

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ ФАКУЛЬТЕТ ІНОЗЕМНОЇ ФІЛОЛОГІЇ ТА СОЦІАЛЬНИХ КОМУНІКАЦІЙ





## СОЦІАЛЬНО-ГУМАНІТАРНІ АСПЕКТИ РОЗВИТКУ СУЧАСНОГО СУСПІЛЬСТВА

МАТЕРІАЛИ ВСЕУКРАЇНСЬКОЇ НАУКОВОЇ КОНФЕРЕНЦІЇ ВИКЛАДАЧІВ, АСПІРАНТІВ, СПІВРОБІТНИКІВ ТА СТУДЕНТІВ

(Суми, 23-24 квітня 2015 року)



## THE DEVELOPMENT OF THE VETERAN BADMINTON

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L. P. Yarmak, *a senior teacher of foreign languages department* Today, the veteran sport founds to be very important area of the sports movement, it is booming, increasing its mass, expanding the calendar of competitions, rising the level of results nowadays. According to the statistics there are more than 676 different public organizations that develop veteran sports movement, bringing together about 67 thousand people of different age in the field of physical culture and sports.

Badminton is not an exception. International competitions are held on the regular base: continental championships, world championships, in compliance with all necessary attributes of sport: determination of winners, awarding, the use of international competition rules.

In Ukraine, competitions among badminton veterans (age 35 years and older) are traditionally held in such cities as Vinnitsa, Dnepropetrovsk, Evpatoria, Zaporozhye, Kiev, Lvov, Nikolaev, Odessa, Kharkiv, Cherkasy. It's about 10 - 12 competitions a year that gather from 70 to 200 participants of different age categories.

The analysis of the literature and the experience of the work with senior badminton players indicates on the one hand the absence of the systematic presentation of the structure, the content and the process of the specific sports training of veterans, and on the other hand the lack of organizational and regulatory framework of the competitions among veterans in Ukraine.

The training process and the athletic performance in veteran sport depends on many factors. It is necessary to highlight some of them:

- the presence of coaches who are ready to work effectively with athletes of older age groups;
- the monitoring and the accounting of the level of psychophysical condition and motivational sphere of the sport movement veterans;
- the realization of personalized training programs, activities and precompetitive preparation;
- motivational support of the needs of athletes of older age groups to perform in competitions.

Competitions in veteran badminton are held mainly due to the enthusiasts who impose all organizational difficulties , beginning with

the location of the organizational rules of the event, and finishing with the rewarding of the winners. Financial support is provided through tournament fees (from 80 to 150 UAH.), which are payed by competitors and in rare cases by sponsors.

Significant progress in the development of veteran sports can be achieved only if it has a reliable social and legal support, the implementation of which should be undertaken by the state. To do this, in our opinion, the following measures are necessary:

- the development and the implementation of the strategy, as well as the regional programs supporting sport veterans;

- the development of the infrastructure, the strengthening of the material and technical base, the development of the schedule of the veteran sport competitions;

- the development and the implementation of research programs and the system of training and retraining, the improvement of the regulatory framework of veteran sports;

- the organization of complex medical, methodical, consulting, insurance, welfare services for veteran athletes;

- the coverage of veteran sports movement in mass media and telecommunications.

In conclusion it should be noted that this issue affects not only the veteran movement in badminton, but the whole veteran sport. The further research in this area will focus on the study of the enabling environment for the implementation of creative and professional potential of athletes in veteran badminton.

## NUMERICAL ANALYSIS OF MULTI-CRACK LARGE-SCALE PLANE PROBLEMS WITH ADAPTIVE CROSS APPROXIMATION AND HIERARCHICAL MATRICES

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The problem of interaction of large number of cracks in a plate is considered by the method of singular integral equations (SIE). The corresponding system of SIE is solved by using Gauss–Chebyshev quadratures, which results in a large system of linear algebraic equations. The solution of the latter employs the adaptive cross approximation (ACA) technique that has not previously been applied for studying multi-crack large-scale plane problems. Therefore, several benchmarks problems with