

Dear readers,

...another year is over and it is time to look back on what we have done and present our plans for the future.

At present, a scientific journal is not only an irreplaceable information channel in scientific communication. Its social and scientific significance is reflected in knowledge application and further scientific research and development. Publishing papers in journals is an important part of scientific and research work as it has an enormous impact on acquisition and deepening of knowledge. One of its pragmatic reasons is promotion of ongoing scientific research. Publishing in scientific papers is an essential part of doctoral studies and a chance for senior researchers to enhance their prestige in the scientific world.

New trends in scientific publishing are connected with new models that are emerging in scientific communication and publishing. They are influenced especially by the digital science tools, open access to scientific information and the Open Science concept as such. The Open Access and Open Science concepts are also backed by the European Union. Most European publishers of scientific journals are planning to publish open access papers within the Horizon 2020 framework programme. Advances in information technologies also lead to development of new means of dissemination and long-term storage of scientific information, including, for example, institutional repositories for digital preservation of scientific knowledge or social networks as means of distributing scientific publications.

The editorial board of the Science & Military journal still has the same long-term plan, which is to continuously improve its quality and make it accessible to the wider scientific community. Identity and quality of our journal (like those of any journal) are determined and developed by the editorial board, authors, reviewers and last but not least you, dear readers.

In September 2019, the new Decree No. 244/2019 Coll. on the System of Academic Disciplines of the Slovak Republic came into effect. The systematization of the fields of study led to definition of a new academic discipline No. 24 called Defence and Military Science, which presents a complex field focused on military-related monitoring, research and education. In this regard, I would like to invite all the academic staff and doctoral students to publish the results of their research work in this field in the Science & Military journal.

Besides requirements regarding continuous improvement of the journal's quality in terms of its content and specialisation, we have set a demanding goal for the upcoming years, which is to increase the journal's impact factor by indexing Science & Military into the SCOPUS database and the journals indexed for the Current Contents Connect (ISI).

Dear readers, let me briefly inform you about the contents of the latest edition, which contains six new and undoubtedly interesting scientific articles, which have been successfully reviewed.

The first article titled **"An Overview of Hash Functions Based on Neural Networks"** was written by Ján Astaloš, Miloš Očkay and Radoslav Forgáč. The authors of this paper point out the use of neural networks for hashing. On the other hand, they draw the attention

to the lack of independent cryptoanalysis that would confirm the safety of the neural network approaches.

The second article among the reviewed articles, which was written by Pavol Lukášik and Miroslav Marko and titled **"Preventive Diagnostics of the Common Rail Fuel System Injectors"**, deals with the current condition of the fuel system, its issues and recommendations for further operations. Fuel and electronic systems of the compression-ignition engines belong to the highest failure rates group and to the most economically demanding items in modern vehicles. From this viewpoint, they deserve a greater attention in order to prevent break downs, failures and their premature wear.

The following article titled **"Possibilities of Implementation of Friendly Units' Manoeuvre in the Common Operational Picture"** by Jan Nohel, Zdeněk Flasar and Petr Stodola describes the possibilities of the use of information sharing on the network of computer workstations when planning the manoeuvre routes of a group of cooperating units with the task to attack the same target in a military operation.

Another article titled **"Use of Data Mining for Network Behaviour Analysis of Selected Operating Systems"** was written by Július Baráth. The aim of this paper is to use data mining techniques to obtain characteristic behaviour patterns of operating systems with a focus on the communication observed by a remote observer. Network communication of selected operating systems is observed, and the list of contacted targets is recorded.

Among the articles in this issue, you can find the article written by Jakub Vilimek titled **"Small Unmanned Aerial Vehicles – Threats and Defence against Them"**. The article discusses current small UAVs (Unmanned Aerial Vehicles) threats and ways of defence against them. The goal of the article is to define vital questions, which have to be answered before designing any UAV protection system.

The author Marek Hargaš wrote the article **"Cooperation between the EU and the USA in their Policy Towards Russia"**. The article is focused on the legislative and institutional background of the mutual cooperation between the EU and the USA within their policy framework towards Russia.

Dear readers, I believe that this year's editions of the Science & Military journal provided you with the topics you were interested in. Let me wish you and your dear ones a very Merry Christmas and success in achieving your personal and professional goals in the upcoming new year.

Col. (ret.) Prof. Eng. Marcel HARAKAL, PhD.
Chairman of the editorial board