

– *Congratulations for the László Rátz Honorary Award of 2001. Would you tell us about the beginning of your career? Did it influence your choice that you were a problem solver of KöMaL?*

To tell the truth, I never ranked very high in the order of the problem solvers of KöMaL. When I went to high school, I did send in solutions, even my name was printed in the journal, in a sample solution. I even made it to the numbered places but I was never in the top few. During my high-school years, I somehow never had enough energy, and circumstances did not encourage me either to work hard on the problems.

I was born in Budapest. Since my father had worked at the Ministry of Education before 1945, he was put on the „B list” after 1945, which meant that he lost his job by a political decision. My parents had three children, and it was impossible for my unemployed father to support the family in Budapest. We moved to the country, to a small village where my father made his living by private tutoring. That is where I went to primary school, then I went to high school in Székesfehérvár. I was a boarding student. There were dormitories with 15 to 20 beds, and compulsory silence during study hours. We only went home for the weekends. Studying conditions were not so good as in a room of one’s own where one can just sit down and solve the problems. At that time, I did not know what career I would choose. I was told that I would make a good engineer or chemist. At high school, however, I was the one who explained mathematics to almost everybody in the class. They still keep mentioning that at class reunions. They remember coming ten minutes earlier to school so that they could get their mathematics homework done. One of my mathematics teachers even asked whether I wanted to become a teacher. From that time onwards, it was quite natural that I would choose that career. That is why I went to study mathematics and physics at the university. It was during my freshman year that I decided to drop physics and take up philosophy instead. I never finished physics.

– *How often do you use philosophy in mathematics teaching?*

Sometimes. It is more of the history of mathematics than philosophy. In some classes I have talked about Greek mathematics and how it was related to philosophy. Then, of course, I often go on chatting with the students. That is all that remains of philosophy.

– *After graduation, did you stay at the university?*

Yes. I was in the third year when I already taught a seminar to younger students, first in algebra and number theory and then in elementary mathematics under the guidance of professors *Turán*¹ and *Surányi*. Naturally, I stayed at the university. I started to work there as soon as I had graduated. After fourteen years, I finally decided to leave for the National Pedagogical Institute where *Tamás Varga*² worked at that time on the reform of mathematics teaching. The task was to prepare a continuation of that in secondary education.

– *At the beginning of your career, you also taught at Fazekas Gimnázium, Budapest.*

Yes. I started to teach a class in the second year because their teacher had fallen ill. I only took that single class over till their graduation. After that I did not teach at Fazekas any more. I was invited to, but I did not even think of leaving the university and start a new class at Fazekas. Since then, they have asked me several times to come to Fazekas, but I did not want to leave Berzsenyi Dániel Gimnázium where I still teach. I did have a good time at Fazekas, I taught the class together with *Károly Kőváry*, and *Gusztáv Reményi* also taught them. It was an advanced mathematics class. I felt a little remorse at the end because there were 44 students in the class to be taught together. It was not easy, but 25 or 26 of them decided to become mathematicians. They were all admitted to the university and had a very good time there. The reason why I felt remorse was that I was uncertain about their future. All right, they are enjoying university, but how will so many people find appropriate jobs? Two years ago they celebrated the 30th anniversary of their high-school graduation. At the reunion, it turned out that they had all found careers. Some changed for humanities, but the lives of most of them remained in some way connected to mathematics. There are computer scientists and engineers, and six or seven of them still work as mathematicians. They teach mathematics at universities.

– *It was after Fazekas that you worked at the National Pedagogical Institute?*

Yes. First I stayed at the university part-time, then I continued giving courses until the 1986/87 academic year, but at the same time I also took up teaching here, at Berzsenyi Dániel Gimnázium, and became a full-time teacher in 1990. I have been working here ever since.

– *Is that because you considered secondary education more important than the university?*

I had a feeling that students in advanced high-school classes were more open and enthusiastic than university students studying to be mathematics teachers. A reason for the change in their attitude was that it became evident at the end of the 70’s and in the early 80’s that the prestige of the teaching profession was declining. It was partly due to the low salaries and partly to the way that some bureaucrats treated teachers. At in-service training courses, for example, one had the impression that teachers were simple subordinate workers whose only function was to carry out instructions. The economy was changing as other fields, for example economics or law acquired more prestige. I hope that by now it has started to balance again.

– *You allow the use of background materials during tests. Isn’t that going to be to the disadvantage of your students? What if they get used to it? They cannot use their notebooks at the final exams and entrance exams.*

¹ *Pál Turán* (1910–1976), a world-famous number theorist.

² *Tamás Varga* (1919–1987) mathematician, he initiated the general reform of primary education in the 60’s that received worldwide attention.

In an ordinary class, I would not let them use anything. In an advanced class, however, it has never caused any problem at entrance exams. The most important things that are needed at the final exams are in their heads by that time anyway, even if they are allowed to use notebooks. I am still convinced that the important thing about mathematics is not that the students should learn a lot by heart but that they should be able to apply in an intelligent way what they have heard and digested before. Of course, when I prepare the test, I make sure that the problems are not simply patterned on one that can be found in the notebook. Actually, even that happens sometimes, especially at the beginning so that they learn it is worth keeping a neat notebook. Those with a good notebook noticed the familiar problem, found it, and were able to do it. Others made several hasty attempts, ran out of time and often could not complete the solution. Then they realized that it was worth taking good notes in class. I have had several arguments with other teachers about the use of notebooks, but they had to put up with it. I am a hopeless case.

– *What relationship do you maintain with KöMaL now?*

As a university student, I used to mark solutions for some time. Then I was in charge of problems for a while, but I had so much work to do that I had to give it up. However, I still read KöMaL regularly. Especially now that I am trying to get my eight-graders to solve the problems. In the seventh and eighth grades, they are very enthusiastic, but later on their number drops, and by the say, eleventh grade only five or six of them remain at most. I still consider that an achievement. Those who get to like it by then and take it seriously will keep going. These students usually finish among the top fifty. On the other hand, those who do not feel like doing it any more should not be forced to. You cannot, anyway. There are other things students are much more willing to devote their time to. Computers, for example. It is surprising how much time they spend with them. In addition, they are expected to take a language exam or rather two by the time they graduate. The school cannot provide that, so they go to language schools in the afternoon. Sports are also very important, which means at least two sessions a week. They take an incredible amount of responsibilities on themselves. No wonder that twenty to twenty-five of them give up KöMaL, and there remain only a few crazy ones who keep solving the problems. We also use the articles of KöMaL. About ten years ago there was even a KöMaL club: when the deadline was over, we discussed the solutions to the problems within a week. I remember students coming from Révkomárom (now Komarno, Slovakia, the part of the town Komárom across the border) in large numbers. Then we decided to send one or two teachers over there so that the club could meet there without 16 to 18 students having to travel. It still happens every now and then that we discuss a harder problem or an extremely interesting KöMaL problem at school, as well as problems that come from elsewhere.

– *Have you always taught advanced mathematics classes?*

I have also taught a class that took advances physics. Now that I am retired, I may have a look outside advanced mathematics again. I do not want to start another advanced class because six years is too long. Now I teach 21 hours a week but I am retired, and I can be given notice any time, though the headmaster does not seem to have that intention. He also went to the class that I taught at Fazekas.

– *And how are the days of retirement?*

We have a summer house. It is very close, only twenty minutes from our home – great for recreation. One can also work there, and should one wish for some different work, there is always something to do.

Let me show you a photo: it was taken at the László Rátz Conference of 1976. Left to right, it shows *László Kalmár*, myself and *Rózsa Péter*³. Unfortunately, they both had passed away within a year. That was a hot summer evening, and they talked about how they had become mathematicians. I was the reporter.

³ *Péter, Rózsa* (1905–1977) world-famous mathematician, colleague of *László Kalmár*. Her book *Playing with Infinity: Mathematics for Everyman* has been translated to several languages.