

25–26 April 2024, Prague

NTCA 2024

New Trends in Civil Aviation

24th International Conference

Day 1: Thursday 25. 4. 2024

08:30	Location Opens / Registration Starts
09:30	Opening Speech
09:40–11:00	Session 1: Information and Communication Technologies Detecting Outlier Positions in Publicly Available ADS-B Data Sets (Lukes P.) Assessing the Vulnerability of Aviation Systems to GNSS Meaconing Attacks (Steiner J.) Comparing 868 MHz and 433 MHz Frequencies for Rotary Antenna Tracking in UAVs: Theoretical Framework and Empirical Validation (Velky P.) Digital Twin ConOps for Airport Master Planning (Siddiqui F. M.)
11:00–11:20	Coffee Break
11:20–11:30	Partners's Presentation
11:30–12:00	Keynote Speaker: Angela C. Albritton (Embry-Riddle Aeronautical University, ALICANTO)
12:00–13:20	Session 2: Air Transport Operations Operational Personnel Training For European Airlines (Nommik A.) Insight into the future navigation with a focus on small airports (Gedrova N.) Analyzing Sustainability Initiatives of the Airline Industry Through Random Forest Classification and K-Means Clustering Techniques (Dahanayaka M.) Sustainable Alternatives in Mitigating Carbon Footprints in the Flight Training of Aviation Schools (Casupang I. L.)
13:20–14:20	Lunch
14:20–14:50	Keynote Speaker: Fabrice Drogoul (EUROCONTROL) Fatigue in Air Traffic Control Ops Rooms and Towers
15:00–16:20	Session 3: Aviation Safety and Security, Human Factors and Ergonomics in Aviation Harmonizing Safety Perspectives: Integrating STPA and MBSA for Comprehensive Aircraft Safety Assessment (Chopart M.) An expert system to manage Call Sign Similarity (CSS) for safer air traffic operations (Lombardi M.) Neutral Safety Taxonomy Utilization at Air Transport Operator (Sudoma M.) A Review of The Current Technological Options for Reducing The Risk of In-flight Medical Emergencies and Potential Flight Diversions in Epilepsy Patients Cases (Smahi H.)
16:20–16:40	Coffee Break
16:40–17:10	Poster session
17:10–18:50	Session 4: Air Traffic Management and Economic Aspects Simulation Tool for Estimation of Air Traffic Distribution (Kavka M.) Analysis of the methods of flight clearance entry and the impact on the efficiency of air traffic control provision (Schmidt S.) Reshaping Strategies of the European Air Transport Network After Covid-19: A Complex Network Theory Analysis (Aldemir H. O.) Who Leases the Aircraft? (Trasberg V.) Exploratory Data Analysis and Prediction of Passenger Satisfaction with Airline services (Simon Shepherd B. T. L.)
19:00	Reception



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Day 2: Friday 26. 4. 2024

09:30 Location Opens

09:40–11:20 **Session 5: Unmanned Aerial Systems**

Concept for a Decentralized Tactical Conflict Management in a U-space Ecosystem (von Ronn L.)

Safety of UAV Operations Around Base Transceiver Stations: Field Measurements and Analysis of Electromagnetic Interference (Dianovsky R.)

Harmonising Drone Regulations across the EU and Challenges Ahead (Hlavata M.)

Hyperlocal weather information for drone operations (Balazova R.)

Detection of Laser Beams Aimed at Aircraft in Flight (Hospodka J.)

11:20–11:40 Coffee Break

11:40–12:10 **Keynote Speaker: Přemysl Volf (AgentFly Technologies)**
Flight Centric ATC

12:20–13:20 **Session 6: Air Transport Operations, Aircraft Technologies and Advanced Materials**

Estimating Aircraft Take-Off Roll Time Using ADS-B Data (Stloukal B.)

Utilizing Advanced Regression Techniques to Forecast Atmospheric Visibility at Subang and Langkawi International Airports (Bin Jamaludin W. M. R.)

Proposal of Advanced Signal Processing Techniques for condition Monitoring of Critical Aero Engine Components: Methodology and Benchmarking (Hruz M.)

13:20–14:20 Lunch

14:20–16:20 **Session 7: Unmanned Aerial Systems**

Comparison of parameters of inertial measurement units suitable for unmanned aerial vehicle control (Breda R.)

Validation of Wind Wall Suitability for Evaluating Characteristics of UAV Propulsion Systems (Urban D.)

Analysis of Static Characteristics of the Sensory Part of the UAV Parameters Measurement System (Polakovic A.)

Analysis of duplicate UTM services and their context of influence on airspace capacity (Kleczatsky A.)

Drone e-ID Vulnerability to GNSS Interference (Steiner J.)

AMIHAN: Conceptualization of an Unmanned Aerial Vehicle for Meteorological Applications and Systematic Observations (Ong M.)

16:20–16:40 Coffee Break

16:30–16:50 Poster Session

16:55 **Best Presentations Awards Announcement & Closing Speech**



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Poster Session

- Hydrogen as one of the Future Alternative Fuels in Aviation - Review (Jencova E.)
- Modeling ATC clearance delivery operation as queueing system with deterministic and stochastic service times (Dorda M.)
- Study of Efficiency of European Groups of Airlines using Input-Oriented DEA Model (Endrizalova E.)
- Hybrid Mathematical Model of Risk Assessment of UAV Flights over Airports (Polishchuk V.)
- Development Of Agent-based Air Traffic Control Logic For Airport Airside Simulation Model (Had P.)
- Study of interchangeability of helicopter Mi-171 fuel tanks to improve operational safety (Graf V.)
- Systemic Safety Recommendations for Maintenance of Microlight Aircraft in the Czech Republic (Guskova N.)
- Evaluation of the Pilot's Mental Workload during a Real Flight Based on Heart Rate Measurement with a Smartwatch (Prochazkova H.)
- Susceptibility to Flight-Simulator Induced Runway Width Visual Illusion (Socha V.)
- Usability of weather system for general aviation (Jevcak J.)
- Pilots' Physiological Responses to Specific Sound Frequencies (Kalivodova M.)
- Demonstrating of U-space Benefits for Safety by Using MEDUSA (Cerny M.)
- Exploring Vibrations of UAV Propellers: A Preliminary Study for Characterization and Fault Detection (Hylmar K.)
- Analysis of the ILS Antenna Systems Impact in the Process of UAS Deployment Into Airport Infrastructure (Pecho P.)

Venue

Czech Technical University in Prague
Czech Institute of Informatics, Robotics
and Cybernetics (CIIRC)
Jugoslávských partyzánů
1580/3 160 00 Prague 6, Dejvice

Contact information

In case of any questions or suggestions do not hesitate to contact the conference Organizing committee:

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