



INTERNATIONAL FLIGHT INSPECTION SYMPOSIUM

20-24 JUNE 2022, DURBAN, SOUTH AFRICA

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Welcome to

Welcome to the International Flight Inspection Symposium (IFIS) hosted by the South African Civil Aviation Authority (SACAA) in collaboration with the International Committee for Airspace Standards and Calibration (ICASC).

As this is the very first time that IFIS is being held on African soil, we hope that all delegates and presenters who are in attendance will take the opportunity to enjoy the beauty of South Africa; its hospitality, and perhaps even its wildlife.

This gathering of participants from the African continent and the rest of the world, including delegates from navigation service providers, the aviation authorities, aviation-related companies and airport companies, among many others, will give air traffic management aspects such as flight inspection, navigation and surveillance, and ecological considerations, among much more, the prominence that they deserve.

As States we are all required to manage the implementation of new innovations, while maximising the use of the existing technologies. At the same time, we need to be respectful of all users of airspace, by adhering to all the necessary safety and sustainability objectives during the various integration processes. As a collective, we will be able to reach meaningful conclusions at this historic event, under the banner of our theme; **“Dawn of a new technological era”**.



Ms Poppy Khoza
Director of Civil Aviation



Mr Joseph Doubleday
ICASC Chairman

On behalf of the International Committee for Airspace Standards and Calibration (ICASC), I wish to express my sincere gratitude to the South African Civil Aviation Authority (SACAA) for hosting IFIS 2022. As noted in the introductory information for this event, this is the first to be held on the African continent, and only the second in our 38-year history to be held in the southern hemisphere!

We extend a heartfelt welcome to all of the delegates, sponsors and exhibitors attending this historic event. We know many of you have travelled far and wide in order to be here, your support and decision to invest your time and energy into attending is greatly appreciated.

The programme is packed with the latest technical and operational information related to flight inspection and flight validation, along with a rich introduction to South Africa and the local culture. Whether you are a long-time attendee or new to this event, we trust that this will be a rewarding experience, both professionally and personally.

Complimentary WiFi



Wireless internet connectivity is available in the plenary room and exhibition area to all the delegates:

Network name: Durban ICC Wifi
Password: Meetings@2020

Photography policy

Your presence at IFIS 2022 constitutes your agreement to be photographed, filmed, videotaped or otherwise recorded by the organising committee and its service providers. This agreement extends to the approval that your image or voice may be distributed in print or electronic communications media without any compensation being paid to you.

FEEDBACK

IFIS 2022 Quick Feedback Survey



SIDE EVENTS

NETWORKING COCKTAIL sponsored by Textron Aviation Special Missions

20 | 17:30 – 22:00
JUNE | Durban ICC –
2022 | Hall 2 Exhibition area

DRESS CODE Business Attire

RSVP Charmaine Shibambo
 Shibamboc@caa.co.za
 083 461 6052

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CULTURAL EVENING sponsored by SAFRAN

21 | 19:00 – 24:00
JUNE | Venue: Max's Lifestyle,
2022 | Umlazi

DRESS CODE Cultural Attire

RSVP Charmaine Shibambo
 Shibamboc@caa.co.za
 083 461 6052

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GALA DINNER sponsored by Aerodata

23 | 19:00 – 24:00
JUNE | Durban ICC – Hall 3
2022

DRESS CODE
 Black with African print

RSVP Charmaine Shibambo
 Shibamboc@caa.co.za | 083 461 6052

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INTERNATIONAL FLIGHT
INSPECTION SYMPOSIUM

DAY 1 | MONDAY, 20 JUNE 2022

SESSION 1 | OPENING CEREMONIES

Programme Director: **Ms Phindiwe Gwebu**, Executive: Corporate Services, SACAA

- 09:30** Welcoming Address
Ms Poppy Khoza, Director of Civil Aviation, SACAA
- 09:40** Opening Remarks, **Mr Onorio Rocca**, Deputy Chairperson, ICASC
- 09:45** Introduction of the Deputy Minister of Transport,
Mr Ernest Khosa, Board Chairperson, SACAA
- 09:55** Keynote Address, **Ms Sindisiwe Chikunga**, Deputy Minister of
Transport, South Africa
- 10:15 – 11:00** **Tea Break in Exhibition Hall**
- 11:00** Signature sponsor commercial presentation
Mr Thorsten Heinke, Aerodata
- 11:30** Gold sponsor commercial presentation
Mr Alexandre Beisbardt, SAFRAN
- 11:45** Silver sponsor commercial presentation
Mr Atle Holm, Norwegian Special Mission
- 12:00 – 13:30** **Lunch in Exhibition Hall**

SESSION 2 | TECHNICAL KEYNOTE SPEAKERS

Programme Director: **Mr Subash Devkaran**, Manager: General Aviation
Organisations, SACAA

- 13:30** Operational Space Weather Service Provision for the Aviation Sector
Dr Lee-Anne McKinnell
- 14:00** Doc 8071 VOLII Update (Rapporteur of CNT WG of ICAO NSP)
Mr Gary Berz
- 14:20** **Tea Break in Exhibition Hall**
- 15:00** ICASC Paper – Instrument Flight Procedures Validation Update
Mr Fabrizio Maracich

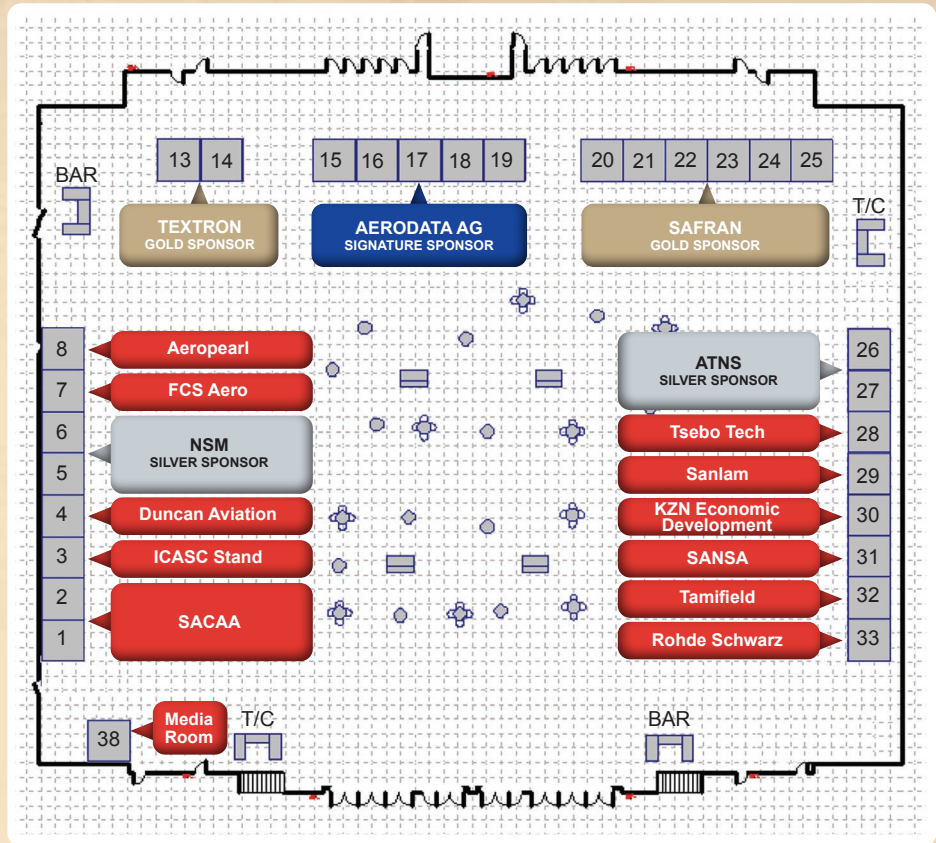
SESSION 3 | FLIGHT INSPECTION TECHNOLOGY

Moderator: **Mr Sigurd Bjelkarøey**

- 15:40** Modern Sat Navigation, what's beyond GPS L1 C/A?
Dr Mirko Stanisak & Mr Claus-Sebastian Wilkens
- 16:10** Determination of environmental VOR errors using aerial Doppler
cross-bearing measurements
Dr Ralf Eichhorn
- 17:30 – 22:00** **Surfs Up – Networking in Exhibition Hall**
This event is included with all registrations

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EXHIBITIONS



ELECTRONICS & DEFENSE

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DAY 2 | TUESDAY, 21 JUNE 2022

SESSION 3 CONTINUED | FLIGHT INSPECTION TECHNOLOGY

- 08:30** The future of technology, how can augmented reality be implemented in Flight Inspection?
Ms Anne Berntsen, Ms Synne B Johannessen
- 09:00** Development of high accuracy SFOL-DME and testbed results
Mr Euiho Kim
- 09:30** Navaid antenna pattern visualization for aviation safety incorporating multipath, *Mr Chad Mourning, Mr Simbo Odunaiya*
- 10:00 – 10:45** **Tea Break in Exhibition Hall**
- 10:45** Inertial technology; sensors, algorithms and integration
Dr Mirko Stanisak

SESSION 4 | UAV OPERATIONS AND FLIGHT INSPECTION APPLICATIONS

Moderator: Mr Fabrizio Maracich


- 11:15** Combining full wave electromagnetic simulations with UAV Multicopter measurements in order to improve VOR signal quality monitoring and interference prevention
Dr Mathias Fries
- 11:45 – 13:00** **Lunch in Exhibition Hall**
- 13:00** Unmanned aircraft system for flight inspection
Mr Claus Sebastian Wilkens
- 13:30** Pre-Flight Check NAV Aids Systems using UAV
Mr Ali Bagherian and Mr Mohammad Ramezani
- 14:00** Using UAV Multicopter as a complement to ILS/VOR ground and flight measurements, enabling flight check reduction
Mr Herve Demule, Mr Klaus Theissen, Mr Vagel Argyrakis
- 14:00 – 15:15** **Tea Break in Exhibition Hall**

SESSION 5 | FLIGHT INSPECTION MEASUREMENT TECHNIQUES

Moderator: Mr Asbjorn Madsen

- 15:15** Investigation of DME Multipath Propagation
Mr Mitsuhiro Maruhashi

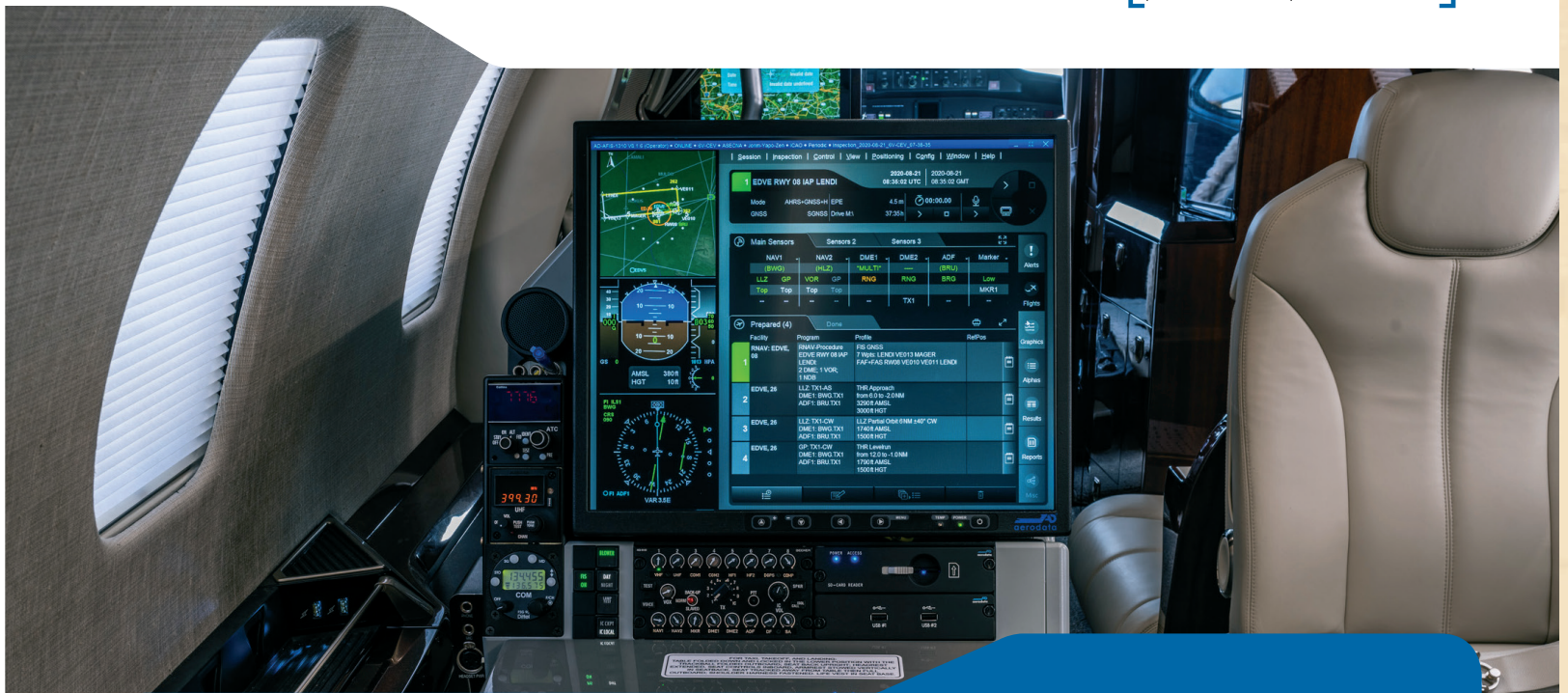
**Bus leaves at
17:15 to
Max's Lifestyle**

Cultural Evening sponsored by  **SAFRAN**
This event is included with all registrations

DAY 3 | WEDNESDAY, 22 JUNE 2022**SESSION 6 | PROCEDURE DESIGN AND VALIDATION****Moderator: Mr Tom Wede****08:30** Portable Flight Inspection System for Rotorcraft Instrument Flight Procedure Validation***Mr Adriano Rizzo Filippelli*****09:00** Flight Validation using Video Cameras***Mr Stefan Jagieniak*****SESSION 7 | EVOLUTION OF AIR NAVIGATION SYSTEMS AND LEGACY NAVAIDS****Moderator: Mr Asbjorn Madsen****09:30** Reengineering DME/N Integrity to support PBN***Mr Gerhard Berz, Mr Luca Saini*****10:00 – 10:45** **Tea Break in Exhibition Hall****10:45** Azimuth - Error prediction for VORs: The rigorous method and propagation model based on analytical approach***Dr Ralf Eichhorn, Dr Matthias Fries*****SESSION 8 | RADIO FREQUENCY INTERFERENCE (RFI)****11:15** RF Monitoring in Scope of ICAO and ITU***Dr Mirko Stanisak, Mr Rolf Seide*****11:45** GNSS RFI impact assessment on PBN Instrument Flight Procedure***Ms Florence Jacolot, Mr Vincent Rocchia*****12:15 – 13:45** **Lunch in Exhibition Hall****13:45** **PANEL DISCUSSION:**

Drones, where is their place in our industry?

Moderator: Mr Mike DiBenedetto,***Panel: Mr Herve Demule, Mr Gerhard Berz, Mr Brad Elliott*****15:15 – 16:00** **Tea Break in Exhibition Hall****Networking in Exhibition Hall****Free evening**



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DAY 4 | THURSDAY, 23 JUNE 2022

SESSION 8 CONTINUED | RADIO FREQUENCY INTERFERENCE (RFI)

08:30 Influence of New 5G Communication Interference on Flight Inspection
Mr Rolf Seide

SESSION 9 | PBN / RNAV AND GBAS INSPECTION

Moderator: Mr Morten Grandt

09:00 Improvements in GBAS VDB Testing
Dr Winfried Dunkel, Mr Klaus Theiben

09:30 Quantifying DME/N Multipath in the Context of PBN
Mr Okuary Osechas, Mr Maurizio Scaramuzza, Mr Gerhard Berz

10:00 – 10:45 **Tea Break in Exhibition Hall**

10:45 GBAS GAST-D Flight Inspection
Mr Claus-Sebastian Wilkens, Dr Mirko Stanisak

SESSION 10 | TRAINING AND CERTIFICATION

Moderator: Mr Floyd Badsy

11:15 Structured Training Plan for Certification of Flight Inspection Crews
Mr Glenn King

SESSION 11 | SAFETY MANAGEMENT SYSTEMS & CREW RESOURCE MANAGEMENT

Moderator: Mr Floyd Badsy

11:45 Collision Avoidance during Flight Inspection, *Mr Rolf Seide*

12:15 – 13:45 **Lunch in Exhibition Hall**

13:45 Human Factors and CRM: Increasing efficiency and managing errors within flight inspection mission by improving non-technical skills
Mr Andrea Gioia

14:15 Reducing the risk of bird strikes for low-level Flight Operations
Ms Isabel C Metz, Mr Markus Schwendener

14:45 Flight Inspection crew safety and emergency procedures training
Mr Vincent Rocchia

15:15 – 16:00 **Tea Break in Exhibition Hall**

16:00 Verification and Certification of Flight Inspection Systems
Mr Thorsten Heinke

18:00 Gala Dinner sponsored by



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DAY 5 | FRIDAY, 24 JUNE 2022

SESSION 12 | FIS INTEGRATION / INSTALLATION / CERTIFICATION

Moderator: Ms Florence Jacolot

- 08:30** Considerations for Ease of Flight Inspection System Integration, Installation and Certification, **Ms Tracy Bohaboj**
- 09:00** New aspects in FIS installation and certification, **Mr Rolf Seide**

SESSION 13 | STANDARDS (ORGANIZATIONAL, OPERATIONS SYSTEMS)

Moderator: Mr Adriano Filippelli

- 9:30** Common Data File Format, **Mr Stéphane Watier**
- 10:00** The definition of an XML Schema, JSON and API-REST for flight inspection reporting, **Mr Olivier Layly**
- 10:30** **Tea Break in Exhibition Hall**
- 11:15 – 11:25** Closing Remarks, **ICASC Deputy Chair Mr Onorio Rocca**

HIGH PERFORMANCE FOR PRECISE MISSIONS



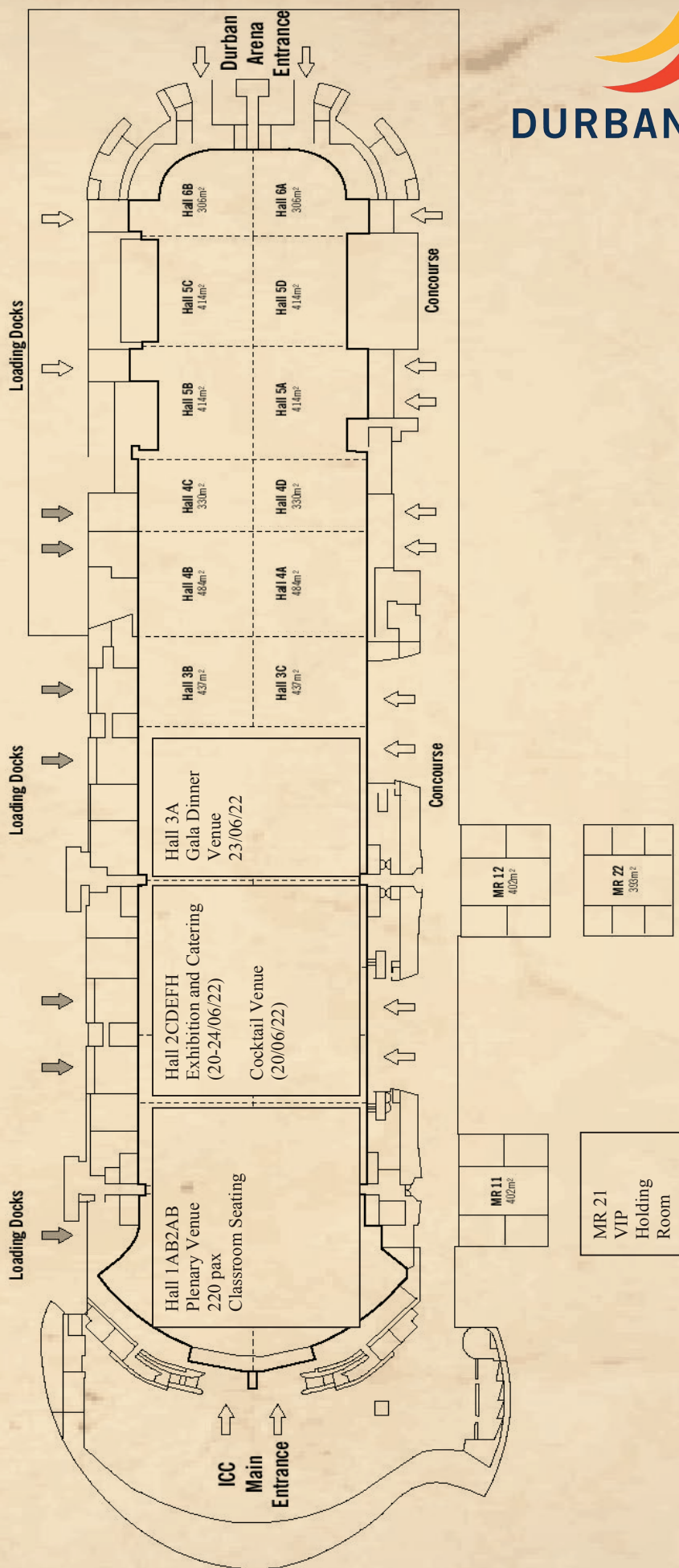
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