

MILOŠ ČANAK – A SPIRITUAL MAN

Miloš Čanak, a mathematician, musician, chess player, anthroposophist, philosopher, in one word a harmoniser, was born on April 3, 1944, in Belgrade, and found peace in our Lord on November 21, 2020. He finished grammar school in Belgrade in 1962 and, in the same year, enrolled at the Faculty of Natural Sciences and Mathematics in Belgrade – Department of Mathematics, and graduated with great success in 1966. Besides mathematics, he also studied violin at the Music Academy in Belgrade in the class of Prof. Margareta Andrić.



He completed postgraduate studies in 1972 at the Faculty of Natural Sciences and Mathematics in Belgrade by defending his master's thesis on the topic: "Methods of Complex Analysis for Solving the Main Types of Contour Problems Concerning One Class of Non-Analytical Functions." In 1977 he defended his first doctoral dissertation on Complex Analysis under the title: "Methods of Differential and Functional Equations for Solving Some Types of Contour Problems." At this point, he began to be interested in Vekua's complex differential equations. Interestingly enough, even the last paper written by M. Čanak and M. Albijanić, published in *Publications de l'Institut Mathématique*, was related to Vekua – *On Inversion in the Case of the Fundamentally Finite Integrable Vekua Complex Differential Equations*.

He was elected teaching assistant in 1967 and assistant professor in 1978. He became an associate professor in 1983, re-elected in 1988, and was elected full professor in 1989 at the Faculty of Agriculture, University of Belgrade. For the last five years of his pedagogical career, he worked as a full professor at the State University in Novi Pazar. During his work, he occasionally taught at the Faculty of Organizational Sciences, the Faculty of Economics in Kragujevac, and at the College of Aviation and Polytechnic College.

As a pedagogue, Miloš Čanak had an exceptional relationship with students and teaching itself. This is confirmed by the very words he wrote in a book written in collaboration with Albijanić: "*A real professor* actually loves his students, he lives with them and from them. There can be no conflict between a real professor and a real student." As his colleagues from the Faculty used to say: "Miloš Čanak is a favourite among students, and he nurtures good and stable interpersonal relations and cooperation with colleagues at work." He was a mentor in doctoral dissertations, master's, and specialist academic theses.

He defended his second doctoral dissertation in 1996 at the University of Belgrade, entitled *Theory of Tonality in the Light of the Mathematical Theory of Music*. His mentor was the academician Dejan Despić, a musicologist and composer. He concluded his lecture at the Mathematical Institute with many emotions, saying that *those years of his creative work were the most beautiful thing that happened to him in his scientific life and work*.

He was engaged in the theory of boundary value problems for analytical and nonanalytical functions of a complex variable, with applications in mechanics. Music was his great love, and he developed a mathematical theory of music. To put it simply, Professor Čanak researched harmony. He gave a considerable number of invited lectures in Munich, Hamburg, Halle, Vienna, Graz, etc. He gave a large number of lectures in the country and abroad in mathematics, mathematical theory of music, and the general science of harmony. He wrote with special reverence about Miloš Radojčić and Stevan Mokranjac. He had numerous lectures and announcements in Serbia, at the Kolarac People's University, the Mathematical Institute of SASA, the Republic Seminar in Mathematics Teaching, etc. In the former Yugoslavia, he participated in numerous conferences. In addition to Belgrade, he also participated in scientific meetings in Ohrid, Bled, Novi Sad, Sarajevo, Bečići, Skoplje, Zagreb, Arandjelovac, Niš, Dubrovnik, Herceg Novi, etc.

He actively cooperated with the Mathematical Institute of SASA in Belgrade. Moreover, he was a member of the Austrian Mathematical Society, the International Society for Applied Mathematics and Mechanics – GAMM. He was an active reviewer of papers at the Zentralblatt MATH for a considerable time. It would be nice to quote a part of the letter addressed to Miloš Čanak from 1996 for this occasion. The letter was written by a former director of the Mathematical Institute Zoran Marković: "Dear colleague, I would like to inform you that the Project Council has chosen you, as an associate with the best results in the previous period at your Faculty, as a representative of the Project Council at your Faculty.

Professor Miloš Čanak, PhD, wrote and published about two hundred papers in the field I have mentioned. He published the books entitled *Mathematics and Music* (Matematika i Muzika) and *The Road to the Fifth Dimension* (Put u petu dimenziju), published by The Publishing House for Textbooks (Zavod za udžbenike). Together with Professor Miloljub Albijanić, PhD, he wrote three books, two of which have been published: *Apollonius' Wisdom: The Road to Healing and Light*, published by the Official Gazette (Službeni glasnik), and *The Secret Revelation of Harmony* (Apolonijeva mudrost: put ka ozdravljenju i svetlosti) published by *Dosije studio*. The printing of the third book is expected soon – *The Temple*, by *Dosije Studio* Publishing House. The authors' idea was simple: to prove that the temple is actually a man.

An interesting anecdote still circulates when Čanak and Albijanić were conversing during the publication of the book *The Road to the Fifth Dimension*. Albijanić asked him: "You see, Professor, it is clear that there are three dimensions in Euclidean space. The

fourth dimension for a large number of people is time. So, Professor, what is then the fifth dimension?" And then Čanak replied without any hesitation: "It's the music, Mićo, the music!" As Professor Čanak says in his book *Mathematics and Music*: "Sylvester used to say that mathematics was the music of reason, while Francis Warrain argued more specifically that music was for time what geometry was for space. Finally, Hermann Hesse was so fascinated by the presence of music in mathematics that he took this "divine synthesis" as the basis for his book *The Glass Bead Game*, which won him the Nobel Prize.

"What is destructible
Is but a parable;
What fails ineluctably,
The undeclarable,
Here it was seen,
Here it was action;
The Eternal-Feminine
Lures to perfection." (Goethe)

There are few people like Professor Čanak, who dealt with the theory of harmony, and it could be said that he applied it – that was his way of living. He lived in a harmonious family. He had two sons with his wife Vukosava, Stevan, and Ljubomir, and also three granddaughters... He had both beautiful and challenging interests. He loved chess and actively (competitively) played in the Bask chess club. He played the violin in the chamber orchestra of the Serbian Medical Association.

He lived a life of dignity and monastic quiet, but the words he uttered and wrote were powerful and loud. He was a spiritual man. Take just one title of his favourite book, *Mathematics and Music*, and pay attention to what the subtitle says: truth and beauty, one golden harmonic thread. He combined intellect, goodwill, and noble feeling into his unique personality. In the book *The Secret Revelation of Harmony* by M. Čanak and M. Albijanić, it is written: "The greatest thinkers and devotees said that every man carries in himself, in addition to his everyday life, another higher man, higher power, higher intelligence."

Were the eye not of the sun,
How could we behold the light?
If God's might and ours were not as one,
How could His work enchant our sight? (Goethe)

When they were writing books together, Professor Čanak used to advise Professor Albijanić: "The first thing you have to do is fulfill your duties, and then dedicate yourself to writing. It is up to us to work and write diligently and dedicatedly. If we do that, ideas

will always emerge. Help will come when you least expect it. It will come from above." He saw more than the others. He had developed those abilities. And just as he had said, they exchanged ideas in long and interesting, but also spiritually rich conversations, they wrote with dedication, and books were emerging one after another.

Three weeks before leaving for the Eternal East, Professor Čanak called M. Albijanić and told him: "I want to tell you that I am close to the other bank. I am satisfied with my life and with my family. Satisfied with my work which I did with love." Albijanić replied to those words: "Professor, if you were looking for your student, and I was looking for my teacher, I will tell you today that you found your student and I found my teacher. And not only that, we became fast friends a long time ago. That kind of friendship is valuable alone." He was unusually happy to hear those words. Albijanić further thought about how nice it was to write books together with his teacher, in accordance with the words of the Hellenic sages – *friends have everything in common*, especially the spiritual space. And Čanak was carried to heaven on the wings of his thoughts.

His wife Vuka remembers how they experienced charming life events together, events that ennobled their circle of friends: "Miloš plays, and his sister-in-law sings." These events were valuable and inherently beautiful, and they made people's lives rich. Albijanić, for his part, testifies that he spent a lot of time talking with Professor Čanak and that these spiritual encounters made them richer. They would separate with a sense of spiritual satisfaction.

The other bank that Čanak and Albijanić wrote about is the bank where noble souls continue to exist. In one of their conversations, Čanak says to Albijanić: "Mićo, do you know who Archangel Michael was? He led an army, fought for good and against evil. That is Njegoš's Ray." And on this saint's day, the Day of Archangel Michael exactly, Miloš joined the highest good and love. May his memory be eternal. May his immortal soul live forever. May his work live among his students.

And if our senses five obtain
In Paradise boon things that please,
Certain it is that I shall gain
A single sense for all of these. (Goethe)

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