

602. PROFESSOR DRAGOSLAV S. MITRINOVIĆ

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Dr Dragoslav S. Mitrinović, Professor of the Faculty of Electrical Engineering, Belgrade, founder of these Publications and one of the most eminent Yugoslav mathematicians reaches this year seventy years of life and 45 years of his very fertile scientific and teaching activity.



Professor Mitrinović was born on 23rd June 1908, at Smederevo. He graduated mathematics at the Philosophical Faculty in Belgrade in February 1932, and already on 24th October 1933 he defended, under the supervision of Professor Mihailo Petrović, his doctoral thesis "Investigations of an important differential equation of first order". Until 1946 he worked as a secondary school teacher, and in spite of very unfavorable conditions for research work he published almost 50 scientific papers before the war (1941).

From 1946 until 1951 Professor Mitrinović worked as an Associate Professor of the Philosophical Faculty in Skoplje, all the time being the Head of the Department. The first mathematical research papers in Macedonia were due to Professor Mitrinović. By his persistent work a rich professional library was founded there and a wide exchange of scientific publications with foreign countries was organised. At first all the lecturing in Skoplje was performed by two mathematicians only. It was at that time that a core of scientific workers was formed in Skoplje, which is today one of the recognized scientific centers. A number of doctoral theses were defended, mainly under the supervision of Professor Mitrinović.

Since 1951 Professor Mitrinović has been with the Faculty of Electrical Engineering, first as an Associate Professor and since 1956 as a Full Professor. From 1953 until 1975 he was the Head of the Department of Mathematics of the Faculty of Electrical Engineering. In the period between 1965 and 1975 he was also the Head of the Department of Mathematics of the Faculty of Electronic Engineering, Niš.

Apart from his regular teaching and scientific duties, Professor Mitrinović was very active in assisting young research workers in their first scientific steps and later on as a supervisor of doctoral dissertations. His social activity on the professional plan is also noteworthy. He was the founder of the Mathematical documentation centre of the Society of mathematicians and physicists of Serbia, Vice-president of the Union of societies of mathematicians and physicists of Yugoslavia, President of the Society of mathematicians and physicists of Macedonia, President of the Commission for mathematics of the Federal Council for the coordination of scientific research, member and president of the corresponding Republican commission, vicepresident of the Commission for Text Books, not to mention several other duties within the framework of the Faculty and the University.

He was twice decorated. Besides that for his scientific work his endeavours in tuition and organization of the Mathematical Institute in Skoplje the Government of Macedonia awarded him — April 1950. In 1962 he was awarded the 7th July Award (the highest Serbian award) for his scientific papers in the field of ordinary differential equations and for his contributions to the theory of the difference and functional equations.

As a great enthusiast Prof. Mitrinović devoted all his time to research work and to his profession, working on organizational tasks, creating a reach documentation in Yugoslavia and abroad.

Of particular significance is the publishing activity of Professor Mitrinović. As already mentioned, he was the founder and the main organizer of the journal *Publikacije Elektrotehničkog fakulteta Univerziteta u Beogradu* (Publications of the Faculty of Electrical Engineering, University of Belgrade, Series Mathematics and Physics). Since 1956, when the journal was founded, up to now 600 papers were published.

Professor Mitrinović was the initiator, promoter and editor of the edition *Matematička Biblioteka* (Mathematical Library) where, since its foundation in 1957 up to 1972 some 44 volumes were published. After a break of few years this edition will continue to appear, at present under the sponsorship of the Publishing House *Građevinska knjiga*. Another mathematical series: *Matematički problemi i ekspozicije* (Mathematical problems and expositions) was also founded and edited by Professor Mitrinović. Up to now 8 books were published in the series.

The papers of Professor Mitrinović were published in 12 Yugoslav and 21 foreign journals. There were about 200 reviewers reviewing his works in referative and other journals. Some papers were written jointly with other mathematicians. There were 64 such co-authors (appearing in bibliographical items). The greatest number of joint papers belongs to recent period, when Professor Mitrinović created conditions for a full assistance to his younger collaborators.

Not only the number but also the variety of topics in his scientific works is noteworthy. However the most numerous papers belong to the field of differential equations (ordinary and partial differential equations as well as integral equations). There are 82 such papers, though this number is difficult to determine since there exist more complex papers, especially in connection with the applications to differential geometry, elasticity and hydrodynamics. The integrability of various types of equations was particularly investigated. The Russian translation of the well-known Kamke's manual (1961) contains a separate chapter of Mitrinović's supplements to this book.

Another field of important Mitrinović's results belongs of the functional equations (28 papers in the period since 1953 when the first paper in this field appeared). Four doctors of Mathematics who received their doctoral degrees in functional equations under the supervision of Professor Mitrinović appear frequently as co-authors.

The third field of Mitrinović's interest is the Number Theory, particularly Stirling's, Bernoulli's prime numbers (31 papers) containing several recognized tables.

The fourth group is composed by the papers from inequalities (27) and the fifth group consists of papers (37) dealing with various topics (special functions, Legendre's polynomial, abstract algebra, set algebra, summation formulas, algebraic irrational equations, arithmetical progressions, matrices, determinants, conic sections, integrals, etc). Finally, the sixth group of 14 papers involves history, science popularization, mathematical pedagogy and various questions in connection with mathematics. These include topics such as organization of scientific work, preparation of scientific work, preparation of scientific cadres, how to learn mathematics, questions dealing with the preparatorial, qualifying of mathematics, history of mathematics in Serbia, importance and role of mathematics, contemporary tendencies in teaching of mathematics and so on.

Professor Mitrinović is very fertile as a writer of text books, collections of problems and monographs.

In the above mentioned groups we did not quote text books and collections of problems by Professor Mitrinović, not his monographs some of which have partially text-book character. Already in 1931, as a student of mathematics, Professor Mitrinović compiled his first small collection of problems entitled "Mathematical problems". In total hitherto, he published, not counting repeated editions of some books, 23 collections of problems, text books and monographs (11 by himself and 12 together with other authors, where his contribution was prevailing, especially in the general conception of the book). Among collections of problems three books of Collection of Mathematical problems are of particular importance, which are not collections for the current exercise of the subject, but a kind of introduction to scientific work. From these collections stem four books: New Collection of Mathematical problems: Special functions (first edition Beograd 1972, second edition Beograd 1978); Matrices and determinants (first edition Beograd

1972, second edition Beograd 1977; Complex analysis, (first edition Beograd 1972, second edition Beograd 1979); Differential Equations (first edition Beograd 1972, second edition Beograd 1979). From Collections of Mathematical problems stem five collections of problems which are published in Groningen.

Prof. Mitrinović is the author of a number of scientific monographs, from which the most important are: Analytic Inequalities (Berlin—Heidelberg—New York 1970, Beograd 1970), Geometric Inequalities (Beograd 1966, Groningen 1969), Means (Beograd 1969, Beograd 1978) Calculus of residius (Groningen 1966, Beograd 1978).

A general look at life and work of Professor Mitrinović shows a picture of a man greatly dedicated to mathematics, which, however, does not imply underestimation or neglect of other fields of human activity. The quantity and the quality of that which Prof. Mitrinović did in mathematics would indicate a man who “deleted” his entire personal life and monastically locked from morning to evening, worked only on mathematics. Such an impression, however, does not correspond to reality. The personal life of Professor Mitrinović was harmonious and wholesome and his relationships with people were not limited to narrowly professional contacts. In fact, it is a question is of his exceptional calmness, his skill to make a proper use of time, his capacity to organize work, and his capability to select good associates when collective endeavours were involved.

In mathematics Prof. Mitrinović achieved, as could be seen from the foregoing, a nice variety, working in several fields, abandoning entirely none though during the years he was changing the stresses with respect to particular fields. Speaking in general, the first period belongs primarily to differential equations, the middle to functional equations while the present period to inequalities. In fact, all this is more complex, since there are certain permutations and other mathematical disciplines were appearing as a subject of his interest.

A live interest in the history of mathematics was a particular present constant in Mitrinović's entire dealing with mathematics. He did not miss any single occasion to popularize mathematics, not underestimating any age, any establishment, any milieu. From mathematical competitions of pupils, through metodologically-didactic innovations at all levels of school practice, he endeavoured everywhere to contribute to an early discovery of mathematically gifted people and support them closely. His assistance to young is unprecedented in Yugoslav mathematical circles; he never got tired, never doubted, nor become disappointed, tolerating the cases of ungratitude (though they were very scarce) calmly and “proceeding to further agenda”.

Prof. Mitrinović cultivates real cult of work and his attitude towards the work is a dominant key to his relationships with people. Though of sharp and high criteria, he did not apply them to prevent publishing work which was not necessarily first-rate, but which is not entirely without interest, and which, especially when young people were involved, promised better results in future.

The point was to classify properly everything, to know exactly “what is what”. When defending the real values, and when opposing what he deemed was not a real value and which, in his opinion, was desired to be presented as a real value, Prof. Mitrinović knew to very polemical and to enter into sharp duels. No man fighting a polemical duel can be expected to put every word in its proper place!

What was always waranted with Mitrinović was the lack of a personal motive in such conflicts and the lack of any vindication. He had no inclination to “pursue people”. If today he had a sharp polemics with someone, it would not mean that

tomorrow he would not accept him as an associate, if the work were of general interest, and if he were persuaded that the person in question would sincerely approach the work. Such a behaviour is not to be confused with the impulsive quarrels and reconciliations of primitive people but it should be regarded as a capacity to separate the personal from the principal questions.

Mitrinović's organizational work in the field of mathematics was always full of initiatives and of new, original ideas. Keeping in mind the legality he did not always heed the remarks that this or that activity should be grounded on a larger scale, with a greater reliance to the existing "responsible" institutions. Numerous initiatives of his emerged when it was found that the "responsible" do not do their duties in the true sense of the word. The entire activity of his was conspicuously public; everything done by himself or together with his associates was published and put to insight of a public. Whoever could do it better, Mitrinović did not prevent him.

Mitrinović's capacity of compiling, classifying and guarding documentation is proverbial — a capacity which is not easily understood by others, and which relies besides his excellent memory, on his knowledge of classical procedures in this domain, as well as on his personal procedures. From time to time Prof. Mitrinović "went to pilgrimage" to our and foreign libraries (several libraries in Yugoslavia were founded and cared for by him). Far from any pathetics he did not like taking part in large gatherings, mathematical or other. More inclined to what would be called in politics "bilateral" contacts, he paid a visit to a number of foreign mathematicians and received them in visit — being with a much larger number in permanent correspondence.

Despite the variety of fields wherein Mitrinović had been working, all his papers are characterised by a concrete algorithm. Numerous and mutually different are the algorithms which he achieved by his particular mathematical resourcefulness. He is very particular about the accuracy of results; he is almost infallible in that domain. His exposition is clear, precise and interesting, without any befogging, always optimal and concise, without anything superfluous, but without omissions and overlookings of any link in the chain of proving.

In his personal contacts Prof. Mitrinović naturally lays the main emphasis on the work (without such an attitude he could not achieve what he did done) but without peternalism and arrogance. He does not belong to those "cold" professors who do not know how to smile. From time to time he makes the conversations more lively by a joke or an interesting anecdote.