नागर विमानन मंत्रालय
MINISTRY OF CIVIL AVIATION

भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

ICAO APAC RADIO NAVIGATION SYMPOSIUM

GNSS RFI: Collectively Bridging Gaps and Shaping the Path Forward

7th – 9th April 2025 New Delhi, India

Mr. Loftur Jónasson

Chief of CNSS Section, ANB, ICAO HQ

Mr. Loftur Jonasson currently holds the position of Chief – Communications, Navigation and Surveillance, and, additionally, Acting Chief – Global Information Systems, at the International Civil Aviation Organization (ICAO).

Since joining ICAO in 2007, major responsibilities include Standards and Recommended Practices for aeronautical CNS systems, and aeronautical frequency spectrum management, as well as being the focal point for ICAO and aeronautical interests at the ITU World Radiocommunication Conferences and related international and regional WRC preparatory meetings. Secretary of the Aeronautical Communications Panel (ACP) 2007 – 2013. Secretary of the Frequency Spectrum Management Panel (FSMP) 2013 – 2024.

Prior to joining ICAO, 15 years of experience with various aeronautical radio- and telecommunication engineering tasks and projects, mainly in support of air/ground and ground/ground voice and data communications and surveillance applications in the North Atlantic region. Since 1996 an active member of the Aeronautical Communications Panel, including being the Rapporteur of two of its long-standing working groups.

Ms. Muna Alnadaf

Technical Officer CNSS , ANB, ICAO HQ

Mrs. Muna Alnadaf is a Technical Officer CNSS at ANB – ICAO Headquarters. Prior to joining ICAO HQ, she used to work as CNS Regional Officer at ICAO Middle East Office. Muna started her career in Jordan Civil Aviation Regulatory Commission (CARC) and held numerous positions, eventually Muna became the CNS director. Muna holds a BSc in electrical Engineering (Telecommunication & Computer), MBA/MIS degree, PGD in Project Management, and diploma in Aeronautical Telecommunication Engineering. She is also officially certified in PMP, CCNA, CCNP. Muna has over 22 years of experience in aviation.

Dr. Soniya Nibhani

Regional Officer ANS (CNS) Implementation, ICAO APAC ,

Dr. Soniya Nibhani joined the ICAO APAC Office as Regional Officer ANS (CNS) Implementation in 2020. Dr. Nibhani is leading several innovative ANS projects, including CRV and SWIM Implementation in Asia and the Pacific Region. She is the secretary of the CRV Operations Group, SWIM Task Force, and Aeronautical Communication System Implementation Support Group (ACSICG). In addition, she leads all CNS and information management-related projects in the ICAO Asia-Pacific Office. Before joining the ICAO APAC Office, she gained several years of experience working in multidisciplinary domains and fields such as UAS, CNS/ATM Systems, Safety management, and Satellite and Launch Vehicle Engineering.

Dr. Nibhani holds an advanced Master's degree in Air navigation System engineering & operations and a doctorate in diplomacy and International Affairs. She also has degrees in Electronics and Electrical Engineering.

Mr. Gerhard (Gary) Berz

Mr. Gary Berz serves as Vice Chair of ICAO Navigation Systems Panel, as well as Rapporteur of its Conventional Navigation Aids and Testing Working Group (CNTWG). He also chairs EUROCAE WG107, DME Infrastructure supporting PBN, and leads or contributes to a large variety of initiatives on GNSS RF interference mitigation and robust multi-sensor navigation development.

While working at EUROCONTROL for 18 years already, his professional experience includes skyguide, the Swiss Air Navigation Service Provider, the United States Naval Air Systems Command and RUAG Aerospace. He has obtained engineering degrees from Embry Riddle Aeronautical University and Ohio University (Avionics Engineering Center).

Mr. Awdhesh Kumar Tiwari

Deputy General Manager (CNS), AAI, India

Mr. Awdhesh Kumar Tiwari currently serves as Deputy General Manager (CNS-Communication, Navigation, Surveillance) in the GNSS Section under the Directorate of CNS Planning–I at Airports Authority of India (AAI). He holds a Bachelor's degree in Electronics and Communication Engineering and a Master's in Business Administration. Additionally, he is a Fellow of The Institution of Engineers (India). Since joining AAI on August 14, 1995, he has held key positions, contributing to aviation technology and safety advancements in India.

He played a vital role in the development and implementation of the GPS Aided GEO Augmented Navigation (GAGAN) system, a joint initiative of AAI and ISRO. Mr. Tiwari has been instrumental in establishing GAGAN Indian Uplink Stations (INLUS) in Bengaluru and Delhi. He played a pivotal role in calculating control loop and clock steering algorithms parameters during integration of GAGAN GEO satellites and contributed to GAGAN’s certification by DGCA India along with its subsequent upgrades.

In addition, he is involved in addressing GNSS interference issues, analyzing GNSS interference incidents as per DGCA-India Advisory Circulars. He has contributed to the rationalization of conventional navigation and surveillance systems in India in line with ICAO ASBU NAVS-B0/4 and further in the context of GNSS vulnerabilities.

Mr. Vipin Pandey

Manager (CNS), AAI, India

Mr. Vipin Pandey is currently serving as Manager (CNS–Communication, Navigation, Surveillance) in the GNSS Section under the Directorate of CNS Planning–I at the Airports Authority of India (AAI). He holds a Bachelor's degree in Electronics and Communication Engineering. After his induction in AAI in 2016, he showcased his expertise in conventional navigation aids at various CNS operational units.

Since September 2021, Mr. Pandey has been actively associated with the GPS Aided GEO Augmented Navigation (GAGAN) project. He has contributed significantly to the upgrades of the GAGAN Indian Reference Stations (INRES) and GAGAN certification renewal processes.

Additionally, he has been actively involved in the collation, processing, and analysis of GNSS

Interference Incident Reports received from various airlines and ATC units as per DGCA-India Advisory Circular on GNSS Interference in Airspace.

Mr. Makoto Fukuda

Special Assistant to the Director, JCAB, Japan

Mr. Makoto FUKUDA was graduated from Aeronautical Safety College in Tokyo in 1997, majoring in Air Traffic Safety Electronics.

Makoto FUKUDA is currently serving as a navigation Special Assistant to the Director at CNS Planning Office of the Japan Civil Aviation Bureau for 2 years and he is also participating in the NSP as an ICAO panel member. For the past 26 years has served as an Air Navigation Services Engineer for 12 years and Flight Inspector as a radio analyst for 11 years handling all aspects equipment of navigation, surveillance, and communications.

Mr. Mohd Fitri Bin Ishak

Deputy Director, CAAM, Malaysia

Mr. Mohd Fitri Bin Ishak is the Deputy Director of the Air Navigation Services Technical Division at the Civil Aviation Authority of Malaysia (CAAM), overseeing air traffic management, airspace policies, and the development of Communication, Navigation, Surveillance, and Air Traffic Management (CNS/ATM) systems. He leads the planning and procurement of CNS/ATM system equipment in Malaysia, including Navaids at airports nationwide. Additionally, he serves as the team leader for the implementation of Performance-Based Navigation (PBN) in Malaysia, driving efforts to enhance airspace efficiency and safety.

Beginning his career as an Air Traffic Controller in 2008, he has held key positions such as CNS Desk Officer and Head of Aeronautical Information Services, before advancing to his current role as Deputy Director, where he contributes to the modernization of Malaysia's aviation infrastructure. He has also been appointed by CAAM as the Co-Chairman of Malaysia's Airspace Technical Committee, working alongside the National Armed Forces, to oversee national airspace management and coordination. Additionally, he serves as the Chairman of the PBCS Taskforce Implementation in Malaysia, leading airspace management initiatives, international collaboration, and alignment with global aviation standards.

Mr. Michael C. Rizada

Mr. Michael C. Rizada is an experienced CNS Systems Officer by profession with more than 29 years of experience in the industry. Proven expertise in the implementation and maintenance of complex Communication, Navigation, Surveillance systems. Possesses a strong track record on leading cross-functional teams, managing projects and ensuring compliance with international aviation standards.

Mr. Rizada regularly participates in the ICAO APAC GBAS/SBAS ITF group, tasked to draft guidance documents on the implementation of Ground-based Augmentation Systems and Satellite-based Augmentation Systems in the Asia Pacific region.

Mr. Rizada is also currently engaged with JRANSA on a Japanese funded project titled, “GNSS Implementation Plan Training for ASEAN (GIPTA)”. Being the focal person in the Philippines for this project, he collaborates with Japanese experts and other stake-holders in-order to deliver the required scope of the project.

In his present role at the CAAP, he oversees government funded CNS-MET project implementation nationwide and ensures deliverables and compliance to standards.

Mr. Kyungwon Lee

Assistant Director, Navigation and Surveillance, MOLIT, ROK

Mr. Kyungwon Lee joined Ministry of Land, Infrastructure and Transport (MOLIT) of Republic of Korea in 2018 and is currently involved in NAVAID about Navigation and Surveillance. His current position is the Assistant Director, Navigation (ILS/VOR/ DME/SBAS) and Surveillance (Radar).

Mr. Minhyuk Son

Researcher, Korea Aerospace Research Institute (KARI), ROK

Mr. Minhyuk Son joined Korea Aerospace Research Institute (KARI) in 2011 and is currently involved in the Korea Augmentation Satellite System (KASS) operation program. He is in charge of developing KASS's safety operation technology.

Captain Abhas Gupta

Assistant Chief Pilot-Flight Ops, IndiGo

Captain Abhas Gupta is an aviation professional with over 20 years of experience, blending his engineering background with his role as a pilot and Type Rated Instructor on the A320 family.

As Assistant Chief Pilot – Technical at IndiGo, he leads efforts to enhance pilot understanding of complex aircraft systems and operational challenges.

He has been instrumental in tackling GNSS interference by analyzing its impact on operations, collaborating with stakeholders, and improving pilot readiness.

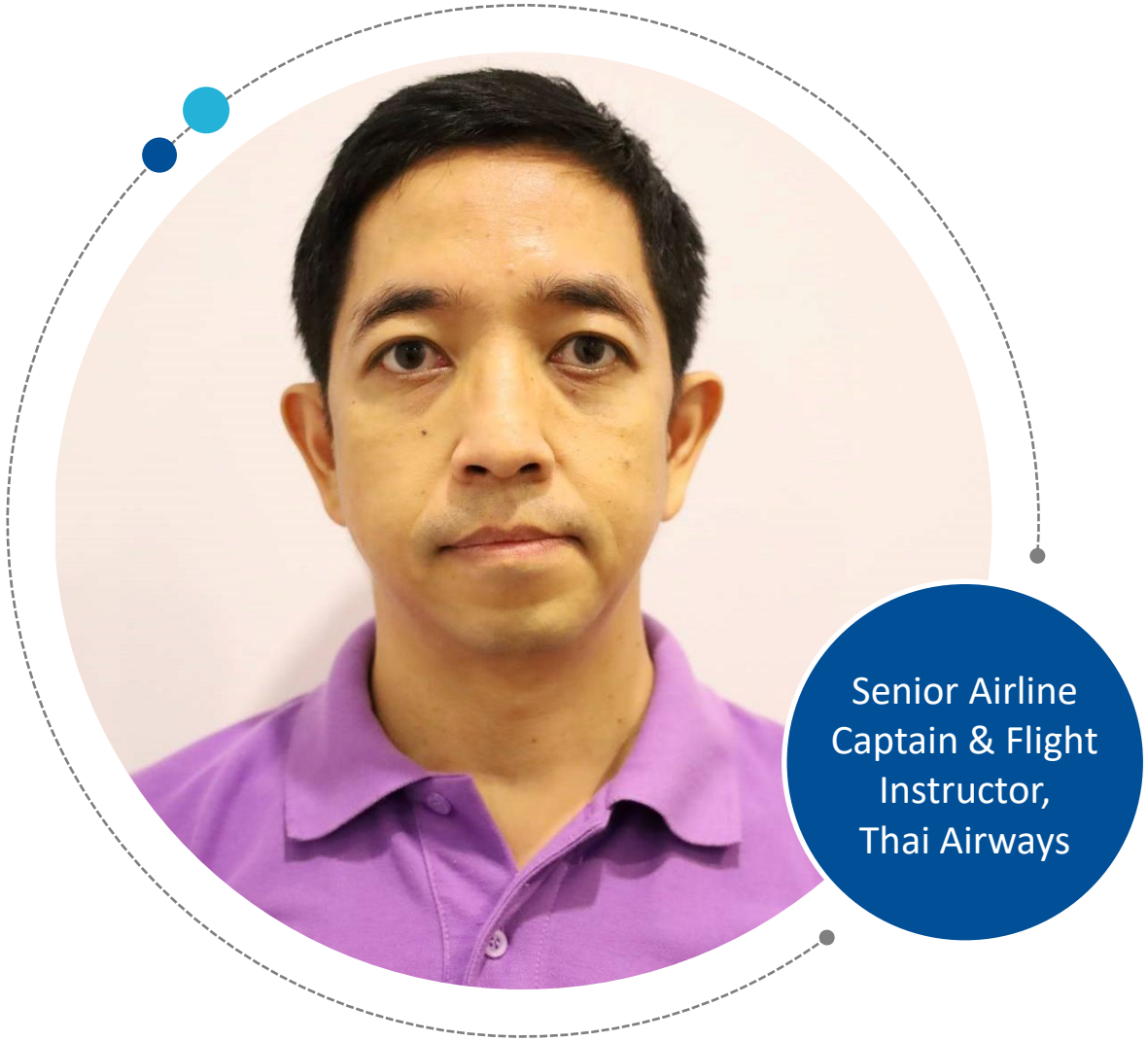
At this ICAO symposium, Capt. Gupta will share practical strategies to mitigate GNSS interference, drawing on real-world airline experiences and emphasizing the importance of pilot preparedness in degraded navigation scenarios.

Mr. Surinder Pal Singh Narli

Director of Air Traffic Management, IndiGo

Mr. Surinder Pal Singh Narli is a distinguished aviation professional with over 40 years of experience, beginning in Air Traffic Control in 1984. As the current Director of Air Traffic Management at IndiGo, he has played a key role in bridging communication among pilots, controllers, and regulatory authorities, including the Air Force and Navy, to enhance airspace optimization and airport infrastructure across India. He has also contributed to IndiGo’s operational growth through airport surveys and feasibility studies, while promoting safety innovations such as Alphanumeric Callsigns. Recognized for his dedication to sustainable aviation, Mr. Narli became the first Indian to receive the Blue Sky Jury Award in 2024 for his leadership in zero-carbon initiatives. Through his legacy of innovation and collaboration, Mr. Narli continues to shape the future of India's aviation landscape.

Captain Treekun Treeriya



Captain Treekun Treeriya is a senior airline captain and flight instructor at Thai Airways International, currently operating both Boeing 777 and 787 aircraft. With over two decades of experience in commercial aviation, he has been actively involved in various training programs including type transition, command upgrade, and difference courses.

He began his aviation career after graduating from the Royal Thai Air Force Academy and has continuously contributed to flight operations and flight crew training development. He also work closely with regulatory authorities to ensure training programs align with ICAO and EASA standards.

In recent years, he has taken a special interest in enhancing pilot awareness and response strategies regarding GPS Interference, Spoofing, and Degradation of GNSS signals. Capt. Treeriya has been directly involved in the development and implementation of GPS Interference Training and Prevention programs, focusing on real-world case studies, simulator-based scenarios, and procedural mitigations to ensure safe and effective flight operations in compromised navigation environments.

Mr. John Moore

Assistant Director, Flight & Technical Operations, IATA ASPAC

Mr. John Moore has more than 35 years' combined experience in Air Traffic Management (ATM), representation of international airlines, and related operational support, safety and management roles in the aviation industry. In addition to a broad career as an Air Traffic Controller, John worked extensively in roles of Project Director and Senior Management within Airservices Australia. John was also the Australian member on the ICAO ATM Requirements & Performance Panel (ATMRPP) for five years.

He has a Diploma of Applied Science in Aviation Studies, and a Commerce Degree from the University of New England with majors in Accounting and Management Information Systems. He also graduated from the Melbourne Business School Senior Leadership Program at Mt Eliza campus.

For the past 9 years John has been in his current role covering all aspects of CNS/ATM operations, infrastructure and concepts for Asia Pacific from IATA's Singapore office. John works in a broad field of international airline and Air Traffic Management activities, as well as projects and safety related issues, through extensive engagement with Air Navigation Service Providers (ANSPs), Regulators and international agencies. John also currently represents international airlines on several ICAO Working Groups and Task Forces in the ICAO Asia & Pacific (APAC) region.

Mr. Ajit Mate

Mr. Ajit Mate is a retired Wing Commander from the Indian Air Force with over 2500 flying hours in the Transport Fleet of the IAF as a Flying Navigator. He spent 21 years with the IAF during which commanded two Shoulder Fired Missile units and one Air Defense Training School abroad (Sri Lanka), which he helped set up and operationalize. While with the IAF he was a qualified Missile Defense Instructor on Surface to Air Guided Weapon Systems.

Over twelve years with Boeing India, he spent the first 5 years on the Defense side of the business as an Operations Analyst and Subject Matter Expert for Aerospace Experimentation with Phantom Works, India.

Working as the Lead System Engineer Air Traffic Management with the Boeing Research and Technology team in Bengaluru presently. He was part of the Communication, Navigation, Surveillance and Air Traffic Management Modernization Roadmap project that Boeing conducted for the Government of India (Airports Authority of India). He is a Subject Matter Expert in the field of Air Traffic Management, Air Navigation, Air Defense and is currently engaged in multiple ongoing projects and programs related to Airspace Operational Efficiency. His current areas of interest include Unmanned Aerial Systems (UAS) Traffic Management (UTM), Urban & Advanced Air Mobility Solutions for Indian cities and safe integration of future modes of air transport into existing ATM network across the Indian National Airspace System (NAS).

Mr. Massimiliano Ferla

Mr. Massimiliano Ferla is based in Thales Italy where he is covering the role of Product Line Manager for Navigation Aids & Non Radar Surveillance.

Massimiliano Ferla has worked for Thales for many years in Navigation aids systems and Non-Radar Surveillance equipment.

He was formerly the Product Manager for Landing systems and the Systems Engineering Manager for Navigation aids products.

Mr. Ken Alexander

Mr. Ken Alexander is the FAA's Chief Scientific and Technical Advisor (CSTA) for Satellite Navigation Systems, with over 45 years of aviation experience in aircraft and avionics engineering, program management, flight tests, and international policy. Mr. Alexander provides technical advice on requirements, design, performance, radio-frequency spectrum, and policy issues for Global Navigation Satellite Systems (GNSS).

Mr. Alexander's significant technical contributions ensure continued backwards compatibility, improved performance, delivery of new capabilities, and protection of GPS/GNSS avionics systems from spectrum interference. He was instrumental in development of the initial 2004 National Space Based Positioning, Navigation, and Timing (PNT) Policy.

He is Vice Chair of the ICAO Navigation Systems Panel, and he co-chairs the U.S. and European Union working group on GNSS modernization. He also serves as the Department of Transportation's Senior Advisor for the National Space-Based PNT Executive Committee and as the Civil Co-chair of the National PNT Engineering Forum (NPEF) with his U.S. Space Force counterpart. He is a principal author of Executive Order 13905, Strengthening National Resilience Through Responsible Use of PNT Services. He has over 3,500 flight hours as a U.S. Air Force transport pilot.

Mr. Mohammad Mandora

Mr. Mohammad A. Mandora is an aviation engineering leader with over 15 years of experience across ANSP and MRO environments. As Communication and Navigation Engineering Manager at Saudi Air Navigation Services (SANS), he leads the development, modernization, and performance oversight of CNS infrastructure nationwide, directly supporting the integrity and reliability of GNSS-based operations.

He specializes in delivering end-to-end engineering services, overseeing the design, deployment, and upgrade of CNS systems, and driving strategic vendor management to enhance system resilience and availability. His leadership has guided major national initiatives, including a multibillion-riyal infrastructure master plan and a strategic sourcing program focused on innovation and cost efficiency.

He is dedicated to advancing aviation technology, strengthening stakeholder alignment, and ensuring compliance with ICAO and GACA standards. He holds an MBA, a BSc in Electrical Engineering, and certifications in leadership, project management, and safety.

Mr. Khalid Alhazmi

CNS Project Manager, Saudi Air Navigation Services (SANS), Saudi Arabia

Mr. Khalid Alhazmi is working in the Air Navigation field projects for 17 years, for developing and promoting the systems and designs of the Communications, Navigations and Surveillance. Working in the assessment of the airspace capabilities and coverage to increase the air traffic flow by optimizing the ANS means and technologies.

With 17 years of expertise in overseeing and delivering complex projects in the field. His background includes managing critical aviation infrastructure, ensuring compliance with industry standards, and leading teams to enhance air traffic management systems.

He is skilled in stakeholder management, risk assessment, and optimizing project workflows to meet regulatory and industry requirements. His leadership and technical acumen contribute to the advancement of air navigation capabilities, supporting safer and more efficient airspace operations.

Mr. Diego Albert

Director of APAC Sales, Aireon

Mr. Diego Albert is the Director of Sales for Asia at AIREON, based in Singapore, promoting the application of satellite-data driven technologies while tackling new challenges in the Aviation industry in Asia.

With over 15 years of experience in Aviation and strong focus in Asia, Diego consolidates a background in Air Traffic, Civil Aviation and Airlines with an active participation in regional ICAO working groups.

Prior to Aireon, Diego held key roles at IATA, SITA, and INDRA, based in Singapore, Malaysia and China, leading the development and implementation of air traffic solutions across Asia.

Diego holds a Bachelor’s degree in Computer Systems Engineering by the University of Alicante and an Executive MBA by Lancaster University.

Dr. Sai Kalyanaraman

Dr. Sai Kalyanaraman is a Principal Technical Fellow at Collins Aerospace and leads enterprise-wide spectrum, RNSS and resilient PNT efforts and chairs multiple industry groups on spectrum management and standards development for navigation systems. He led Collins' first open service GNSS chipset design and development of high integrity certified GPS solutions.

He chairs the RTX Spectrum Council and leads multiple efforts in the areas of spectrum management and compatibility assessments. He also serves as an enterprise representative to ICAO, NDIA, AIA and RTCA/Eurocae, has more than a dozen publications and co-authored a chapter on GPS in the Digital Avionics Handbook.

Mr. Jorge Alberto Ciccorossi

Head of the Space Strategic & Sustainability Issues Division (SSSI), ITU

With over 25 years of experience in satellite communications and regulations at international level, Mr. Ciccorossi is the Head of the Space Strategy and Sustainability Division at the ITU Radiocommunications Bureau. Mr. Ciccorossi advises ITU Member States, Sectors Members and ITU intersectoral groups on technical regulatory matters of space services, including those related to space sustainability activities in the context of ITU and the Radiocommunication Bureau. Mr. Ciccorossi advises ITU Member States, Sectors Members and ITU intersectoral groups on technical regulatory matters of space services, including those related to space sustainability activities in the context of ITU and the Radiocommunication Bureau. He holds the degree of engineer in electronics from the National University of Technology (UTN) in Buenos Aires, an Executive Certificate in Management and Leadership from the Massachusetts Institute of Technology in the US, and has studied satellite communications and spacecraft design at the University of Surrey in the UK.

Dr. Chilaka Mahesh

Airport Director, Kalaburagi Airport, AAI, India

Dr. Chilaka Mahesh is a seasoned expert in Communication, Navigation, and Surveillance (CNS) systems with over 18 years of experience in aviation infrastructure, air traffic surveillance, and signal processing. As DGM (CNS) and Airport Director at Kalaburagi Airport, he has played a pivotal role in enhancing air navigation safety through ADS-B deployment, ILS installation, and GNSS integrity analysis. His contributions include developing reliability assessment tools for CNS systems, mitigating GNSS radio frequency interference (RFI), and integrating AI for performance optimization. A published researcher with works in IEEE, Elsevier, and Springer, he has also led Proof-of-Concept projects on cloud-based ADS-B data sharing and smart aviation infrastructure.

Mr. Ho Wee Sin

Dy. Director (ATM)
Dy. Director (Standards & Capability Development), CAAS, Singapore

Mr. Ho Wee Sin is a telecommunication engineer in the Civil Aviation Authority of Singapore since 2004. He has deep knowledge in surveillance technology, including ADS-B. He has been active in various ADS-B forum since 2007 and one of the key personnel to operationalize ADS-B in Singapore. He is currently a member of the ICAO Surveillance Panel and one of the co-chairs for the ICAO Asia Pacific Surveillance ICG.

Mr. Michele Carandente

Mr. Michele Carandente is the Deputy VP of Air Traffic Services for Aireon, overseeing sales and customer interactions between Aireon and ANSPs around the world.

He has been an instrumental part of Aireon, joining the company since its foundation, and participating actively in their strategical, operational and technical implementations.

With over 18 years in CNS ATM technology domains, Michele started his professional career as an Engineer in several industries. Prior to Aireon, he worked in different roles at ENAV, the Italian ANSP and one of the Aireon shareholders, where his la oversaw CNS International Strategies.

Michele holds a M.Sc. in Telecommunications and Software Engineering by Università degli Studi di Napoli Federico II (Italy).

Mr. Shunichi Futatsumori

Mr. Shunichi Futatsumori received the B.E. and M.E. and Ph.D. degrees in electronics and information engineering from Hokkaido University, Sapporo, Japan, in 2004, 2006 and 2009, respectively. From 2008 to 2009, he was a Research Fellow of the Japan Society for the Promotion of Science. In 2009, he joined the Electronic Navigation Research Institute (ENRI), Japan, where he has been engaged in the research of millimeter-wave radar systems and electromagnetic compatibility (EMC) issues including potable electronics devices EMC issues, radio altimeter interference due to 5G mobile systems. He is currently a principal researcher of ENRI.

Mr. Hiroshi Futakami

Special Assistant to the Director, JCAB, Japan

Mr. Hiroshi FUTAKAMI was graduated from Aeronautical Safety College in Tokyo in 1995, majoring in Air Traffic Safety Electronics, and then worked as an Air Traffic Safety Electronics Personnel for three years, mainly as a specialist in Navigation System operations. After that, he was boarding on a flight inspection aircraft as a radio analyst of flight inspection in Operations and Flight Inspection Division JCAB, and also as an avionics specialist. He is Currently a Special Assistant to the Director of the Division Aeronautical Information and Flight Inspection Planning Office, Japan Civil Aviation Bureau. He has worked in flight inspection for a total of 21 years, including his current position, and during that time has been involved in the large-scale upgrades and procurement of flight inspection aircraft, as well as the introduction of drones for flight inspection.

Mr. Riza Faizal

Assistant VP of Communication Facility Planning, AirNav Indonesia

Mr. Riza Faizal is a professional with 30 years of experience in air navigation services, specializing in communication and navigation systems. As a Manager in the Directorate of Engineering at AirNav Indonesia, he leads the planning and development of CNS infrastructure programs across the Indonesian Flight Information Region. His expertise includes communication, navigation aids, and the transition towards IP-based technologies, focusing on enhancing system reliability and efficiency. Played a key role in modernizing Indonesia's aviation infrastructure to meet international safety and performance standards.

Mr. Dedy Iskandar

Data Processing and Surveillance Facility Planning, AirNav Indonesia

Mr. Dedy Iskandar graduated from the Indonesian Civil Aviation Institute in 2006 and has over 17 years of experience in aviation, specializing in navigation and surveillance within the Air Navigation Service Provider (ANSP) sector. He spent 13 years as a Field Engineer, managing the maintenance and operation of navigation and surveillance systems. Over the past four years, he has taken on key roles at the headquarters, focusing on CNS Facility Readiness and CNS Facility Planning.

Thank You!

ICAO