

Guest editorial

Special Issue dedicated to the 6th EASN International Conference “Innovation in European Aeronautics Research”.

Dear Reader.

It is my pleasure to present the second installment of this special issue in the *Aircraft Engineering and Aerospace Technology (AEAT)* Journal, dedicated to the 6th EASN International Conference on “Innovation in European Aeronautics Research”. The Conference was organized by EASN together with the Institute of Science and Innovation in Mechanical and Industrial Engineering (INEGI) in Porto, Portugal, on October 18-21, 2016.

The EASN Association was officially established on 6th May 2008 by 20 founding members, following two EC-funded specific support actions. EASN is:

- 1 an international association based in Brussels;
- 2 self-funded and self-sustainable; and
- 3 coordinated and run by a board of directors which is elected by the General Assembly for a 3-year term.

Presently, the EASN Association has 325 members, including individuals and laboratories, from nearly all European universities dealing with aeronautical research.

The long-term goal of establishing EASN was to build up an open, unique European platform in order to structure, support and upgrade the research activities of the European Aeronautics Universities, as well as to facilitate them to respond to their key role within the European aeronautical research community in incubating new knowledge and breakthrough technologies. The primary aim of the EASN Association is the advancement of aeronautical sciences and technologies. Any individual with an interest in Aeronautics and related research may become a member of EASN. In addition, entities such as research establishments, small-to-medium enterprises (SMEs), industries and universities are welcome to join EASN. More details about EASN services, membership types and activities of EASN can be found on its website www.easn.net.

Based upon the EASN statute and coming from the assumption that dissemination of research results is one of the most important roles, we decided to organize workshops, which over time, gradually transformed into conferences. The first workshop was organized in Paris (2010), the second in Praha (2012), and in the following years successive workshops were held in Milano, Aachen, Manchester and, finally, a full conference in Porto (2016) (Figure 1).

During the Porto Conference, more than 220 participants attended and around 160 papers were presented. Numerous papers were developed in current projects funded within the scope of the European Commission 7th and 8th Framework Programs (FP7/FP8) and a few of them are included into this *AEAT* Journal Special Issue. Taking

Figure 1 The route of EASN workshops (conferences) – from Paris in 2010, through Praha in 2012, Milano 2013, Aachen 2014, Manchester 2015 to Porto in 2016. In 2017 the 7th EASN Conference was held in Warszawa, in September 2018 will be held in Glasgow



stock of the session chairs assessment the authors of 30 Conference presentations were invited to submit their full-length papers for consideration. The scope spanned from fundamental research on aircraft technologies, through exergy, combustors, gas turbines, turbojet engines, propulsion, active flow control (AFC), Nacelle-wake-separation, ultra-high bypass ratio (UHBR) turbofan engines, fluidic actuators, small unmanned aerial systems, regulations in aviation, offensiveness, emergency, drag, dynamics of flight, spin, light aircraft, nonlinear aerodynamics, high angles of attack, simulation, micro aerial vehicles (MAV), wind gust, vortex lock-in, computational fluid dynamics, flapping airfoil, aviation piston engine, on-condition exploitation, flight safety, aviation occurrence categories, wake vortex encounter, landing, ground effect, wind effects, panel method, finite element method, optimization, gyroplane, static stability, stability derivatives, dielectric barrier discharge plasma actuator, plasma body force modelling, boundary layer separation, experimental velocity measurements, aeroelasticity, turbulence modelling, RANS, LES, hybrid RANS-LES, DES, wake vortex and gust encounter.

From the numerous contributions to the Workshop, 24 papers were accepted for publication in the *AEAT* Journal after a peer review process. Among these accepted 24 papers, the first installment (12 papers) of this special issue (Vol. 89, Iss. 5) was published in July 2017, and now the second one (Vol. 90, Iss. 7) includes topics devoted to fuel systems, small air transport and general aviation, materials and production technologies, design, flight dynamics and optimisation and, navigation.

Furthermore, distinguished invited speakers in Porto updated the delegates about the newest opportunities for carrying out aeronautics related research, on available research infrastructure and novel research results. The keynote speakers were: Dr Jose Rui Marcelino (INEGI, Portugal), Professor Ray Whitford (Cranfield University Defence Academy, United Kingdom), Dr Dietrich Knoerzer (European Commission), Dr Jean-Francois Brouckaert (Clean Sky), Dr Giuseppe Pagnano (Clean Sky),

Valerie Guenon (European Commission) and Dr Markus Fischer (Airbus Bremen).

Finally, I would like to express my deep appreciation to Dr Askin T. Isikveren, the Editor-in-Chief of the *AEAT* Journal, for offering to EASN the possibility of publishing a number of selected papers and for his continuous support in preparing this special issue.



I hope you will find this special issue interesting reading.

Professor Zdobyslaw Jan Goraj
Guest Editor and Vice-President
of EASN