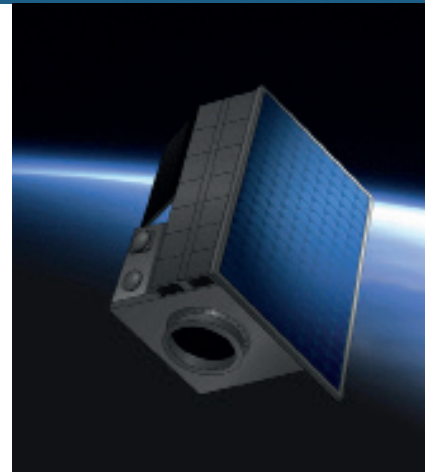


AEROSPACE TECHNOLOGY CONGRESS 2016

Swedish Aerospace Technology in a Globalised World



OCTOBER 11-12

Quality Hotel Friends, Solna, Stockholm

Final Programme



PARTNERS



SAAB



GKN AEROSPACE

Sjöland & Thyselius
Experts in Advanced Technology

**AEROSPACE
CLUSTER
SWEDEN**

Aerospace Technology Congress 2016!

The Swedish Society of Aeronautics and Astronautics (FTF) in cooperation with the Strategic Innovation Programme for Aeronautics (Innovair) welcome you to the Swedish Aerospace Technology Congress at Quality Hotel Friends, Solna – Stockholm, 11-12 October 2016.

The Congress, which is the ninth triennial congress arranged by FTF, has become well established as the forum for Swedish aerospace technology. The aim is to promote research as well as technical and industrial development in the aerospace sector and also to create stimuli for higher education in aerospace.

The Aerospace Technology Congress 2016 is open to all persons active in aerospace research and development and focuses on engineering developments, industrial restructuring, relevant applications, and user benefits.

For the first time, this Congress is open to international participation with strong focus on Brazil following bilateral cooperation resulting from the purchase of the Gripen system by the Brazilian Air Force. We are glad to see a large number of high-quality Brazilian papers in the programme and expect this event to foster even larger cooperation between our two countries.

The Congress will begin and end with plenary presentations by invited speakers. This year we are pleased to acknowledge the participation of leading plenary lecturers from not only Sweden and Brazil, but also from the European Union, UK, and the USA. In fact, this is the strongest aerospace Congress in Sweden yet, and as organizers we appreciate your efforts in coming here to share your expertise with our audience.

Finally, the Swedish Society for Aeronautics and Astronautics together with Innovair gratefully acknowledge the support of all exhibitors at the Congress.

Welcome to Solna - Stockholm and the AEROSPACE TECHNOLOGY CONGRESS 2016!

Roland Karlsson, Chairman FTF

Anders Blom, Program Director INNOVAIR



PROGRAMME

TUESDAY 11 OCTOBER

- 08.00 Registration**
- 09.00 Opening ceremony**
FTF chair Roland Karlsson and Brazilian Ambassador Marcos Pinta Gama
Moderator: Olle Bååthe, FTF
- 09.10 USAF Research & Development**
Major General Robert D. McMurry Jr., US Air Force
- 09.40 ~~Importance of Aeronautics in Sweden~~**
~~Hans G Pettersson, Dep of Trade and Innovation~~ CANCELLED
- 10.00 Air Force Development**
Magnus Liljegren, Head of Training & Development, Air Force, Swedish Armed Forces
- 10.20 Saab 's vision**
Lars Sjöström, Director Future Business, Saab Aeronautics
- 10.40 COFFEE**
- 11.00 GKN Aerospace R&T centre in Trollhättan Sweden**
Henrik Runnemalm, Technical Director, GKN Aerospace
- 11.20 Swedish Aeronautical Innovation System**
Charlotte Brogren, General Director, Vinnova
- 11.40 Sweden and Space – Investments in Research and Development for the Benefit of Society**
Olle Norberg, General Director, Swedish National Space Board
- 12.00 LUNCH**
- 13.00** Parallel, technical sessions
- 15.00 COFFEE**
- 15.30** Parallel, technical sessions
- 17.00 POSTER SESSION**
- 18.30 RECEPTION** in the Exhibition area

19.30
Congress Dinner
at Quality Hotel Friends

WEDNESDAY 12 OCTOBER

- 08.30** Parallel, technical sessions
- 10.00** COFFEE
- 10.30** Parallel, technical sessions
- 12.00** LUNCH
- 13.00** **Small and Medium Enterprises in Aeronautics**
Börje Andermård, Director, Brogren Industries
- 13.20** **Embraer future strategies**
Francisco De Assis Ferreira Gomes, Program Director Technology Development, Embraer S.A.
- 13.40** **ATI UK Strategy in aerospace**
Simon Weeks, Chief Technology Officer, ATI
- 14.00** **Clean Sky II**
Ron van Manen, Programme Manager, Clean Sky II
- 14.20** **Airbus**
Torsten Bardewyck, Head of Business Development European Affairs, Airbus
- 14.40** **SESAR 2020**
Michael Standar, Chief Strategy & External Affairs, SESAR JU
- 15.00** COFFEE
- 15.30** **Global Space Trends & Driving Forces**
Stefan Gardefjord, CEO, Swedish Space Corporation
- 15.50** **Swedish space systems in a globalized world**
Gierth Ohlsson, Managing Director, OHB Sweden
- 16.10** **Global market presence – strategy for innovation and growth**
Folke Brundin, Marketing Director, RUAG
- 16.30** Conclusions FTF chair Roland Karlsson

TECHNICAL PROGRAMME

TUESDAY 11 OCTOBER

Sessions A-C

TIME	SESSION A	SESSION B	SESSION C
	Room: O2 South	Room: 02 North	Room: San Siro
13.00-15.00	Major cooperative projects I	Sub-system and system technology I	Sub-system and system technology II
	<i>MIDCAS - Managing Complex Cooperative F&D</i>	<i>Aircraft Systems</i>	<i>EWS, Radar Development</i>
	<i>Chair: Knut Övrebö</i>	<i>Chair: Birgitta Lantto</i>	<i>Chair: Odd Romell</i>
	A1: Mid-air collision avoidance for RPAS – Findings from MIDCAS. Bengt-Göran Sundqvist, Saab AB	B1: Robust MRAC augmentation of flight control laws for centre of gravity adaptation. Daniel Simon, Saab Aeronautics	C1: Spiral Development of Radar and Electronic Warfare RF Sensors – It's about Critical Mass. Fredrik Wising, Saab AB
	A2: Detect and avoid for Remotely Piloted Aircraft in Air Traffic Control Simulations. Jens Alfredson, Linköping University/ Saab Aeronautics	B2: Human Pilot Modeling: Cognitive Architecture and System Identification applied to experimental data. Felipe Turetta, EMBRAER	C2: Pushing the envelope with Gallium Nitride technology. Johan Carlert, Saab AB
	A3: Dynamics of trust, control and risk in complex collaborative innovation projects. Gunnar Holmberg, Saab Aeronautics	B3: Design decision and technology readiness assessment for aircraft electrical power systems. Luciana Pereira, UFABC	C3: What's inside the building? Patrik Dammert, Saab AB
	A4: Managing competitive R&D Projects of Complex Product System - A case of an European R&D Consortium. Jose Franca, Linköping University	B4: Assessment of the influence on the fuel dilution with combustion products in the energy use. Nattan Roberto Caetano, Federal University of Santa Maria - UFSM	C4: Iterative Change Detection Algorithm for Low-Frequency UWB SAR. Renato Machado, UFSM
	COFFEE		
15.30-17.00	Major cooperative projects II	Environmentally friendly technology I	Aircraft and spacecraft system analysis III
	<i>Gripen and T-X</i>	<i>Sustainable Flight Operation</i>	<i>Future Combat Air Systems</i>
	<i>Chair: Anders Blom</i>	<i>Chair: Knut Övrebö</i>	<i>Chair: Roger Larsson</i>
	A5: Saab and Embraer a true partner co-operation within the Gripen NG Brazil Program. Linus Narby, Saab AB	B5: The VINGA Project. Henrik Ekstrand, Novair	C5: Exploration of Future Combat Air System in a 2040 perspective. Stefan Andersson, Saab AB
	A6: Analysis of Technology Transfer Mechanisms for the Defense Industrial Complex in Brazil. Alcides Neto, UFSCar	B6: SAFT - Simulation of Air traffic and atmosphere For a quieter environment. Ulf Tengzelius, KTH	C6: How to integrate and validate disruptive technologies within Future Combat Air System. Peter Furenbäck, Saab AB
	A7: Saab and Boeing Cooperation on the new T-X Advanced Pilot Training System. Tomas Karlsson, Saab AB	B7: Lean-Integrated Management System for Sustainability Improvement: Aerospace Industry Application. Prof. Dr. Luis Gonzaga Trabasso	C7: Artificial Bandits and Wingmen – A Framework for FCAS Scenario Analysis. Henrique Marques, Aeronautics Institute of Technology

TUESDAY 11 OCTOBER

Sessions D-F

TIME	SESSION D	SESSION E	SESSION F
	Room: Camp Nou	Room: Yankee Stadium	Room: Evenemangsglogen
13.00-15.00	Sub-system and system technology III	Aircraft and spacecraft system analysis I	Aircraft and spacecraft system analysis II
	<i>Space Systems</i>	<i>Airframe Modelling</i>	<i>Methods and Tools for Design & Analysis I</i>
	<i>Chair: Björn Kullberg</i>	<i>Chair: Anders Blom</i>	<i>Chair: Björn Jonsson</i>
	D1: Cots paving the road for Global Internet Coverage. Per-Olof Lindqvist, RUAG Space AB	E1: Aircraft Concepts Modelling with Subdivision Surfaces. Christopher Jouannet, Saab AB	F1: Model Based Design within Conceptual Aircraft Design. Ingo Staack, Linköping University
	D2: Enabling advanced missions on small platforms by cost effective avionics in the CubeSat form factor. Dan Ohlsson, AAC Microtec AB	E2: Time Domain Dynamic Simulations of Locally Nonlinear Large-Scale System. Andreas Linderholt, Linnaeus University	F2: Models Based on Singular Value Decomposition for Aircraft Design. Petter Krus, Linköpings Universitet
	D3: Single-Event Upset Detector Based on COTS FPGA. Johnny Öberg, KTH	E3: Inverse simulation applied to an aeroelastic aircraft. Euler Goncalves Barbosa, Condax Tecnologia	F3: Computation of aerodynamic sound with aeroacoustic analogies using a low dispersion numerical method. Raphaella Carvalho Machado, ITA
	E4: Derivation of world largest KI-data base for twin cracks at countersunk holes. Börje Andersson, Private company BARE	F4: Closed-loop Identification of Rigid-body Aircraft using Subspace Methods. Raphaella Carvalho Machado, ITA	
	COFFEE		
15.30-17.00	Sub-system and system technology IV	Sub-system and system technology V	Aircraft and spacecraft system analysis IV
	<i>Integrated EW Systems</i>	<i>Engine Research and Development</i>	<i>System Concept and Concept Evaluation</i>
	<i>Chair: Björn Kullberg</i>	<i>Chair: Mårten Staaf</i>	<i>Chair: Emil Vinterhav</i>
	D5: Future sensor combat. Anders Höök, SAAB AB	E5: Methods to account for the effect of water and ice ingestion on compressor performance. Lars Ellbrant, GKN Aerospace	F5: Prediction of Physiological and Psychological Crew Performance under Various Thermal Conditions. Jörg Schminder, Linköpings universitet
	D6: Evaluation of Interoperable Open Architecture's by means of Capability Development in the Mission Planning Domain. Ella Olsson, Saab AB	E6: Autonomous powering of wireless sensors for gas turbine applications. Peter Enoksson, Chalmers	F6: The Virtual Turbine Module Demonstrator (VITUM) research project. Peter Johansson, GKN Aerospace
D7: Airborne surveillance of sea surface activities –what technology is needed for improved effectiveness? Heike Schneider, Sjöland & Thyselius	E7: An approach to support robust design and identify producibility parameters for jet engine components. Johan Vallhagen, GKN Aerospace	F7: 25824: Experimental evaluation of the contribution of adding a motion system to an EDS. Anderson Harayashiki Moreira, Instituto Mauá de Tecnologia	

TECHNICAL PROGRAMME

TUESDAY 11 OCTOBER

Sessions G-I

Time	SESSION G	SESSION H	SESSION I
	Room: Hederslogen	Room: Madison Square Gar.	Room: Old Stafford
13.00-15.00	Aircraft and spacecraft technology I	Aircraft and spacecraft technology II	Aircraft and spacecraft technology III
	<i>Flow Control. Subscale Flight Testing</i>	<i>Intake Design and Analysis</i>	<i>Survivability and Stealth</i>
	<i>Chair: Petter Krus</i>	<i>Chair: Tomas Melin</i>	<i>Chair: Oscar Hag</i>
	G1: Numerical study of leading-edge flow control on a low signature UCAV. Magnus Tormalm, Swedish Defence Research Agency	H1: Integrated Duct Aerodynamics. Elias Siggeirsson, Chalmers University of Technology	I1: The future of low-signature platforms. Anders Höök, Saab AB
	G2: Subscale flight testing of a generic fighter aircraft. David Lundström, Linköpings University	H2: Aerodynamic analysis of the influence of canopy shape in the supersonic dorsal intake design. Fernando Martini Catalano, University of São Paulo	I2: Electromagnetic Characterization of Composite Structures. Torleif Martin, Saab AB
	G3: Subscale Ground and Flight Testing Methodologies for Advanced Aircraft Design. Roberto Silva, IVA	H3: Experimental Aerodynamic Analysis of a Fighter Aircraft with a Canard, Forward Swept Wing and Dorsal Intake operating at high incidences. Fernando Catalano, University of São Paulo	I3: Analysis of radar cross section and wave drag reduction of fighter aircraft. Raghu Munjulury, Linköpings University
	G4: Wind Tunnel Experiments of Winglet, C-wing, Droop and Fences coupled to a "Blended Wing Body" Model. Hernán Ceron-Muños	H4: Hybrid RANS-LES simulations for prediction of inlet distortion on the Gripen E fighter. Sebastian Arvidson, Saab Aeronautics/Chalmers	I4: BaToLUS – European programme for including increased battle damage resistance technology in UAV design and development. Niclas Persson, Saab AB
	COFFEE		
15.30-17.00	Aircraft and spacecraft system analysis V	Aircraft and spacecraft technology V	Aircraft and spacecraft technology VI
	<i>Methods and Tools for Design & Analysis 2</i>	<i>Aerodynamic Modelling, CFD</i>	<i>Propulsion Technology 1</i>
	<i>Chair: Vijay Sharan</i>	<i>Chair: Hans Mårtensson</i>	<i>Chair: Oscar Hag</i>
	G5: Schedulability analysis and worst case execution time estimation in cyber physical systems. Abdeljalil Boudjadar, Linköpings Universitet	H5: Zonal hybrid RANS-LES modeling using a Low-Reynolds-Number $k - \omega$ approach. Sebastian Arvidson, Saab AB/Chalmers	I5: VINK - Virtual Integrated Compressor Demonstrator. Nenad Glodic, KTH Royal Institute of Technology
	G6: Efficient Worst-case Analysis of Mechatronic Systems with Parametric Uncertainty. Moises Ferber, Federal University of Santa Catarina	H6: General Sensitivities For Euler Flows Using The Adjoint Method. Marcelo Hayashi, University of São Paulo	I6: Optimization of transonic axial compressor blades. Marcus Lejon, Chalmers University of Technology
	G7 : Knowledge-based flight control system and control surfaces integration in rapid. Raghu Chaitanya Munjulury, Linköping University	H7: Modal Analysis of Separated Nozzle Flow. Ragnar Lárusson, Chalmers University of Technology	I7: Multidisciplinary Optimization for Integrated Design of Aero-engine Components. Visakha Raja, GKN Aerospace

TUESDAY 11 OCTOBER

Sessions J-L

Time	SESSION J	SESSION K	SESSION L
	Room: Wembley Stadium	Room: Stamford Bridge	Room: Sky Lounge West
13.00-15.00	Aircraft and spacecraft technology IV	New materials and processes I	New materials and processes II
	<i>Applied Aerodynamics:</i>	<i>Advanced Manufacturing Processes</i>	<i>Composite Structures</i>
	<i>Chair: Lasse Karlsen</i>	<i>Chair: Vijay Sharan</i>	<i>Chair: Hans Ansell</i>
	J1: A summary of the AFRO-DITE project: Advanced Fluid Research On Drag reduction In Turbulence Experiments. Jens Fransson, KTH - Royal Institute of Technology	K1: Analysis of superplastic forming process applied to aerospace industry: Case study of AL 5083 alloy. Daniel Pereira, Institute for Technological Research	L1: Static and fatigue failure of bolted joints in hybrid composite-aluminium aircraft structures. Zlatan Kapidzic, Saab AB
	J2: Disciplinary Data Fusion of Aerodynamic Database for Flight Simulation. Mengmeng Zhang, Airinnova AB	K2: Keyhole laser process for welding Titanium alloy: modeling and experiment. Josefine Svenungsson, University West	L2: Methodology for fatigue damage prediction in NCF composites for applications in aircraft engines. Andrejs Pupurs, Lulea University of Technology
	J3: Countermeasure Aerodynamics. Torsten Berglind, FOI	K3: Numerical modeling of Weld Hot Crack Nucleation in Nickel-Based Super-alloys. Joar Draxler, Luleå University of Technology	L3: Low Cost Manufacturing and Assembly of Composite and Hybrid Structures. Magnus Engström, SAAB AB
J4: Multi-objective Aerodynamic Optimization of an Unmanned Aerial Vehicle. Edna Raimunda Da Silva, MDH Mälardalen University	K4: Microstructure variations in Ti-6Al-4V manufactured with different additive manufacturing processes. Magnus Neikter, Luleå University of Technology/GKN-Aerospace	L4: Damage tolerance of composite sandwich structures with thick face sheets. Moeen Rajput, KTH Royal Institute of Technology	
	COFFEE		
15.30-17.00	Aircraft and spacecraft system analysis VI	New materials and processes III	New materials and processes IV
	<i>System Concept Studies</i>	<i>Metal Alloys</i>	<i>Composites 1</i>
	<i>Chair: Christina Ahremark</i>	<i>Chair: Robert Lundberg</i>	<i>Chair: Tonny Nyman</i>
	J5: Teamwork in the Gripen F Two-Seater. Anders Lundqvist, Saab AB	K5: Examination of Electromagnetic Absorption Efficiency Base from the Additives of Mn-Zn Ferrites for Shielding in Electronic Equipments Aeronautic and Spatial. Carlos Alberto Reis De Freitas, DCTA-IEAv	L5: Effect of in-plane and out-of-plane waviness on the compressive strength of UD NCF-reinforced composites. Leif Asp, Chalmers University of Technology
	J6: Sensor model design for aircraft concept development. Carina Marcus, Saab AB	K6: Prediction of damage and fracture during forming simulations in Alloy 718. Lluís Pérez Caro, Swerea IVF	L6: Damage and Failure Prediction of Composite Rotorcraft blades under combined Bending-Torsion Loading. Sylvain Langlo, State University of Campinas
J7: Measuring of operational usability within the Gripen E development. Jonas Jeppsson, Saab AB	K7: Modeling and validation of hot forming and mechanical cutting in Ti-6Al-4V. Eva-Lis Odenberger, Swerea IVF	L7: Effects of radius thinning on shape distortions of a composite beam. Jens Sjölander, KTH	

TECHNICAL PROGRAMME

TUESDAY 11 OCTOBER

Session M and Poster Session

TIME	SESSION M
	Room: Boardroom
13.00-15.00	Operational availability, maintenance and support I
	<i>Operational Availability, Maintenance and Support</i>
	<i>Chair: Olov Candell</i>
	M1: Aircraft Maintenance Data Evaluation Method Applied to Integrated Product Development Process. Luís Gonzaga Trabasso, Linköping University
	M2: Interoperable and Agile Maintenance Planning, Ella Olsson, Saab AB
	M3: The Development of Aerologlab-ITA at the Aeronautics Institute of Technology. Fernando Teixeira Mendes Abrahão, ITA
	M4: Prognosis performance and management for efficient planning of aircraft engine maintenance. Johan Vallhagen, GKN
	COFFEE
15.30-17.00	Operational availability, maintenance and support II
	<i>Operational Availability, Maintenance and Support</i>
	<i>Chair: Olle Bååthe</i>
	M5: Prognosis performance and management for efficient planning of aircraft engine maintenance. Veronica Fornlöf, GKN Aerospace
	M6: Case study Swedish NH90 (HKP 14) - Decision support and cost savings through optimization, modelling and simulation. Johan Elfvik, Systecon AB

TIME	POSTER SESSION
	Room: Exhibition area
17.00-17.30	Operational availability, maintenance and support
	N1: Medical- and electronic mission equipment –how to comply with certification and maintenance requirements regarding aircraft installation? Stefan Kuttainen, Sjöland & Thyselius
	Sub-system and system technology
	P1: IoT Security. Djamel Sadok, Universidade Federal de Pernambuco
	P2: SEFIN - A Secure Emergency Fieldwork Network. Djamel Sadok, Universidade Federal de Pernambuco

TECHNICAL PROGRAMME

WEDNESDAY 12 OCTOBER

Sessions A-C

Time	SESSION A	SESSION B	SESSION C
	Room: O2 North	Room: O2 South	Room: San Siro
08.30-10.00	Major cooperative projects II	Environmentally friendly technology II	Aircraft and spacecraft system analysis VII
	<i>Space and Civil Aircraft</i>	<i>Propulsion and Space</i>	<i>Simulation 1</i>
	<i>Chair: Robert Lundgren</i>	<i>Chair: Daniel Granquist</i>	<i>Chair: Björn Kullberg</i>
	A8: Esrange Space Center – A Future Center of Excellence for Cubesats. Anna Rathsman, SSC	B8: An Intergrated Aeroacoustics Framework for Subsonic Aircraft and Engines. Fakhre Ali, Chalmers University of Technology	C8: Tool Support for Credibility Assessment of Aircraft System Simulators. Magnus Eek, Saab AB
	A9: GF Demo project "Next Generation Composite Structures for Civil aircraft". Maria Weiland, SAAB AB	B9: Overview of the development of green rocket propellants. Niklas Wingborg, FOI	C9: Experimental Evaluation of a Robotic Flight Simulator based on FOQA. Diego Arjoni, ITA-Instituto Tecnológico de Aeronáutica
	A10: GKN Aerospace involvement the Clean Sky engine demonstrators. Robert Lundberg, GKN Aerospace	B10: The MATS micro satellite mission – tomographic perspective on the mesosphere. Niclas Larsson, OHB Sweden AB	C10: Modeling Functional Specifications of Ground Systems in the National Airspace System. Christian Krantz, KTH
	COFFEE		
10.30-12.00	Major cooperative projects III	Aircraft and spacecraft system analysis X	Aircraft and spacecraft system analysis XI
	<i>Propulsion</i>	<i>Space Systems</i>	<i>Simulation 2. Auto Landing System</i>
	<i>Chair: Petter Krus</i>	<i>Chair: Per Ingvarson</i>	<i>Chair: Odd Romell</i>
	A11: ULTIMATE - Ultra Low emission Technology Innovations for Mid-century Aircraft Turbine Engines. Tomas Grönstedt, Chalmers University of Technology	B11: Bluestone – A system for optimizing downlink utilization in earth observation applications through smart selection and prioritization of data. Emil Vinterhav, ÅAC Microtec	C11: Grey-box Modelling of a Quadrotor Using Closed-loop Data. Marcus Bäck, Saab AB
	A12: The Pratt & Whitney PW1000G engine family; Past, present and future for GKN Aerospace. Marcus Borg, GKN Aerospace Sweden AB	B12: The role of Sweden in the Golden Age of Mars Exploration. Javier Martin-Torres, Luleå University of Technology	C12: Formal Modeling of Run-Time Reconfigurable SoCs for Fault Tolerance Avionics Applications. Ingo Sander, KTH Royal Institute of Technology
	A13: Research in the INNOVAIR Turbomachinery cluster. Hans Mårtensson, GKN Aerospace Engine Systems	B13: The Conceptual Design of a Horizontal Take-off and Landing, Reusable Satellite Launcher. Luciano Barbosa, Condax Tecnologia	C13: Longitudinal automatic landing system using robust QFT controller for a military aircraft. Adriellen Sousa, IFSC

TECHNICAL PROGRAMME

WEDNESDAY 12 OCTOBER

Sessions D-F

Time	SESSION D	SESSION E	SESSION F
	Room: Camp Nou	Room: Yankee Stadium	Room: Evenemangslogen
08.30-10.00	Sub-system and system technology VI	Sub-system and system technology VII	Aircraft and spacecraft system analysis VIII
	<i>Avionics System Design, IMA</i>	<i>Navigation, Tracking</i>	<i>Safety 1</i>
	<i>Chair: Ingemar Söderquist</i>	<i>Chair: Roger Larsson</i>	<i>Chair: Emil Vinterhav</i>
	D8: Gripen E Avionics Architecture - the new frontline against cost and complexity. Pär Hammarström, Saab AB	E8: Inertial-Vision Navigation with Support from a Flat Terrain Map. Zoran Sjanic, Saab AB	F8: An Integrated Approach for Safety and Security Analysis in Embedded Systems Development. Celso Hirata, Instituto Tecnológico de Aeronáutica
	D9: Efficient Correct-by-Construction Design of Avionics Systems. Ingo Sander, KTH Royal Institute of Technology	E9: Real Time Embedded Image Processing System for Autonomous Unmanned Aerial Vehicles. Edison Pignaton De Freitas, Federal University of Rio Grande do Sul	F9: : Hidden failure scenarios of an aircraft collector fuel tank. Heitor Azuma Kagueiama, Federal University of Santa Catarina
D10: IMA Platform Computing Module based on Partial Reconfigurable FPGA. Rodrigo Romero, ITA	E10: Uncertainty Determination of Real-Time Optical Tracking System used for External Store Separation. Nelson Leite, Instituto de Pesquisas e Ensaios em Voo (IPEV)		
	COFFEE		
10.30-12.00	Sub-system and system technology VIII	Sub-system and system technology IX	Aircraft and spacecraft system analysis XII
	<i>Avionics System Design, cont.</i>	<i>ISR and Space Systems</i>	<i>Safety 2</i>
	<i>Chair: Daniel Simon</i>	<i>Chair: Lasse Karlsen</i>	<i>Chair: Emil Vinterhav</i>
	D11: Towards Runtime Adaptivity by using Models of Computation for Real-Time Embedded Systems Design. Denis Loubach, University of Campinas - UNICAMP	E11: RAAISR: intelligent ISR data node in the sky. Bob Moll, Spacemetric B.V.	F11: Using the Unscented Transform to Assess Systems Reliability. Jose Edil Guimaraes De Medeiros, University of Brasilia
	D12: Real-Time Reconfiguration Approach Based on Efficient Deep Learning Diagnosis of Embedded Systems. Euripedes Nobrega, University of Campinas	E12: Opportunity Concepts of Aerospace Testing at Esrange Space Center, Gunnar Florin, SSC	F12: Influence of the device positioning inside aircraft on its SEU rate. Adriane Prado, Instituto Tecnológico de Aeronáutica
D13: A practical Study on WCET Estimation on Multicore Processors for Avionics Applications. Edison Pignaton De Freitas, Federal University of Rio Grande do Sul	E13: Antenna design and optimization for nanosatellites communications. Lucas Travassos, UFSC	F13: Mercury: An Integrated Environment for Performance and Dependability Evaluation of Systems. Danilo Oliveira, Federal University of Pernambuco	

WEDNESDAY 12 OCTOBER

Sessions G-I

Time	SESSION G	SESSION H	SESSION I
	Room: Hederslogen	Room: Madison Square Gar.	Room: Old Stafford
08.30-10.00	Aircraft and spacecraft technology VII	Aircraft and spacecraft technology VIII	Aircraft and spacecraft technology IX
	<i>Spacecraft Technology</i>	<i>Propulsion Technology 2</i>	<i>Structural Technology</i>
	<i>Chair: Odd Romell</i>	<i>Chair: Tomas Melin</i>	<i>Chair: Oscar Hag</i>
	G8: The HABIT (Habitability, Brine Irradiation and Temperature) instrument for the Exo-Mars Surface Platform. Javier Martin-Torres, Luleå University of Technology	H8: An Overview of the MOT-STRÖM Project: Motståndsminskning för Strömningsstyr i Kompressor. Bengt Fallenius, KTH Mechanics	I8: Influence of type of discrete modeling of fasteners in FEM models of composite materials. Rodrigo Martins, Embraer
	G9: Analysis of REXUS12's Suaineadh Experiment: Centrifugal Force Deployment of Space Web from Sounding Rocket. Huina Mao, KTH Royal Institute of Technology	H9: Performance Analysis of Gas Turbine Blade Cooling on Aero Gas Turbine Cycle. Lucilene Silva, Technological Institute of Aeronautics (ITA)	I9: Input-Output and Operational Modal Analysis of a High Aspect Ratio Flexible Unmanned Aerial Vehicle using Accelerometers and Strain Sensors. Luiz Carlos Góes, ITA-Instituto tecnologico de Aeronautica
G10: Modelling and control of a long flexible guyed structure. Paola Gonzalez Ramos, UNICAMP	H10: An optimization platform for high speed propellers. Alexandre Capitaio Patrao, Chalmers University of Technology	I10: Topology optimization of an aircraft component as a fluid-structure system with unstructured mesh. Walter Casas, Federal University of Rio Grande do Sul	
	COFFEE		
10.30-12.00	Aircraft and spacecraft technology X	Aircraft and spacecraft technology XI	Aircraft and spacecraft technology XII
	<i>Materials and Structural Technology</i>	<i>Weapons Integration. Man Machine Interface</i>	<i>Unsteady Aerodynamics, Aeronautical Engineering</i>
	<i>Chair: Tomas Melin</i>	<i>Chair: Christina Ahremark</i>	<i>Chair: Oscar Hag</i>
	G11: An invariant-based design approach to carbon fiber reinforced polymer composite laminates. Jose Daniel Melo, Federal University of Rio Grande do Norte	H11: Nonlinear aeroelastic analysis of fighter-like aircraft with external stores. Anders Karlsson, Saab AB	I11: Studies on strategies for flutter speed optimization through fiber orientation. Carlos Eduardo De Souza, Federal University of Santa Maria
	G12: Conceptual structural airframe design using topology optimization. Erik Holmberg, Saab AB	H12: Cost and Time Efficient Gripen Weapon Integration. Gideon Singer, Saab AB	I12: Elementary source arrays in the synthesis of acoustic fields due to turbulent fluctuations around fuselage panels. Eduardo Bauzermedeiros, Universidade Federal de Minas Gerais
G13: Liquid feedstock plasma spraying - an emerging process for the next generation aircraft engines. Nicolaie Markocsan, University West	H13: Airborne man-machine interface -aspects of airborne operations and the aid for the user. Heike Schneider, Sjöland & Thyselius	I13: A Swedish national Competence Cluster in Aeronautical Engineering. Roger Larsson, Saab AB	

TECHNICAL PROGRAMME

WEDNESDAY 12 OCTOBER

Sessions J-L

Time	SESSION J	SESSION K	SESSION L
	Room: Wembley Stadium	Room: Stamford Bridge	Room: Sky Lounge West
08.30-10.00	Aircraft and spacecraft system analysis IX	New materials and processes V	New materials and processes VI
	<i>Efficient Design, Development and Manufacturing</i>	<i>Manufacturing Methods</i>	<i>Composites 2</i>
	<i>Chair: Per Ingvarson</i>	<i>Chair: Tomas Ireman</i>	<i>Chair: Tonny Nyman</i>
	J8: 2 Competencies development in an aerospace organization in the globalized world. Lucio Amaro, Aeronautics Institute of Technology- ITA	K8: Systematic redesign of manufacturing systems for aerospace. Johan Vallhagen, GKN Aerospace Engine Systems	L8: Assessment of fiber metal laminate panels reinforced with metallic pins deposited by welding. Americo Scotti, Federal University of Uberlandia
	J9: PTC Innovatum a Unique Arena for Production Research and Development. Elis Carlström, Swerea IVF	K9: Future-oriented dimensional management and production engineering metrology. Richard Lindqvist, Saab AB	L9: Prediction of post-cure residual stresses and distortions in the fabrication of composite structures. Alfredo Faria, ITA
J10: Aircraft Interior Design Using Photorealistic Augmented Reality. Bernardo Reis, Federal University of Pernambuco (UFPE)	K10: Assessing form error through simulation platforms. Anders Forslund, Chalmers University of Technology		
	COFFEE		
10.30-12.00	Aircraft and spacecraft technology XIII	New materials and processes VII	New materials and processes VIII
	<i>Air Vehicle Systems Technology</i>	<i>Engine Materials</i>	<i>Additive Manufacturing</i>
	<i>Chair: Knut Övrebö</i>	<i>Chair: Anders Blom</i>	<i>Chair: Richard Lindqvist</i>
	J11: Piezoelectric Crystals Application on Landing Gears for Harvesting Energy. Jose Carlos Pereira, Federal University of Santa Catarina	K11: The effect of microstructure and defects on mechanical properties of Ti6Al4V welds produced by different processes. Sakari Tolvanen, Chalmers University of Technology	L11: Influence of Process Parameters on Microstructure using Laser Metal Powder Deposition. Andreas Segerstark, University West
	J12: New perspectives on digital hydraulics for aerospace applications. Lie P. G. Pinto, Linköping University	K12: Testing procedures for the evaluation of strain age cracking in nickel based superalloys. Fabian Hanning, Chalmers University of Technology	L12: A review of selective laser melting - Process parameters and its influence on microstructure, defects and strength in superalloy Alloy 718. Tahira Raza, University West
	K13: Hot Cracking in Nickel-Based Superalloys. Sukhdeep Singh, Chalmers University of Technology	L13: Additive Manufacturing in Sweden and its Application in the Space Industry. Christo Dordlofva, Luleå University /GKN Aerospace	

WEDNESDAY 12 OCTOBER

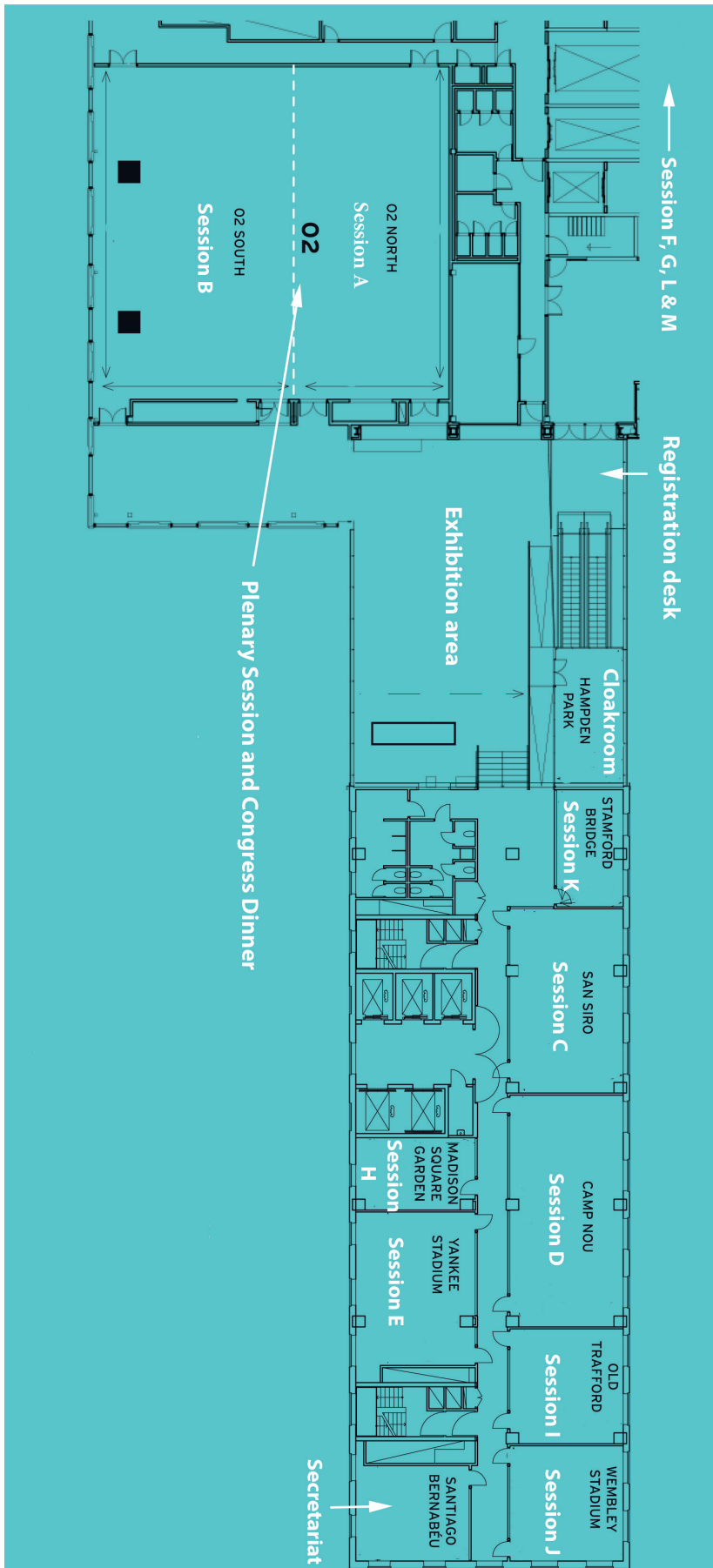
Session M

Time	SESSION M
	Room: Boardroom
08.30-10.00	Operational availability, maintenance and support III
	<i>Operational Availability, Maintenance and Support. Structural Health Monitoring</i>
	<i>Chair: Catarina Lindholm</i>
	M8: Mediated Reality for Aircraft Maintenance Procedures. Bernardo Reis, Federal University of Pernambuco (UFPE)
	M9: Tool for Aiding Maintenance Procedures with Augmented Reality. Bernardo Reis, Federal University of Pernambuco (UFPE)
	COFFEE
10.30-12.00	Operational availability, maintenance and support IV
	<i>Structural Health Monitoring</i>
	<i>Chair: Hans Ansell</i>
	M11: Aircraft distributed structural health monitoring based on ϕ -OTDR. Carolina Franciscangelis, Unicamp
	M12: Multiple Damage Detection in Plate Structure using Piezoelectric Array Sensors and 2D-MUSIC Spectrum. Sergio Farias, Aeronautics Institute of Technology - ITA
M13: Structure Health Monitoring using Discrete Wavelet Transform and Piezoelectric Sensor Array. Osamu Saotome, Aeronautics Institute of Technology - ITA	



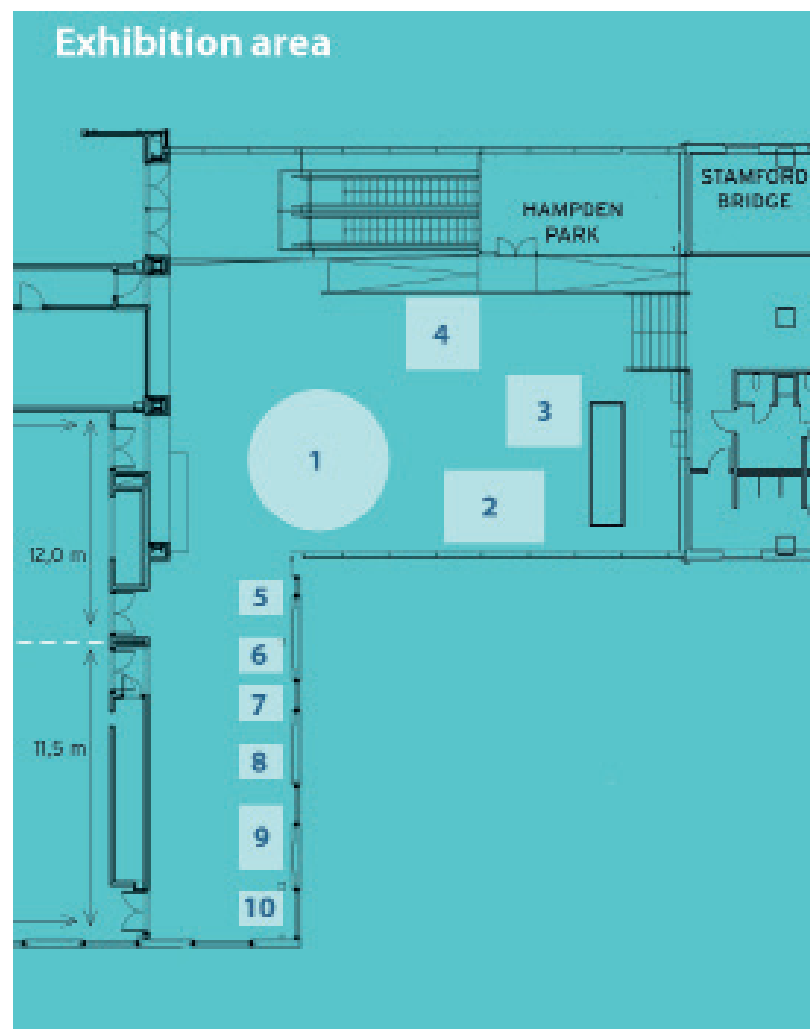
www.ft2016.se

FLOORPLAN



Exhibitors at Aerospace Technology Congress 2016

1. **Saab Aeronautics**
2. **GKN Aerospace**
3. **Sjöland & Thyselius**
4. **Aerospace Cluster Sweden**
5. **Systecon**
6. **Swedish Space Corporation (SSC)**
7. **Swedish Aviation Group (SAG)**
8. **Centrum för hållbar luftfart, KTH**
9. **FTF, Innovair and Cambridge Books**
10. **Svenska Flygtekniska Institutet**





www.gknaerospace.se

GKN TECHNOLOGY:
MAKING THINGS FLY



TRAINING ANYWHERE, ANY TIME

One pilot is training in a flight trainer. Next to him, five more pilots are sitting in their trainers and all six are training together. This is a realistic mission rehearsal.

All this is made possible in Sjöland & Thyselius' Flight Trainer.

Sjöland & Thyselius
Experts in Advanced Technology

Unified for growth and innovation

Proud sponsors of
Aerospace Technology Congress 2016

Visit us at
our booth!

AEROSPACE
CLUSTER
SWEDEN

INNOVATUM

COMPRASER
LABS

swerea|SICOMP

INTERNET ACCESS

Internet access (Wifi) at Quality Friends Hotel
Network: conferenceguest (No login)

ACCESS TO ABSTRACTS

In the Aerospace Technology Congress **mobile website** you find all abstracts and list of participants. To get access to the mobile web check your SMS sent October 7th and follow the link.

PROGRAMME COMMITTEE

Kaj Lundahl, Chairman
Roland Karlsson
Björn Jonsson
Knut Övrebö
Anders Blom
Christina Ahremark
Odd Romell
Lasse Karlsen
Per Ingvarson
Vijay Sharan
Oskar Hag
Robert Lundberg
Tomas Melin
Olle Bååthe

SECRETARIAT

Meetagain Konferens
Aerospace Technology 2016
Råsundavägen 13
SE-169 67 Solna
Telephone: +46-(0) 8 664 58 00
E-mail: ft2016@meetagain.se



Support FTF and become a member

The annual fee is 150 SEK. For participants in the Congress in 2016 is the first year (2017) membership for free. Please fill out the Member Application found at www.ftfsweden.se and indicate whether your membership relates to the Main Branch or any of the Local Branches.



**BREAKING THE
THOUGHT BARRIER**

Saab's unique approach to research and development breaks operational, logistical, technical and financial barriers to deliver smarter solutions. With more than seven decades of experience, we have become a centre of aeronautical excellence, enabling customers to unlock their potential today and in the future. Whatever the barrier to your success, Saab's innovative thinking and real-world pragmatism will help you break through. We call it our *thinking edge*.

www.saab.com



SAAB

AEROSPACE TECHNOLOGY CONGRESS 2016
Swedish Aerospace Technology in a Globalised world
www.ft2016.se