

Dear readers,

In your hands, you are holding this year's first issue of the Science & Military journal. As usual, the journal is characterised by openness that allows a wide range of topics and results from its concept and efforts of the editorial board to make the Science & Military open to all kinds of cooperation. Bearing this goal in mind, we keep on encouraging our readers to submit their articles and proposals for improvement since we want the Science & Military journal to be open to all its readers and we hope their number will continuously increase.

In the journal archive, which is available at <http://sm.aos.sk/index.php/en/archive-of-journal.html>, you can find all its issues, which even after several years still appeal to readers by their thematic originality and interdisciplinary approach. They contain valuable sources of information that help educate young scientific staff and doctoral students. We are pleased to provide our readers with the latest trends and research in military science and an opportunity to engage in an active dialogue.

This issue contains high quality and interesting articles, which have successfully passed the peer review process. I firmly believe that they will inspire their readers and make them think about and discuss the presented issues.

The first among the reviewed articles, which was written by Ján Kollár and Vojtech Florko titled **Solution of Selected Problems Using IBM QX**, presents a set of works that were chosen to be decomposed to individual algorithms and solved using a quantum computer, which is available publicly through the IBM QX platform. The objective was to demonstrate a fundamental change in the way of thinking about problems when working with a quantum computer as opposed to solving a computational problem on a classical computer.

Another article titled **Target Tracking by Adaptive Filtering** was written by Peter Rohal' and Ján Ochodnický. In this paper, we approach the structure and key features of the proposed adaptive targeting radar and the algorithm of the particle filtering (PF), the Elman NN (neural network) and the Group Methods for Data Processing (GMDP). The proposed algorithm was used in adaptive radar especially for monitoring problems with emphasis on backpropagation learning, selection of correct algorithm, decision making based on the situation and storage of information.

Among the articles in this issue, you can find the article written by Pavel Žižka titled **The Current Command and Control System of Realization of Engineer Support Tasks of Task Force Operation**. The article deals with the current command and control system of completing engineer support tasks of task force operation depending on the realized

steps within the army of the Czech Republic transformation in recent years. The aim of the paper is to evaluate the current state of command and control system and identify possible causes contributing to the current situation in this area.

The author Peter Mako wrote the article titled **FEM Analysis of Mobile Bridge AM-50 as Per Needs of Slovak Armed Forces**. This article is showing detailed description of FEM analysis of AM-50 bridge load capacity in accordance with standard STANAG 2021 and their results.

The article written by Serhiy Orel titled **Sensitivity Analysis in Risk Assessment of Drinking Water Chemical Pollution Caused by Military Activities** presents the sensitivity analysis of environmental pollution risk assessment caused by military activities. The role of the sensitivity analysis for environmental decision-making is shown. Sensitivity analysis is a valuable tool in quantitative risk assessment by determining critical aspects and effects of variations.

The series of articles is closed with the paper titled **Tasks and Activities Executed in the Field of the Support of the State Defence** written by Ján Brezula. This paper deals with the tasks and activities executed in the field of the support of the state defense. The defence infrastructure is a necessary element of supporting the state defense and it is formed by the services and activities provided to the Slovak Armed Forces for ensuring effective protection and defense of the state.

Dear readers,

on behalf of myself and the entire editorial board, I would like to thank you for your interest and support. My gratitude also goes to the authors submitting their high quality papers, without which our journal could not exist. In conclusion, I would like to express my sincere appreciation to our reviewers, who contributed to professional and scientific quality of the Science & Military journal by their systematic approach, expert knowledge and constructive criticism.

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