

EDITORIAL

On behalf of the Editorial Committee of **Journal of Advances in Applied & Computational Mathematics**. I have the honour and the pleasure to launch the first, inaugural issue of that journal. Our aim is to publish papers presenting outcomes and efforts of mathematicians and other scientists applying mathematics, which are mainly devoted to miscellaneous topics of applied mathematics. It is clear that nowadays applied mathematics is very closely connected with computational mathematics. The vast development of computer sciences and numerical analysis enables to support research activities conducted in various branches of applied mathematics. It is worthwhile mentioning that numerous investigations realized in the framework of engineering, bioengineering, mechanics, physics, chemistry, electrochemistry, geodesy, geology, economics, queueing theory, kinetic theory of gases, radiative transfer and many other branches associated with real world events are strongly connected with several topics considered both in pure and applied mathematics. On the other hand mathematicians working in pure mathematics are always looking for the possibility of applications of their results and, simultaneously, numerous events encountered in real world inspire the development of various, new branches of applied mathematics. Consequently, in order to solve a lot of problems emerging in such a way in applied mathematics, in majority of cases it is necessary to use tools created inside of computational mathematics.



The goal of this journal, as we pointed out earlier, is to publish papers dealing with diverse topics of applied mathematics. Nevertheless, we will also frequently present papers showing various topics of other exact sciences in which mathematical methods are applied, sometimes very loosely. However, in each paper presented now and in the future in the journal, we can always find some connections of considered topics with applied or computational mathematics.

The journal, which we are going to publish, creates the challenge to scientists, engineers and people working in "practical" branches of engineering, to apply mathematical methods effectively and to indicate some interesting and essential points of their activity which are connected (directly or indirectly) with applied and computational mathematics. Thus, we will focus on articles presenting the mentioned directions of scientific and engineering activity, although papers showing the theoretical approach to applied mathematics or presenting diverse topics of pure mathematics (but related to some applications) are also warmly invited.

The journal which we are going to edit i.e., **Journal of Advances in Applied & Computational Mathematics** is, in general, not restricted to some special branches of applied and computational mathematics. We are going to publish papers covering very broad spectrum of these disciplines.

The first issue of our journal contains five scientific papers prepared in the spirit presented in our exposition above. The first of the mentioned papers entitled *Quantum game techniques applied to wireless networks communications* by O.G. Zabaleta and C.M. Arizmendi presents results concerning some current topics of game theory. More precisely, the authors considering some power control problems connected with the wireless network nodes with help of an appropriate modelling, replace their problem by some topics of game theory. Next, applying the techniques of game theory they obtain some results concerning the behaviour of the players who choose a suitable coalition strategy as the best possible option under suitable constraints. After transferring to the original problem such an approach leads to the best possible performance of the whole network. Some other interesting corollaries are also derived.

The second paper was written by E.M. Badr ana M.I. Moussa under title *On jump-critical ordered sets with jump number four*. The investigations of that paper are closely related to the theory of ordered sets. The authors presented a few results on the so-called jump-critical ordered sets with jump number four. The paper contains a large number of technicalities and we will not describe them to avoid of repeating of large parts of the paper in question.

The next paper, which we are going to present briefly is entitled *Uni-type modal operators on intuitionistic fuzzy sets* and was prepared by G. Ç uvalciođlu. That paper is concerning with some topics of the theory of fuzzy sets. The

author considers a few new operators defined on intuitionistic fuzzy sets and examines their properties. It is shown, among others, that those operators are of the type one or two (in the sense defined in the paper). Some other problems concerning intuitionistic fuzzy sets theory are also derived.

Now, let us say a few words on the fourth paper presented in this issue. That paper is authored by A.I. Gavrishin and is entitled *The methodological aspect of development and application multivariate classification G-mode for analyses geochemical trend*. The paper presents a unique G-mode of multidimensional classification method and its application to the analysis of hydrogeochemistry of Donetsk basin. That method, in comparison with other ones, does not require a priori informations used for classification of observations. The described method is successfully applied in examining of objects, events and processes on Earth, Moon, Mars, Saturn, comets and asteroids, among others.

The last paper contained in the presented issue of our journal, is the paper of A. Alb Lupaş, under the title *On special strong differential superordinations using Sălăgean and Ruscheweyh operators*. That paper has rather purely mathematical character and is devoted to present some results on strong differential superordinations for certain differential operators defined as convex combination of a extended Sălăgean operator and a extended Ruscheweyh derivative.

It may be noticed that the above described five papers published by the first issue of **Journal of Advances in Applied & Computational Mathematics** are devoted to distinct domains of the activity of applied and computational mathematics as well as pure mathematics. This observation creates the platform to invite all papers connected (closely or loosely) with mathematics and devoted to miscellaneous aspects of exact sciences, engineering, computational mathematics and other branches of applied mathematics.

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