participated the type validation projects of Airbus a380, Embraer 190/195 airplanes etc.. He was the TCB secretary and certification team member for ARJ21-700 and now is the TCB member for C919 airplane. He also has research experience and expertise in the areas of aircraft certification compliance technologies.

ABSTRACT

"Review the development and revision of airworthiness certification regulations and policies during the ARJ21-700 type certification. The experiences of applying new standard and procedure in the aircraft certification are shared between the airworthiness authority and the industry. And future evolution of airworthiness regulations and related policies is proposed.

ARJ21-700 Type Certification Summary

JUNE 9

Yong CHEN

General Designer of ARJ-21, COMAC

Mr. Chen Yong is permanent member of Science and Technology Committee of Commercial Aircraft Corporation of China Ltd (COMAC), the Chief Designer of ARJ21 Aircraft, adjunct professor and supervisor of postgraduate in Northwestern Polytechnical University, adjunct professor at Shanghai Jiaotong University, doctoral tutor.

Mr. Chen graduated from Northwestern Polytechnical University majoring in aircraft design in July 1988. At the same year, He joined the First Aircraft Design & Research Institute of China Aviation Industry Corporation (AVIC), have successively held the posts of Technician, Group Leader, Director of Science and Technology Management Department. His technical titles have served successively as Assistant Engineer, Engineer and Senior Engineer, Researcher.

Mr. Chen was appointed as Vice President of Shanghai Aircraft Design & Research Institute in July 2003, Chief Designer of ARJ21 Aircraft in Jun 2008, permanent member of Science and Technology Committee of COMAC in April 2013. He is totally in charge of design, experiment, flight test, technological breakthrough and application of Type Certificate (TC) of ARJ21 aircraft.

In December 2014, ARJ21 aircraft had achieved Type Certificate of CAAC. At the present stage, Mr. Chen and his team are fighting for the delivery and optimization design.

Mr. Chen was awarded such honorary titles as the National May 1st Labor Medal, Governmental Special Allowance by the State Council, one of the First-Batch National Ten-Thousand Talent People Program, one of leading talents of science and technology in shanghai, the First Prize of science and technology innovation in Shanghai, 2014, etc.

ABSTRACT

Brief introduction, including ARJ21-700 basic information, TC application, TC issue, marketing status and delivery plan

- ARJ21-700 program develop process review
- ARJ21-700 certification basis and certification plan
- ARJ21-700 compliance work
- Technical issues resolved during the type certification process
- Design modification arrangement after TC
- SAE standards followed during ARJ21-700 development
- COMAC wish and suggestion

System Integration and Certification Considerations for IMA Systems

JUNE 9

Qin ZHU (Amy)

Systems Certification & Airworthiness Engineer, Aviage Systems

Qin Zhu (Amy) is a Systems Certification & Airworthiness Engineer with AVIAGE SYSTEMS. In this role, Amy is responsible for conducting system (APR4754A, DO-297) compliance reviews for IMA systems and providing guidance on certification regulations to internal and external customers including COMAC for the C919 program. Amy obtained COMAC's SAL (supplier airworthiness liaison) delegation in 2013.

Amy's background spans over nine years of experience in system and software development for avionics systems, system and software certification, process improvement and engineering management. She began her avionics career at Honeywell in 2005, as a TSO specialist, conducting certification activities throughout multiple FAA/ESAA TSO and STC programs.

Amy holds a MS in Measurement & Control Technology and Instrument from Southeast University.

ABSTRACT

The increased level of complexity introduced by Integrated Modular Avionics (IMA) Systems in turn impacts the complexity of system integration and certification. Historically the driver for integrating functions onto a centralized platform providing shared services have been the OEMs. The approach has been successfully deployed on platforms such as B787 and A350. In both cases the approach was championed by a well-established OEM with significant integration and certification experience.

Smaller OEMs usually have found it significantly more difficult to apply the same model to their airplane, due to the lack of integration and certification experience at the OEM and complexity/ resistance to managing integration activities by platform supplier and functional suppliers.

This paper elaborates the above factors and presents considerations and approaches to address some of these concerns. It shares experience and practical application for the very first program of a system integrator that adopted RTCA/DO-297 to an IMA system development and certification. It focuses on the following major topics:

1. Describe how a developer and system integrator plans to accumulate incremental acceptance of integrated system with modules, platform, and host applications.
2. Develop an effective communication and cooperation mechanism when modules, Platform, host applications are developed by multiple companies and integrated.
3. Elaborate the relationship between RTCA/DO-297 and other system/ software/hardware guidance materials and propose an approach to Stage of Involvement internal review for finding compliance of the objectives in regulations/ guidance materials.

Murray L. Scott
Managing Director,
Advanced Composite
Structures Australia Pty Ltd.

Advanced Composite Structures Research and Development

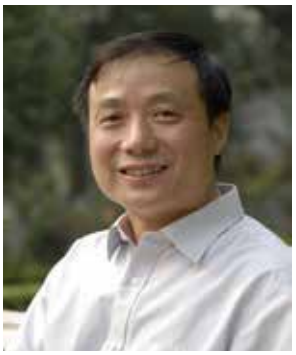
JUNE 9

Murray Scott is Managing Director of Advanced Composite Structures Australia, and CEO of the CRC for Advanced Composite Structures, both of which have their head offices in Melbourne, Australia. He is an Adjunct Professor of RMIT University and has 35 years of Aerospace Engineering experience, working in Australia and internationally. His outstanding record of achievement in research and professional activities includes terms as President ofthe International Council of the Aeronautical Sciences and the International Committee on

Composite Materials. He is a Fellow of the Royal Aeronautical Society, the Australian Academy of Technological Sciences & Engineering and several other organisations.

ABSTRACT

The advanced composites community in Australia has been a strong contributor for more than two decades to the research, development and production of carbon fibre composite components, particularly for the global aerospace industry. In this presentation a review of current Australian activities in the field will be provided, including the latest on implementing new technologies in areas ranging from oil & gas to aerospace & defence. Particular emphasis will be placed on the transition of research undertaken in the Cooperative Research Centre for Advanced Composite Structures (CRC-ACS) into production.



Weidong HUANG
Director
The State Key Laboratory of Solidification Processing
Northwestern Polytechnical University, China

Additive Manufacturing (3D printing) and Innovative Design

JUNE 9

Professor Huang Weidong is a fund receiver of the National Science Fund for Distinguished Young Scholars (1998) and Distinguished Chang Jiang Scholar appointed by Ministry of Education (2001). He is currently Director of State Key Laboratory of Solidification Processing, Director of China Foundry Association, Reviewer of Metal Discipline for National Natural Science Foundation of China, Director of Editorial Board for Foundry and China Foundry, the first international journal of 3D printing.

He is editorial member for 3D Printing and Additive Manufacturing, member of 3D Printing Expert Group under Ministry of Science, member of National Intelligent Manufacturing Key Projects Group and Vice President of National 3D Printing Technology Innovation Association. He was among the first ones in China to propose the technical concept of metal high-performance additive manufacturing. He authorized the first batches of patents and published Laser Solid Shaping the only treatise in the field in China. He trained 15 doctors and 42 masters, including the first Chinese doctor of metal high-performance additive manufacturing, published more than 300 theses on 3D printing and obtained 16 authorized national invention patents.

ABSTRACT

1. Basic concept and development history of additive manufacturing
2. Classic application cases of additive manufacturing related to structure design
3. New ideas of structural design about additive manufacturing technology
4. Mechanical features of metal high-performance additive manufacturing
5. Summary: the “new era” of structural design

Quality Assurance of Major Aerospace Components through Automated Process Capability Analysis

JUNE 9

Liang MA (Martin)
Executive Director,
ETA-China
Engineering Technology Associates (China), Inc

Mr. Ma graduated from Sichuan University with Mechanical master degree and obtained MBA degree from Shanghai Jiaotong University. He joined ETA since 2001, during these fourteen years, he is responsible for strategic development of CAD/CAM/CAE products and operation management in China market. Since 2009, ETA signed the agreement with Dimensional Control System Co. for the promotion of 3DCS software and GD&T technology. ETA, as the VCP (Value Channel Partner) of DCS, works with DCS to support the GD&T technology into Auto and Aerospace industries. Through ETA team's promotion in China, ETA become the top GD&T and CAE software and service provider in China.

ABSTRACT

This presentation focuses on a case study solution for setting up and monitoring the process capability of machined parts at an aircraft OEM. By creating standardized measurement plans and automating the analysis of the measured output, users can understand individual machine process performance and overall process performance in real time, as well as through automated reporting.

By showing outputs and set up, reinforced by customer data, DCS will demonstrate the method of creating actionable reporting and quality tracking for process capability at a major aerospace OEM.

PANEL: TSO Status Harmonization of Standards Between US & China

JUNE 9

Eric Peterson
Vice-chairman of SAE International S-18 Committee
Vice-President Systems and Safety for Electron International, Inc.

Mr. Peterson is Vice-President of Systems and Safety for Electron International, Inc. He holds a B.S. in Electrical Engineering from Montana State University.

Mr. Peterson has over 38 years' experience in management, system design and analysis, development of hardware & software and safety assessments for commercial and military flight critical avionic, engine control, ground based navigation augmentation and fly-by-wire system applications.

Mr. Peterson is an active member of Society of Automotive Engineers (SAE) and presently serves as the SAE S-18 Aircraft & Systems Development and Safety Assessment Committee Vice-Chairman. He provided key contributions to the industry documents, "Guidelines for Development of Civil Aircraft and Systems", ARP4754A, "Guidelines and Methods for Conducting the Safety Assessment Process on Civil Airborne Systems and Equipment", ARP 4761 and ARP 5150, "Safety Assessment Methods and Tools to Support Safety Management of Transport Airplanes in Commercial Service."" He provides industry instruction on these industry standards; presenting the ARP4754A training seminar over 35 times on four continents.

Mr. Peterson is a licensed private pilot and an FAA Systems and Equipment Safety DER with Level A software endorsement.

PANEL: TSO Status Harmonization of Standards Between US & China

JUNE 9

Vahid Navidi
Chief Engineer's Office Leader
Aviage Systems

Mr. Navidi is Chief Engineer's Office leader for the AVIAGE SYSTEMS. He is responsible for managing the Chief Engineer's Office organization which includes Certification & Airworthiness, Development Quality Assurance, Safety, Reliability, Maintainability and Testability functions. Mr. Navidi has over 28 years of experience in the aerospace business sector managing and leading a variety of highly technical design and development projects for General Aviation and Airtransport customers. He has broad and extensive experience in engineering design & development, Aircraft Certification and Project Management.

Mr. Navidi has a bachelor and Master degree in Electrical Engineering.

Chunjing WANG (Jenny)
Certification Manager, Honeywell

PANEL: TSO Status Harmonization of Standards Between US & China

JUNE 9

Jenny is the Certification Manager at Honeywell China. In this role, Jenny built and currently leads the China Certification team coordinating with the local COEs (CEL and COMAC), the Chinese aviation authorities, and the Honeywell Product Integrity team in the United States. Under her leadership, the certification team supports approvals of Honeywell avionics and mechanical equipment. Her team is also involved in supporting certifications of OEM equipment.

Jenny also works in a technical capacity as an International Certification Engineer (ICE) and a Technical Standard Order Specialist (TSO Specialist), supporting numerous programs such as B777, B787, A340, A350, G650, C919, and ARJ21. She was the first engineer in China to be designated a TSO Specialist at Honeywell.

John LIU
LEAP-1C Program Director,
GE Aviation / CFM
International

LEAP-1C Engine Program

John Liu holds the profit and loss (P&L) commercial leadership responsibility for LEAP-1C engine product line for GE Aviation/CFM International. He leads teams of commercial, engineering, quality, supplier chain, and, airworthiness for integrating LEAP-1C integrated propulsion system with COMAC's C919 airplane. John serves as the focal contact between CFMI and COMAC.

John began GE career 15 years ago at GE Global Research Center, New York. He held leadership positions in several GE businesses with extensive experience in research and development, advanced engineering design, service engineering, and project management.

John held Ph.D. degree in mechanical engineering from Rensselaer Polytechnic Institute, Troy, New York, M.S. degree from 3rd Research Academy of Chinese Aerospace Ministry, and B.S degree from Beijing Institute of Aero. and Astro.

ABSTRACT

"This presentation will first give a brief overview of CFM organization structure and product line. The focus will be on LEAP engine programs: history, development status, marketplace, technology features, advanced manufacturing technology, and production readiness and challenges. Special attention will be given the technologies improving fuel consumption and emission reduction. The integration of LEAP-1C integrated propulsion system with C919 aircraft will be presented.

Cyrille Breard
C919 Noise & Emission Manager, COMAC

Aircraft Noise & Emission: Meeting All Expectations

JUNE 10

Cyrille Breard is currently holding the position of C919 program Noise & Emission Manager at Shanghai Aircraft Design and Research Institute (SADRI), the product development branch of Commercial Aircraft Corporation of China, Ltd (COMAC).

Current development activities cover community noise, cabin comfort, ramp noise and sonic fatigue as well as emission. And top of his responsibilities, he is extremely involved in broad activities across the company, such as marketing research, flight test center, risk management, system requirements, organization change,...

He provides technical advices to China member during Civil Aviation Environmental Protection meeting under ICAO for noise and emission.

He is also adjunct Professor at Zhejiang Technical University, Hangzhou and Advisory Committee Member for the department of Mechanical Engineering of the HongKong Polytechnical University.

In 2012, he was awarded by the Recruitment Program of Global Experts (Thousand Talents Program) from CPC Central Organization Department. In September 2012, he received the National Friendship Award from the Chinese government. In 2013, he was awarded for his outstanding performance during the 5 years anniversary of COMAC. He regularly advises and shares his proposal with State Administration of Foreigner Experts Affair. (SAFEA), which is an administrative agency of the State Council of the People's Republic of China responsible for certifying foreign experts to provide expertise in mainland China.

Between 2005 and 2010, he managed and participated to several aero-acoustic research development programs at the Boeing Company. Most of those projects directly impacted acoustic liner design of the Boeing 787 and 747-8 airplanes throughthe Quiet Technology demonstrator in partnership with GE, Goodrich, ANA and NASA. In 2001, he was a senior Engineer at Analytical Methods (USA). In 1997, he was a research Associate at Imperial College at the Rolls-Royce research center of Vibration Engineering (UK). He obtained his PHD diploma from the University of Le Havre (France) in 1996 and performed doctoral and post-doctoral research projects at National Technical University of Athens (Greece).

In addition, he obtained Technical Management MBA degree from the Foster Business School of the University of Washington (USA) in 2010. He is a senior member of AIAA (American Institute of Aeronautics and Astronautics)

ABSTRACT

Aircraft noise development program involves highly integrated system from diverse disciplines such as weight, propulsion, structure, stress, aerodynamic, avionics, flight control, etc... And aircraft noise is, without doubt, no exception to it. From aircraft system perspectives, noise control and design guideline must be included in the design phase as early as possible in order to reach aircraft noise requirements. The different requirements defined the early design phase provide a conventional breakdown of the work package that must blend into the organization.

The presentation will focus on 3 aspects:

1) Sustainable growth can only be achieved through an environmental responsibility. COMAC is currently developing a new narrow-body aircraft, the C919 by not only meeting current regulations for community noise, but by exceeding them as well as future ones. Like any highly integrated product, such stringent requirements must be balanced with others requirements such as, safety, reliability and maintainability so that the solution is economically and technically feasible.
2) The author will then present some of the major activities for the C919 noise through a system engineering approach following the V&V model.
3) Finally, China has grown dramatically in the last 30 years and it is still growing. The impact on the environment is well known, and the noise pollution on the population is starting to emerge as more complex than it seems to be. Recently, more and more studies in China has been carried out, and new trends are emerging, which seems to be related to the new characteristics of aircraft noise and air traffic."

Patrick WANG
Executive Engineering Leader
GE Aviation China

Industry Internet and Big Data Analytics

JUNE 10

As Executive Engineering Leader for Aviation in China, Patrick Wang and his team are developing engineering capability to support and promote GE Aviation growth in China, which includes engine system integration for aircraft and marine programs, supply chain growth and service engineering for the airlines and MRO in Great China Region.

Patrick Wang started his engineering career in China Xinhua Airlines. Patrick Wang joined GE Engine Service (Xiamen) as engineering manager in 2001 and also in charge the Customer Support later. He transferred to GE CTC (China Technology Center) in May 2003 as the ARJ21 on-site system integration leader, and grew his responsibility in this program. Patrick was promoted to lead the GE Aviation China Engineering team in 2008. Under his leadership the China engineering team successfully built many new design and analytics capabilities from zero for business growth in China, such as Nacelle Design, Advanced Engine Manufacturing and Engine Big Data Analyst etc, that enhanced GE Aviation business growth with better customer services. Patrick received GE Aviation Globalization Award in 2012.

Patrick Wang was born and grew up in Harbin. He got the Bachelor Degree in ME from Northwest Polytechnic University in 1993, MBA from Nankai University in 2002 and EMBA from CEIBS in 2012. Patrick Wang started to build model airplane in high school that is why he selected aviation industry as a career. Patrick likes sports, travel and reading books.

Alex Wilson
Director Business Development
Wind River

Update on ARINC 653 and EUROCAE ED-124 / RTCA DO-297 Avionics Standards

JUNE 10

Alex Wilson obtained a BSc(Eng) in Electrical Engineering from Imperial College, London in 1986. Prior to Wind River, Alex worked at British Aerospace on Automated Test Equipment for various Inertial Navigation Systems using VME and RTOS technology. He then worked as a Field Applications Engineer (FAE) for Motorola Computer Group working with 68k and PowerPC VME boards and 3rd party Real Time Operating Systems. He joined Wind River in the UK as an FAE in 1996 supporting VxWorks and Tornado. In 2002 he became European Business Development Manager for Wind River focusing on the Aerospace and Defence market. As Director of Business Development, Aerospace and Defence for Wind River, he is responsible for A&D programs, and is part of the Wind River Strategic Marketing Team.

ABSTRACT

This presentation will introduce Integrated Modular Avionics and why it needs a standard such as ARINC 653 to fulfil the goals of IMA. It will then explore ARINC 653 Parts 1-5 and introduce the latest draft of Part 5.

ARINC 653 defines the architecture standard for IMA, but how do you certify these complex systems? The second part of this presentation introduces RTCA DO-297 / EUROCAE ED-124 and explores how it provides a framework towards incremental certification. It will also briefly introduce TSO C153 and AC 20-170 in the context of IMA development.

Nicolas FAVARCQ
Director Marketing & Innovation
Spherea Test & Services

Maximizing Tools Interoperability to Achieve a Continuous Validation Process of Complex Systems. A Concrete Use Case for Avionics Platforms

JUNE 10

Nicolas Favarcq is responsible for Marketing and Innovation department within Spherea Test & Services. His team is in charge of creating next generation products such as Universal Maintenance Test Benches for Aircraft Units, High Productivity Aircraft Manufacturing Test Products, or Model Based Testing solutions.

He joined Spherea in 2003. Before that he started his career back in 1998 working as for Barfield INC,.a MRO located in Miami. In 2000, he joined Wuilfert, a company designing real time motion simulators, as Engineering Department Director.

Nicolas Favarcq was born in Toulouse, France, in 1975. He graduated as an engineer from the ICAM in Toulouse.

ABSTRACT

Since 10 years, aerospace industry is facing an unprecedented program development time reduction driven by high competition between Aircraft manufacturers. By the same time, avionics systems complexity is increasing dramatically.

In this respect, the efficiency of avionics Integration, Validation and Verification (IVV) process is probably one of the most important success factors in the development of complex aircraft systems. This is one enabler to optimize design process to new concurrent engineering and drastic time schedule constraints.

Classical IVV process consists in 3 major steps. First, during preliminary design phase, virtual testing evaluates the system capabilities with simulated components. Then, once first developments are achieved, this phase is completed with Hardware In the Loop (HIL) testing; this step mixes on the same test platform real aircraft components with models. Finally tests are directly performed on the complete aircraft (either on ground or in flight).

Modern aircraft validation techniques rely heavily on virtual test but integration of this activity in the design engineering process still faces issues. More broadly, disruptions in the IVV process are still occurring between these 3 steps. Reuse of components such as test scripts and simulations from virtual test to physical test is therefore extremely difficult.

This presentation will introduce a novel approach to maximize interoperability of the platforms in order to maximize reuse and to build an incremental validation approach during the whole IVV cycle.

Yunming WANG
General Manager
Shanghai Aviation Technologies Co., Ltd.

Development and Certification of Airborne Systems

JUNE 10

Mr. Yunming Wang obtained his PhD degree from INRIA in March, 2001. He is a member of SC-205/WG-71, the editorial committee of DO-178C standard series.

Yunming Wang always emphasizes on the integration of theory with practice. On one hand, he gives unique insights to civil aviation airworthiness standards by sharing his years' intensive research. On the other hand, he has rich and solid experience in software development, certification and project management. Yunming Wang has been offering basic training, advanced training, practical training and DER training of airworthiness standards for years. In addition, he provides consulting services on system development and certification. All his work gets high evaluations from customers.

ABSTRACT

Many corporations and institutes in Chinese aviation industry possess extensive experience in airborne systems/equipment/software development. However, those who are well capable of airborne system development in military aircrafts are now encountering unprecedented challenges and difficulties in airworthiness certification in civil aviation. Obviously, there has been a huge gap between the development and certification of airborne system.

This speech provides a unique perspective on bridging the gap between development and certification of airborne systems. It analyzes main challenges, provides feasible solutions and shares practical achievements. It also indicates that the efficient way to certification is not to find ways and tactics to get the system certified after it is developed, but rather to make plans before development in accordance to every aspect of certification requirements of process, engineering and evidence collection/retention, and then follow the plans afterwards during the development. On this principle, the speech also introduces specific solutions and practice guidelines.

Mirko Jakovljevic
Solution Architect - Integrated Critical Systems
TTTech Computertechnik AG

Cross-Industry Considerations on Advanced Integrated Systems and IMA: Impact on Aerospace Industry **JUNE 10**

Mirko Jakovljevic chairs SAE Avionics ATC since 2007, and SAE AS-2D standardization committee since 2008.

His professional focus is on advanced integrated systems, distributed embedded platforms for time-, safety- and mission-critical applications, system design methodology, certification, complexity management and standardization of new technologies in aerospace domain. Dr Jakovljevic has led certification of real time operating systems and complex hardware devices for integrated more electric aircraft systems. Currently he is working as solution architect for integrated critical systems at TTTech – a company focusing on advanced system integration for aerospace, automotive and industrial systems.

He received a Master's and a PhD degree in Computer Technology from Vienna University of Technology, and a MBA from University of London.

ABSTRACT

Baseline technologies for advanced system integration have changed with every generation of aircraft over the last 50 years, and triggered significant changes in architectural considerations and system capabilities.

Aerospace industry is the pioneer in considerations on integrated system architectures and safety for fail-operational systems, and has maintained an advantage of 15-20 years in this domain against all other industries.

However, new trend and requirements in automotive safety architectures and autonomous driving could close the gap with aerospace industry within the next 10 years, and influence the architectures and baseline technology used in the next generation of aircraft systems currently envisioned by OEMs.

This could have profound impact on system lifecycle cost reduction and component reliability improvements which can be shared among high-volume low-cost automotive and low-volume aerospace industry.

A convergence in methodology and design of complex integrated systems and advanced integrated architectures can be also expected.

We will show several examples which synergies can be exploited to build sustainable complex integrated systems with advanced capabilities.

Eran Gery
Distinguished Engineer, IBM

Continuous Engineering - An Advanced Engineering & Lifecycle Platform for Connected Complex Systems **JUNE 10**

Eran Gery is an IBM Distinguished Engineer and a lead architect for the IBM Continuous Engineering Solution. Eran has over 20 years of experience within the complex embedded systems domain. Eran's current focus is the key transformational aspects of continuous engineering: model based development & simulation, product line engineering, and integration of the systems engineering process into the enterprise, including operations and data analytics. In addition Eran also engages with key worldwide customers in the major vertical markets: Aerospace and Defense, Automotive, and Electronics.

Prior to this Eran was the development manager and the principal architect of the Rhapsody product at IBM Rational Software, a market leading model driven engineering solution.

Eran was also part of the original UML and SysML specification teams in the OMG. Eran's main areas of interest are Systems Engineering, Model Driven Development, Engineering Lifecycle Management, and the Industrial Internet (IoT).

Early in his career Eran was an embedded software engineer at a major A&D company.

Eran holds an MSc and BSc degrees in computer science from the Technion, Israel Institute of Technology.

ABSTRACT

Today's complex systems, such as Avionics Systems, have become increasingly complex and functionally rich, while the time to market pressure and pressure to meet safety and security requirements is increasing. Complex systems engineering involves multi-disciplinary engineering, mechanical, electrical, and also the importance and amount of embedded software is increasing. The mixture of multiple disciplines and software in addition, typically results in engineering silos and many process discontinuities (at least from a digital standpoint). Such discontinuities prevent speeding up and optimizing the process. We will present an approach and a platform - continuous engineering - that facilitates a continuous digitally enabled end to end process. Continuous engineering leverages digital technology to improve better engineering insight and decision making, support for regulatory compliance such as DO178, and continuous verification leveraging model based engineering. We will also discuss how IoT technologies such as connected devices and analytics contribute to complex system engineering as part of continuous engineering.

Susan YING
Chief Integration Officer
COMAC

PANEL:Complex Systems Integration

JUNE 10

With 30 years of experience in the aerospace industry, Dr. Ying is now the Chief Integration Officer of the Commercial Aircraft Corporation of China (COMAC). In 2013, she retired from the Boeing Company as the Director of Research and Technology. Before joining Boeing, Ying taught at universities and directed research in the DOE Research Labs and NASA Ames Research Center. Dr. Ying is a Fellow of the AIAA and VP-International serving on the Board of Directors. She also serves on the Aerospace Council of the SAE. Dr. Ying is the Program Committee Chair and Executive Committee member in the International Council of Aeronautical Science (ICAS). She was one of the inaugural members in the NASA Advisory Council Innovation and Technology Committee. Dr. Ying holds a Commercial Pilot License and is a FAA-Certified Flight Instructor. She received her PHD in Aeronautics and Astronautics from Stanford University and BS in Mechanical and Aerospace Engineering from Cornell University. As a true believer in life-long learning, Dr. Ying has also taken executive education courses from the Kellogg School of Business Administration, Wharton Business School, and Brookings Institute in Brussels.

John HSU
AIAA Fellow,
ESEP (INCOSE)

PANEL:Complex Systems Integration

JUNE 10

John C. Hsu, Ph.D., P.E., AIAA Fellow, INCOSE ESEP, has over thirty (30) years of diversified experience in Systems Engineering, Aerospace Engineering, Mechanical Engineering, Nuclear Engineering, software development and engineering management, and has worked as technical manager, project manager, principal investigator and project leader, mainly at The Boeing Company. He was among the first group of people in the world working on systems engineering at the onset of systems engineering revitalization. He implemented the first break-through systems engineering applications for the Boeing/Airlift and Tanker Programs.

Dr. Hsu is the President of Systems Management and Engineering Consulting Services, Adjunct Professor at California State University Long Beach, Board Member and instructor of the University of California Irvine Systems Engineering Certification Program, Honorary Professor of Queens University in United Kingdoms, and Royal Academy of Engineering Visiting Professor.

Johan Andreasson
CEO
Mondelons Asia

PANEL:Complex Systems Integration

JUNE 10

Johan Andreasson is leading Modelons Asia operations. He holds a PhD in Vehicle Dynamics from the Royal Institute of Technology in Stockholm, and has 15 years of experience of model-based systems engineering using open standards.

Susan Martin
Senior Fellow
Center for Advanced Defense Studies (C4ADS)

PANEL:Complex Systems Integration

JUNE 10

Dr. Martin is a Cognitive Research Scientist with more than 25 years' experience applying her expertise to real-world problems. She is an acknowledged expert in the field of Human Decision Making and Cognitive Engineering. Her experience includes technical leadership across a broad range of commercial and military aerospace and C2 related programs. She has applied her expertise to many diverse problems related to human decision making, problem solving and behavior in complex and high-stress environments. Her work Includes, but is not limited to: Flight deck system requirements development and system evaluation; Design and conduct of full and part-mission flight deck and crew performance experimentation, studies and analysis; Human error reduction and decision support; Culture-automation interactions; C2 System requirements definition; Major aviation accident/incident investigation; Assessing the impact of national, organizational and professional culture within the operational environment; Cross-cultural training systems design and evaluation. Her experience further extends to the analysis of the global future in terms of threats/risks from multiple national perspectives and their impact on business strategy.

Key assignments have included the lead role in Global Future Analysis as well as international analysis as part of both NATO SCI-181 and SCI-186. She has also served as the lead scientist for Crew Performance Research within the BCA organization and later Human Systems Integration lead for Advanced Information Engineering. During her career, Dr. Martin has conducted research with and for such organizations as NASA, FAA, ATA,ONR and ARI; has served on numerous committees including a NASA appointment to the Aviation Research and Technology Sub-Committee and has worked extensively in international settings interacting with government agencies in China (CAFC, CAAC), Singapore (NSCC, DSTA), Europe, Australia and the US, as well as projects with more than 17 international airlines. Dr. Martin continues to apply her understanding of the Future Operational Environment and its challenges, in combination with her expertise in human and cognitive engineering disciplines, to develop methods and analyses to address complex cross domain problems.

Dr. Martin holds a Doctorate in Cognition from the University of Washington with minors in both physiological and organizational psychology and a Masters in Cognitive Psychology from the University of West Florida and has published extensively in her field.

Qing LI
Strategy Director
Siemens PLM STS

PANEL:Complex Systems Integration

JUNE 10

Engineer and PhD of ENSAM in France. Li specializes in system modeling and simulation studies, and boasts rich experience in the modeling and simulation of the complicated hydraulic and mechatronic system. He has worked with a host of customers both home and abroad on their system simulation projects, such as the modeling and study of Reynolds' AMT synchronizer, the modeling and simulation of BorgWarner's pressure and flow control valve, and the modeling of Siemens' high pressure common rail system of the engine. After coming back to China, he presided over and completed a series of projects related with hydraulic pressure, such as the Study and Experiment of the Development of the Automatic Gearbox project of an automobile organization; the simulation of the hydraulic pressure control system of the automatic gearbox of an automobile organization; the modeling analysis of the cushion valve of the automatic gearbox of a weaponry organization; torsional vibration analysis of the engine and drivetrain of an weaponry organization; real-time simulation of the engine of a vessel organization; analysis of the large-scale high pressure hydraulic system of a vessel organization; they simulation analysis of the special air valve for rockets of an aerospace organization. Li is now the strategic development director of Siemens PLM STS.

Neil Partridge
Consultant

PANEL:Complex Systems Integration

JUNE 10

Neil has 26 years of international experience - gained predominantly in the aerospace and defence sector.

Neil has recently returned to Brisbane, Australia, after a period working for Calibre Global and Project Managing complex systems upgrade programme in North Queensland.

Neil began his career at Ferranti Defence Systems, Scotland. Whilst working full-time, Neil completed a BSc in Electrical and Electronic Engineering. Neil spent the majority his career at Ferranti engaged as a Radar Systems Test Engineer.

Neil then moved to BAE Systems where he was responsible for software integration activities on the Tornado aircraft. Neil also Project Managed the integration of software and hardware for the German and Italian airforce Tornado.

Following this, Neil worked for Rolls Royce on development and integration of the Eurofighter Engine Management System Software. He then spent a period consulting and Project Managing the Year 2000 programme at BAE Systems Chadderton site.

He then worked for Boeing on the Nimrod MRA-4 programme. In this capacity, he was responsible for the integration and qualification of several software functionality elements onto that platform.

Neil then enjoyed a period in the US working for Boeing Commercial Aircraft. As a Senior Systems Engineer, he was responsible for in-flight entertainment integration and was instrumental in developing processes and procedures to improve organisational efficiency.

Neil relocated to Brisbane, Australia and worked for Boeing Australia – undertaking software integration and test activities on the F1-11 platform. During this period, Neil was also a member of the organisations Systems Engineering Process Council and was the inaugural Integration and Test chairperson for Boeing Australia.

Neil spent a brief period in Madrid working as a consultant to EADS-Airbus on the A330MRTT programme undertaking environmental compliance analysis and software integration activities.

Neil then worked for Brisbane based technology company, Intellection. In that capacity he worked as Integration and Test Manager establishing test and certification methodologies for the company's products.

Neil was the Chief Engineer at Metal Storm – a Brisbane based defence company. Neil was responsible for leading the development of the company's electronically fired, multi-shot weapon systems.

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BOOTH 4

Shanghai Aviation Technologies Co., Ltd. aims at studying international standards of safety critical software, introducing and assimilating successful experiences of software development from foreign corporations, combining with national standards and local practices, providing the integrated platforms of software development, certification, project management and related services of technical training, consulting and software outsourcing.

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BOOTH 1

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   - **Vehicle Electronics & Powertrain Technologies Forum**
     December 3-4, 2015

2. **Professional Development Training:**
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