



NEW TRENDS IN AVIATION DEVELOPMENT 2020

15th INTERNATIONAL SCIENTIFIC CONFERENCE

High Tatras, Slovakia

Grand hotel Starý Smokovec



New trends in aviation development 2020

17.09.2020 – The High Tatras, Grand hotel Starý Smokovec

- 10:00 – 12:00 Registration
- 12:00 – 13:30 Lunch
- 13:30 – 13:45 Opening – Dean of the Faculty of Aeronautics,
Technical University of Košice - Dr.h.c prof.h.c. assoc. prof.
Stanislav Szabo PhD., MBA, LL.M.**
- 13:45 – 14:30 Session 1 - Session Chair - R. Andoga**
- 13:45 – 14:00 Deformation States of the Selected Mechanical
Component during the Harmonic Analysis
*M. Spodniak, K. Semrád, M. Hovanec,
Samer A. S. Al-Rabeei, F. Heško*
- 14:00 – 14:15 Discussion on blockchain applications in unmanned aerial
systems domain
*M. Košuda, P. Lipovský, W. Yang, M. Bai, J. Novotňák,
Z. Szöke*
- 14:15 – 14:30 Meteorological satellites and their impact on transport
systems in the field of weather forecasting
*P. Šváb, M. Spodniak, P. Korba, M. Hovanec,
S. A. S. Al-Rabeei*
- 14:30 – 14:45 Coffee and hygienic break**
- 14:45 – 15:30 Session 2 - Session Chair – M. Košuda**
- 14:45 – 15:00 Longitudinal UAV motion with plugged error model of
angular velocity sensor
D. Megyesi, R. Bréda, J. Leško
- 15:00 – 15:15 Verification of a UAV's mathematical mode
J. Leško, R. Andoga, M. Schrötter, D. Megyesi



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- 15:15 – 15:30 The identification of scientific issue and the circadian rhythm research concept for ATCO work performance
H. Némethová, D. Neštrák, P. Szabo, F. Balla, P. Kalavský, M. Antoško
- 15:30 – 15:45 Coffee and hygienic break**
- 15:45 – 16:30 Session 3 - Session Chair – R. Rozenberg**
- 15:45 – 16:00 Description of the Initial Status of Personnel Training Requirements for Specific Operator
L. Choma, J. Jevčák, P. Kalavský, Robert Klír, M Kelemen jr.
- 16:00 – 16:15 Impact of global pandemic COVID-19 on Air Transport in Slovakia in the Period from March to June 2020
S. Bernáthová, P. Čekan, M. Džunda, S. Szabo, S. Makó, A. Horvath
- 16:15 – 16:30 Covid -19 pandemic and its impact on air carrier pricing
S. Makó, M. Pilát, N. Staříčn, P. Košak, D. Marasov
- 16:30 – 16:45 Coffee and hygienic break**
- 16:45 – 18:45 Poster session – Session Chair – R. Brda**
- Liquidation of forest fires utilizing aviation technology
P. Švb, D. Blaško and A. Tobisov
- Coronavirus- aviation's biggest challenge
M. Kešelov, Patrik Švb, N. Staříčn, P. Hank
- Safety Performance Indicators as Important Part of Safety Management System Implementation in Production Organizations of the Aviation Industry
S. Szabo, I. Koblen



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Poster session

The Teaching of Aeronautical Subjects on the Faculty of Aeronautics TUKE

M. Džunda, D. Čekanová, A. Moravčíková, L. Melníková

Constructions of Contactless Aircraft Electrical Generators and Their
Visualization

F. Adamčík, M. Schrötter, J. Leško

Longitudinal UAV motion with plugged error model of angular velocity
sensor

Megyesi D., Bréda R., Leško J.

Challenges to the global aerospace industry due to the pandemic
epidemy of COVID-19

D. Liptáková, J. Kolesár

Training Models for Military Air Traffic Controllers

*I. Harčár, M. Antoško, Ľ. Fábry, H. Némethová, Ľ. Šuťák, A. Korniienko,
R. Rozenberg*

Learning and Growth Perspective in Balanced Scorecard

B. Mikula, I. Vajdová, P. Koščák, E. Jenčová

Assessing the Effects of the Construction of a Logistics Center on the
Operation of DME System

M. Džunda, L. Melníková, P. Koščák

Transport Aircraft Pilot Education Model for Specific Operator in Slovakia

L. Choma, S. Ďurčo, J. Jevčák, M. Kelemen jr., S. Szabo jr., P. Petříček

Implementation of Statistical Methods to Optimize the Processes of
Transport Systems

J. Galanda, M. Spodniak, E. Jenčová, L. Lučanská, B. Semrádová



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Poster session

Formation of the Area of Possible Existence of Electrified Airplanes

D. A. Dukhnovskiy

Digitization of air transport using smart tires

D. Marasová, P. Koščák, N. Stařičná, S. Mako, D. Matisková

Pilot Education Model for Specific Operator Conditions in the Context of Increasing Pilots' Performance and its Impact on Air Safety

J. Jevčák, R. Rozenberg, P. Kalavský, A. Čekanová, S. Szabo jr.

J.F. Aeroclub Airport Risk Assessment Prostějov

L. Brumarová, K. Tomanová, J. Brumar, J. Pokorný

Risk minimization in socially important objects

Z. Dvořák, Z. Štěpáánek

Influence of the use of electric drive in a glider on its aerodynamic parameters on the example of GP-15 glider

T. Wojnar, J. Kozuba, M. Mroziak

Optimization of persons localization using a thermal imaging scanner attached to UAV

P. Pecho, M. Hružík, I. Škvareková, V. Ažaltovič

Improving the Quality of Calculation of Air Parameters in the Passenger Areas of the Aircraft Through the Interaction of One-Dimensional and Three-Dimensional Software Systems

K. S. Napreenko, A.V. Lamtyugina, D. I. Smagin



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Poster session

New law in the air transport during the COVID-19 era

K. Brzeska, J. Borowski, J. Kozuba

The possibility of using A390.0 alloy in modern internal combustion engines

R. Wieszala, J. Mendala

19:00 Gala reception

End of Day 1



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8:30 – 9:00 **Registration**

9:00 – 12:00 **Poster session – Session chair – L. Főző**

Organization of Line Maintenance Hangar Equipment
J. Kania, D. Hůlek, P. Daňko, M. Novák

Analysis of Airport Bird Strike Avoidance by Pulse-Doppler Radar
S. Gazovova, J. Perdoch, Z. Matousek, J. Ochodnický, F. Nebus

The Effect of a Change in Maintenance on Reducing the Susceptibility to Failures of the Landing Gear Joint of Mi-171Sh Helicopters
P. Staněk, V. Graf

Penetration testing of Surveillance Data Distribution System
B. Kandra, IM. Jančík, Š. Holoda,

Experimental research of stress-strain states and Maintenance Technicians Training
T. Musil, S. Fábry, M. Hovanec, B. Ráček, J. Lukáč, S. A. S. Al-Rabeei

Magnetic Microwire Sensors for RTD Magnetometer Suitable for Small UAVs
P. Lipovský, M. Filko, K. Draganová, F. Heško, J. Novotňák, Z. Szőke, V. Moucha

Hypersonic design optimization for ultra-high-speed aircraft transport
D. Polák, M. Hovanec, P. Korba, K. Semrád, S. A. S. Al-Rabeei, M. Golisova, P. Gašparovič



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Poster session

Design of Workplace for Multirotor UAV Parameters Measurement

Z. Szőke, J. Novotňák, P. Lipovský, M. Šmelko, M. Filko, M. Košuda

Pilot Education Model for Specific Operator Conditions in the Context of Increasing Pilots' Performance and its Impact on Air Safety

J. Jevčák, R. Rozenberg, P. Kaľavský, A. Čekanová, S. Szabo jr.,

Identification of a Praxeological Problem of Professional Training of Personnel for a Specific Air Operator

J. Jevčák, R. Rozenberg, P. Kaľavský, M. Kelemen jr., R. Klír, A. Čekanová

Analysis of ticket sales on the route from Kosice to London

M. Tomáš, P. Hanák, A. Tobisová, L. Socha, M. Zušáková

Measurement Methodology of Hypoglycemia and Alcohol Effect on UAV piloting Accuracy

V. Ažaltovič, I. Škvareková, P. Pecho, B. Kandra

Swot analysis and its application in solving research task

P. Petříček, R. Klír, P. Kaľavský

Development of Airborne Test Environment for Micro Turbojet Engine - Part I: Powerplant and Airframe Integration

K. Derbel, K. Beneda

New Concept of Firefighting Aerial Support with Autonomous Unmanned Aerial Systems (AUAS)

G. Gašparović, B. Klarin, A. Grebo, S. Mladenović

Advanced Data Acquisition System for Alternative Fuels Micro Turbojet Engine Test Bench

K. Beneda, L. Kavas, B. Varga



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Poster session

Eye Track Technology in Process of Pilot Training Optimization

I. Skvarekova, V. Azaltovic, P. Pecho, B. Kandra

Covid-19 Pandemic Impact on the Aviation Future

J. Hořínka, L. Kontriková

Efficiency of BLDC Fuel Pump Controllers of Small Turbojet Engines

P. Hladík, R. Andoga, L. Főző and L. Melníková

Design and Evaluation of Linear Quadratic Regulator for Blade Load
Distribution Control as Active Surge Suppression in Centrifugal Compressors

Z. Faltin, K. Beneda

Simulation of obstacle avoidance of an UAV

P. Udvardy, B. Beszédes, B. Tóth, Á. Földi, A. Botos

12:00 – 12:10 Conference conclusion and evaluation

12:10 – 13:40 Lunch and the end of the conference

End of the conference



Acknowledgement

Conferecne is supported by APVV-17-0167 - Pilot performance and
air transport safety

Event Partners



Organiser



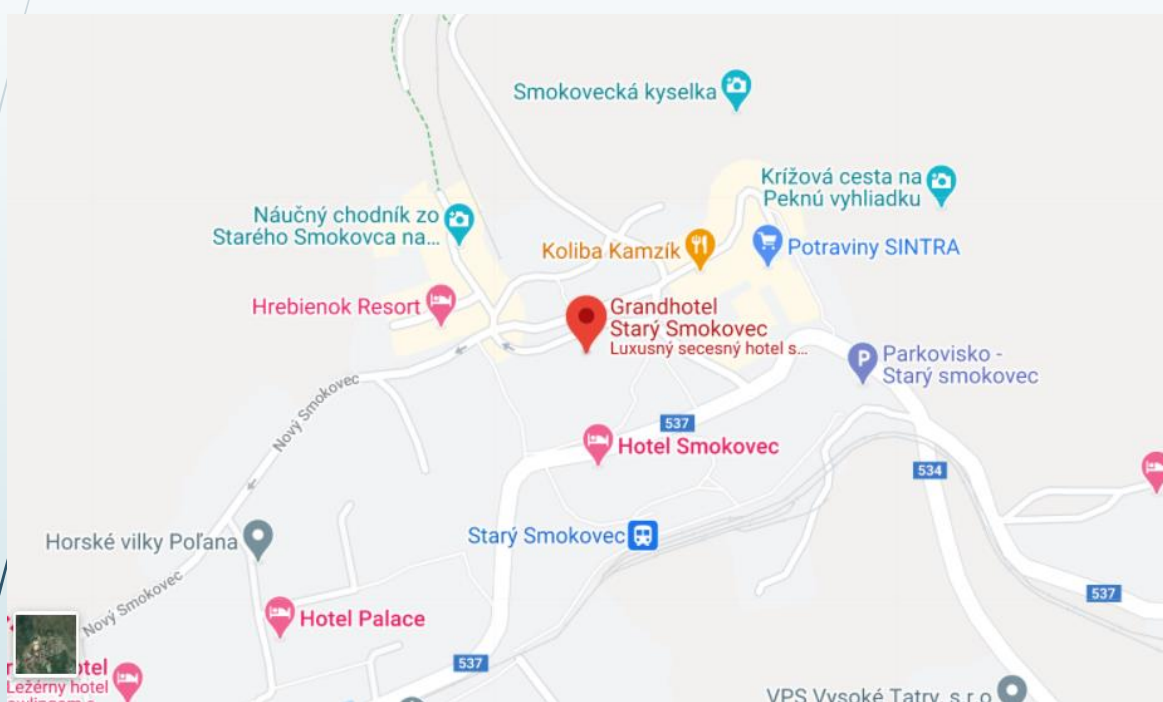
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Additional Information

Day 1	High Tatras – Grand hotel Starý smokovec
10:00 – 12:00	Registration
Day 2	High Tatras – Grand hotel Starý smokovec
8:30 – 9:00	Registration



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2005-2020



Faculty
of Aeronautics

