### **Guest editorial**

# Special issue devoted to the 13th READ conference and 14th EWADE workshop

#### Dear reader,

It is our pleasure to present the special issue of the Aircraft Engineering and Aerospace Technology Journal, dedicated to the exceptional event that was a joint READ&EWADE conference. The conference was hosted by the Institute of Aerospace Engineering of Brno University of Technology from 7 to 9 of November 2018.

The READ conference – Research and Education in Aircraft Design (former name: RRDPAE – Recent Research and Design Progress in Aeronautical Engineering and its Influence on Education) –was established in 1994 by Professor Zdobysław Goraj, who was the chair of the conference for 20 years. The seminar was organized every 2 years as a general forum for the exchange of information about progress in aerospace engineering research. The unique character of the seminar is given by its focus on aircraft engineering education and inclusion of juried student sessions.

Over the years, the seminar has travelled from Warsaw (Poland), through Vilnius (Lithuania), Riga (Latvia) to Tallinn (Estonia), Brno (Czech Republic) and then to Warsaw, Brno, Vilnius, Warsaw, and in 2018 again to Brno (Figure 1).

The European Workshop on Aircraft Design Education (EWADE), which is the education activity of the Technical Committee Aircraft Design under Council of European Aerospace Societies (CEAS) was started in 1994 in Madrid. Next, the workshops were organized every 2 years in Berlin, Bristol, Turin, Linköping, Brno, Toulouse, Hamburg, Samara, Seville and Naples. The next workshop was held in Linköping, together with CEAS Air & Space Conference, and after that, EWADE workshops travelled together with CEAS conferences at Delft and Bucharest. This time EWDAE joined the READ conference and arrived at Brno for the second time (Figure 2).

The combined READ&EWADE event strengthened the educational part of the conference and allowed to meet groups of researchers from different parts of Europe. More than 80 participants from 12 countries attended providing a total of 45 presentations. Furthermore, distinguished invited speakers updated the delegates on the newest opportunities for carrying out aeronautics-related research on available research infrastructure and novel research results. I would like to cordially thank the invited speakers, Blanka Lenczowski,

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Figure 1 RRDPAE-READ – Travelling Seminar

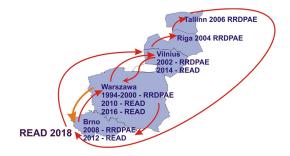
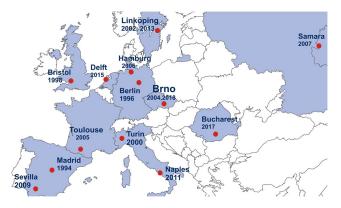


Figure 2 EWADE – Travelling Workshops



Štefan Klein and Milan Šlapák for their interesting presentations.

The following 13 conference papers have been selected for publication in this peer-reviewed special issue:

- 1 Berdnik, Y. and Beskopylny, A., "The approximation method in the problem on a flow of viscous fluid around a thin plate".
- 2 Goraj, Z.J., Kowalski, M. and Goliszek, B., "Stress, strain and displacement analysis of geodetic and conventional fuselage structure for future passenger aircraft".
- Masri J., Dala, L. and Huaed, B., "A review of the analytical methods used for seaplanes performance prediction".
- 4 Šedek, J. and Ruzek, R., "Magna-Lok rivet joint and the stiffness-equivalent FE model".
- 5 Pobikrowska, K. and Goetzendorf-Grabowski, T., "Stability analysis of the experimental airplane powered by a pulsejet engine".
- 6 Mieloszyk, J. and Tarnowski, A., "Enhancements in conceptual electric aircraft design".
- 7 Staack, I., "Establishment of the Swedish Aeronautical Research Center (SARC)".
- 8 Skawiński, I. and Goetzendorf-Grabowski, T., "FDM 3D printing method utility assessment in small RC aircraft design".
- 9 Kulhánek, R., "Identification of a degradation of aerodynamic characteristics of a paraglider due to its flexibility from flight test".
- 10 Kopyt, A., Topczewski, S., Zugaj, M. and Bibik, P., "An automatic system for a helicopter autopilot performance evaluation".
- 11 Kwiek, A., "Conceptual design of an aircraft for Mars mission".
- 12 Groth, C., Cella, U., Costa, E. and Biancolini, M.E., "Fast high fidelity CFD/CSM fluid structure interaction using RBF mesh morphing and modal superposition method".

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## 13 Grendysa, W., "Multidisciplinary wing design of a light long endurance UAV".

The articles deal with different solutions for future aerospace challenges in the areas of novel configuration, aerodynamics, design methods, multidisciplinary optimization, UAV and stress analysis.

With great pleasure, I would like to thank Professor Jaroslav Juračka for his big effort in organization, hosting and cochairing of the conference. I would also like to thank all authors for writing such excellent technical papers and the reviewers for their insightful critique and suggestions, which contributed directly to improving the technical content of this Special Issue. Finally, I would like to thank the Editor-in-Chief of the Aircraft Engineering and Aerospace Technology Journal, Dr Askin T. Isikveren, for his agreement and support in making this issue possible.



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