

Preface	vii
Committees	ix
Hybrid Mathematical Model of Risk Assessment of UAV Flights over Airports <i>Volodymyr Polishchuk, Miroslav Kelemen, Martin Kelemen Jr., Matej Scerba</i>	11
Detecting Outlier Positions in Publicly Available ADS-B Data Sets <i>Petr Lukes, Michael Matejovie</i>	19
An Expert System to Manage Call Sign Similarity for Safer Air Traffic Operations <i>Manuel Lombardi, Giulio Di Gravio, Antonio Licu, Riccardo Patriarca</i>	27
Evaluation of the Pilot's Mental Workload during a Real Flight Based on Heart Rate Measurement with a Smartwatch <i>Hana Prochazkova, Miroslav Splichal, Jiri Chlebek</i>	35
Who Leases the Aircraft? <i>Viktor Trasberg</i>	41
Demonstrating of U-space Benefits for Safety by Using MEDUSA <i>Richard Volf, Michal Cerny, Tomas Tluchor</i>	47
Susceptibility to Flight-Simulator Induced Runway Width Visual Illusion <i>Vladimir Socha, Lubos Socha, Lenka Hanakova, Peter Hanak, Dmitriy Gobofov, Umer Asgher</i>	53
Concept for a Decentralized Tactical Conflict Management in a U-space Ecosystem <i>Luca von Roenn, Timo Hackel, Nemo Juchmann, Tobias Grebner, Daniel Kloock-Schreiber, Tim Tiedemann, Volker Gollnick, Rinie Akkermans, Alexander Fay</i>	59
Hyperlocal Weather Information for Drone Operations <i>Renata Balazova, Jiri Hlinka, Assia Belbachir, Jiri Svoboda</i>	67
Evaluation of a Selected Weather System for General Aviation <i>Jan Jevcak, Martin Kelemen, Anton Korniienko</i>	75
EAnalysis of Duplicate UTM Services and Their Context of Influence on Airspace Ca- pacity <i>Adam Kleczatsky, Jakub Kraus</i>	81

Hydrogen as One of the Future Alternative Fuels in Aviation - Review <i>Iveta Vajdova, Edina Jencova, Peter Koscak</i>	89
UAV Tracking in Lower Stratospheric Flight: A Low Cost Pilot Solution and Verification of Functionality <i>Patrik Velky, Pavol Pecho, Robert Dianovsky, Michal Hruz</i>	99
Digital Twin ConOps as a Platform for Airport Master Planning <i>Fahad Masood Siddiqui, Christopher John Mead</i>	105
Study of Efficiency of European Groups of Airlines Using Input-Oriented DEA Model <i>Eva Endrizalova, Radoslav Zozulak, Samuel Hornik</i>	113
Detection of Laser Beams Aimed at Aircraft in Flight <i>Anna Polanecka, Katerina Novackova, Teodor Balaz, Stepan Rydlo, Dusan Kolar</i>	119
Proposal of Advanced Signal Processing Techniques for Condition Monitoring of Critical Aero Engine Components: Methodology and Benchmarking <i>Michal Hruz, Dominik Mrakvia, Pavol Pecho, Patrik Velky</i>	125
Safety of UAV Operations Around Base Transceiver Stations: Field Measurements and Analysis of Electromagnetic Interference <i>Robert Dianovsky, Pavol Pecho, Michal Hruz, Patrik Velky</i>	133
Analysis of the ILS Antenna Systems Impact in the Process of UAS Deployment into Airport Infrastructure <i>Pavol Pecho, Robert Dianovsky, Michal Hruz, Patrik Velky</i>	141
Pilots' Physiological Responses to Specific Sound Frequencies <i>Lenka Hanakova, Michaela Kalivodova, Katerina Vranova, Karel Hylmar, Daniel Urban, Vladimir Socha</i>	147
Analysis of Static Characteristics of the Sensory Part of the UAV Parameters Measurement System <i>Jozef Novotnak, Martin Filko, Zoltan Szoke, Jaroslav Kessler, Adam Polakovic</i>	153
Comparison of Parameters of Inertial Measurement Units Suitable for Unmanned Aerial Vehicle Control <i>Robert Breda, Rudolf Andoga, Martin Schrotter, Adam Polakovic</i>	159
Simulation Tool for Estimation of Air Traffic Distribution <i>Martin Kavka, Tereza Topkova</i>	165
Investigating Strategies of the European Air Transport Network After Covid-19: A Complex Network Theory Analysis <i>Cem Ersoz, Huseyin Onder Aldemir</i>	171
Analyzing Sustainability Initiatives of the Airline Industry Through Random Forest Classification and K-Means Clustering Techniques <i>Thamindu Gambheera Arachchi, Mahekha Dahanayaka, H. Niles Perera</i>	179

Utilizing Advanced Regression Techniques to Forecast Visibility at Subang and Langkawi International Airport	
<i>W. M. R. Jamaludin, W. M. Wan Mohamed, N. H. Nik Ali, N. A. M. Isa</i>	185
Neutral Safety Taxonomy Utilization at Air Transport Operator	
<i>Marek Sudoma, Jakub Malik, Vladimir Plos</i>	191
Estimating Aircraft Take-Off Roll Time Using ADS-B Data	
<i>Bo Stloukal, Jakub Hospodka</i>	197
A Review of The Current Technological Options for Reducing The Risk of In-flight Medical Emergencies and Potential Flight Diversions in Epilepsy Patients Cases	
<i>Hichem Smahi</i>	203
Drone e-ID Vulnerability to GNSS Interference	
<i>Jakub Steiner, Michal Cerny</i>	207
Assessing the Vulnerability of Aviation Systems to GNSS Meaconing Attacks	
<i>Jakub Steiner, Stanislav Pleninger, Jakub Hospodka</i>	213
Operational Personnel Training for European Airlines	
<i>Allan Nommik, Karl-Eerik Unt, Heliise Unt</i>	219
Modeling ATC Clearance Delivery Operation as a Queueing System with Deterministic and Stochastic Service Times	
<i>Rostislav Stryk, Michal Dorda</i>	225
Insight into the Future Navigation with a Focus on Small Airports	
<i>Nikola Gedrova, Sebastian Cikovsky, Lucia Melnikova, Lenka Stanislavova</i>	233
Systemic Safety Recommendations for Maintenance of Microlight Aircraft in the Czech Republic	
<i>Natalia Guskova, Matous Adam, Oldrich Stumbauer</i>	241
Exploring Vibrations of UAV Propellers: A Preliminary Study for Characterization and Fault Detection	
<i>Karel Hylmar, Daniel Urban, Vladimir Socha</i>	247
Validation of Wind Wall Suitability for Evaluating Characteristics of UA Propulsion Systems	
<i>Daniel Urban, Karel Hylmar, Stanislav Kusmirek</i>	253
Harmonizing Safety Perspectives: Integrating STPA outputs into MBSA for Comprehensive Aircraft Safety Assessment	
<i>Max Chopart, Julien Vidalie, Andrej Lalis, Katerina Grotschelova</i>	261
Harmonising Drone Regulations Across the EU and Challenges Ahead	
<i>Martina Hlavata, Jakub Kraus</i>	269
Analysis of the Methods of Flight Clearance Entry and the Impact on the Situational Awareness of Air Traffic Control Operators	
<i>Stanley Schmidt, Denis Tagunkov, Terezia Pilmannova, Vladimir Machula</i>	275

Study of Interchangeability of Helicopter Mi-171 Fuel Tanks to Improve Operational Safety	
<i>Pavel Stanek, Vojtech Graf, Ondrej Vehovsky</i>	283
Development of Agent-based Air Traffic Control Logic For Airport Airside Simulation Model	
<i>Petr Had, Petra Mihalova, Slobodan Stojic, Jiri Volt, Jana Kuklova</i>	287
Exploratory Data Analysis and Prediction of Passenger Satisfaction with Airline Services	
<i>Maham Salah-Ud-Din, Blessy Trencia Lincy.S.S, Hannah Al Ali</i>	295
Author Index	303