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WORK AND LIFE OF PROFESSOR BOŠKO JOVANOVIĆ

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I have the honor to speak about professor Boško Jovanović.

Development of Mathematics in twentieth century was very fruitful. At the beginning of this century Mathematics was converted by imbuing it with the new mathematical theories, such as Set theory, Mathematical Analysis, Mathematical logic and so on. Many mathematical areas were deeply modernized and they begun to develop very quickly.

Having in mind that this words are devoted to professor Jovanović I shall speak on the differential and partial equations as well as on numeric mathematics. The theory of such equations for centuries was developed following, in some measure, the ideas concerning the development of the algebraic equations. One can think that in the background of this was the idea: the real numbers are definitely described as *the complete ordered field*, there may be a similar 'field' related to differential-partial equations. However, despite the tremendous efforts of many great mathematicians for such equations nobody has found 'desired field'. In my opinion, the basic reason

is: the mathematical world of differential-partial equations is entirely different; the big mystery is what kind of nature is it.

The area of numerical mathematics, in many countries all over the world for long time has been treated as a mathematics of the second importance. Even in our time you can meet a mathematician who asserts that the only genuine mathematics is ϵ - δ mathematics, i.e. Mathematical Analysis and Functional Analysis. In my opinion these areas are very, very important part of mathematics. There are many great results in both areas. Nowadays there are also important contributions.

However, I want to point out the following: Mathematics is one of the oldest sciences, but also it is young forever. By use of the existing books we can approximately describe the mathematics 'until yesterday', but only a naive mathematician can think that we can describe it in future.

In our country, but also in many other countries, for long time the areas of differential-partial equations and numeric mathematics were very weakly developed. One of the reasons was the delusion that the main task is to find formulas for general solutions. The second reason was the opinion that numeric mathematics is only part of Mathematical analysis.

In the second half of twentieth century, specially due to demands of practice, related to these equations the most important is to make effective solutions, what means solutions which can be approximately obtained by means of some computer, which uses some program designed by us.

Here I point out that between the theoretical and applied mathematics there is not big difference, unless the second one is considered mostly merely practically: one uses some theoretical results and by means of them he makes some practical formulas, programs etc. Briefly said, deep applied mathematics should include various parts of theoretical mathematics, as for instance parts of ϵ - δ mathematics.

Now to emphasize that in our country thanks to professor Jovanović the areas of differential-partial equations and numeric mathematics are very well developed. To

add this: always his mathematics was very deep, very precise and also connected to some practical problem.

Now I will state some details from his curriculum vitae. Professor Boško Jovanović was born in 1946 in Belgrade. In 1969 he graduated from the Mathematics faculty of Belgrade University. I remember him when he was a student: he was one of the best students, very quiet but when he says a little that was very smart.

In 1971 he got masters degree and in 1976 doctor's degree in mathematics. In 1972/73 he was on graduate studies at Faculty for numerical mathematics and cybernetics of Moscow state university Lomonosov. In 1998 he spent a month at Oxford university as a study stay.

In 1969 he became assistant in Mathematics faculty, in 1977 assistant professor, in 1983 associate professor and in 1989 the full professor.

Professor Jovanović published over 110 scientific articles in domestic and foreign journals and 30 articles in conference proceedings. He published 7 books, including two monographs. Some of the books are:

- *Numerical analysis*, Belgrade, 1984 (in Serbian).
- *Integral equations*, Belgrade, 1997 (in Serbian).
- *Partial equations* including Distribution theory and also Theory of Soboljev's spaces, Belgrade, 1993 and 1999 (in Serbian).
- *Numerical analysis* (with D. Radunović), Belgrade, 1993 and 2003 (in Serbian).

Monographs:

- *Numerical methods to solve differential and partial equations*, Mathematical Institute SANU, 1989 (in Serbian).
- *The finite difference method for boundary-value problems with weak solutions*, Mathematical Institute SANU, 1993.

Professor Jovanović has given many courses on Mathematics faculty, further on Faculty of Organizational Sciences in Belgrade, and also at Kragujevac in the Group for mathematics students.

He also has given five special courses and more courses on graduate studies.

He was a mentor for many doctoral dissertations. He has many collaborators and young scientific successors. Nowadays professor Jovanović is very active and very creative.