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E. D. I am always interested to hear from good mathematicians about how they chose their profession. How old were you when it happened? Did you participate in any math circles?

G. M. I participated in math circles starting from the 7th grade. I competed in math Olympiads. But even before that, from my early childhood my dad tried to get me hooked on mathematics.

E. D. Was he a mathematician?

G. M. Yes, he worked as a docent in various colleges in Moscow.

E. D. In this regard your situation was similar to that of Arnold whose father also was a mathematician.

G. M. Yes.

E. D. Was there anyone in the math circles who influenced you in a particular way?

G. M. One of the circles was run by Lehman and Leontovich and another person whose name escapes me.

 I participated in math circles up until the tenth grade and changed them a few times, so I can't say exactly who influenced me the most.

E. D. Did you have any outstanding achievements in the Olympiads?

G. M. Yes, in 1962 I participated in the International Mathematical Olympiad and received the second prize. But there were a number of so-called second prizes. Joseph Bernstein[1] got the first prize.[2] We were there together.

E. D. I see, and due to your successful performance you were automatically admitted to Mekhmat, right?

G. M. Not quite so. I still had to take entrance exams. But, because the Olympiad was taking place at the time of the entrance exams, I took both oral and written math exams before the Olympiad, and I took physics and literature exams afterwards.

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[1] http://en.wikipedia.org/wiki/Joseph_Bernstein#Biography
[2] http://www.imo-official.org/team_r.aspx?code=USS&year=1962

E. D. 1962 was a comparatively good time.

G. M. My examiners in math were Rozov and Ulyanov.

E. D. Who? Ulyanov?

G. M. Yes.

E. D. I assume he didn't pick on you, did he?

G. M. No, these were different times. People were different.

E. D. Do you know Ulyanov's "theory"? According to this "theory", Jewish boys develop faster than Russian boys and therefore have a natural advantage at the time they take entrance exams. This must be taken into account at the time of admission.

G. M. Birkhoff[3] had the same theory. Wiener has written about that.

E. D. Even if Ulyanov was not the original proponent of the "theory", he certainly did everything he could to implement it in real life. But tell me about your first and second year in Mekhmat.

G. M. In my early years in Mekhmat I attended a lot of seminars.

E. D. What do you remember from those seminars?

G. M. There were too many of them.

E. D. So you don't remember anything specific, do you?

G. M. In my third year I attended your seminar. In it I wrote my first paper.

E. D. Was it your first one?

G. M. Yes.

E. D. There are quite a few of good mathematicians whose first published paper was prepared in my seminars. Among them Kirillov, Dobrushin and many others.

And the subject of your paper was harmonic functions on nilpotent groups, right?

G. M. Yes.

E. D. Of course this subject is only tangentially related to your subsequent research. But there is some connection nonetheless.

G. M. Yes, you are right. Starting from my fourth year, I participated in the seminar of Sinai.

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[3] http://en.wikipedia.org/wiki/George_David_Birkhoff#Influence_on_hiring_practices

E. D. Did your work on discrete subgroups started in this seminar? It seems this was not one of directions of Sinai's research.

G. M. Among of topics of the seminar at that time were geodesic flows on 3-dimensional manifolds. So far as discrete subgroups are concerned, they appeared in my intercommunication with Piatetski[4] and Kazhdan.[5]

I also attended the Gelfand seminar.

E. D. Piatetski is a brilliant mathematician. Did you have a chance to meet him afterwards?

G. M. Yes, I did. I met him in Norway, in 1987, at the symposium in honor of Selberg.[6] What about you? Do you meet him often?

E. D. I used to meet him a lot but not recently. He visited Cornell when Gelbart[7] was here. I also met him a number of times in Israel and in Yale. But in the last couple of years our paths haven't crossed.

Later you also volunteered to teach in the Second School. Tell me about this experience. How did you get involved and what came out of it?

G. M. I volunteered twice, each time for a two-year period. The first time was in 1965-6, under your supervision. The second time was in 1967-8.

E. D. Who was your supervisor the second time?

G. M. Brudno,[8] I believe. I don't remember how I got involved in this activity. It must have been you who recruited me.

E. D. This is the most likely scenario. I think you were in your first or second year when you volunteered for the first time.

G. M. I think it happened in the fall of 1964. I was in my third year.

E. D. If I am not mistaken, your wife is your former student. Did you meet her in the Second School?

G. M. Yes, I met her for the first time there, but our relationship developed later when she was a university student.

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[4] Interview of Piatetski-Shapiro is a part of this collection.
[5] http://en.wikipedia.org/wiki/David_Kazhdan
[6] http://en.wikipedia.org/wiki/Atle_Selberg
[7] http://www.wisdom.weizmann.ac.il/~gelbar/
[8] http://en.wikipedia.org/wiki/Alexander_Brudno

E. D. You may remember that among your students at the Second School were Olya Dynkin and Sasha Baril. They also later became a married couple.

Who was your supervisor in graduate school?

G. M. Sinai. My dissertation, entitled *On Some Aspects of the Theory of Anosov Flows*, was along the lines of Sinai's research.

E. D. And after grad school you started to work...

G. M. ... in the Institute for Problems in Information Transmission[9].

E. D. This is not bad at all, even by Western standards. You must have had the luxury of spending most of your time on your own research.

G. M. Yes, I had more time to do research than an average professor in the US does.

E. D. When you teach several courses (and normally young faculty teach introductory courses), it takes a lot of time.

I think you are one of the two Soviet mathematicians who were awarded the prestigious Fields medal. How did the news reach you? Did somebody give you a call?

G. M. The International Congress at Helsinki has a committee which is responsible for awarding these medals. The head of the committee is the president of the International Mathematical Union. At the time it was Montgomery.[10] In March of 1978 I received a letter from him notifying me about the award and asking me to maintain confidentiality because the official announcement was supposed to take place later that year at the Congress.

E. D. I would assume that many people already knew about it.

G. M. Yes, many people knew. Tits[11] wrote me a letter as well. He also served on that committee.

E. D. If I remember correctly, it was he who in your absence presented your work to the Congress. Okay, so you received the letter in March, and the Congress took place in August. There was enough time obtain all the documentation required for a trip abroad. What went wrong?

G. M. There was a special application procedure. I had to fill out some forms.

E. D. Of course you can talk freely about that now.

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9 http://www.iitp.ru/ru/about
10 http://www.ams.org/about-us/presidents/36-montgomery
11 http://en.wikipedia.org/wiki/Jacques_Tits

G. M. Basically the Institute for Problems in Information Transmission was supposed to file some paperwork on my behalf.

E. D. But that means that you had to tell your employer about the award in spite of confidentiality.

G. M. Yes, but many people already knew about it, so it wasn't such a big deal. It was just a matter of getting all the paperwork done.

E. D. And where did this process stall?

G. M. It stalled at the level of the National Committee.

E. D. You have to "thank" Pontryagin then, don't 'you?

G. M. No, it was Vinogradov who stalled the process.

E. D. This is outrageous. I remember there was a protest during the plenary report of Dobrushin. Do you know anything about it? The protest took place in front of the building where the Helsinki agreement was signed. Lipman Bers[12] presided over the meeting. I also delivered a speech there. Bitsadze[13] stood nearby [*Laughs*].

But after that incident your superiors were always considerate toward you. What about your subsequent trip to Germany? Formally it was not related to your scientific achievements, was it?

G. M. No, it wasn't.

E. D. Did someone invite you there?

G. M. Yes, I was invited by the University of Bonn.

E. D. I assume this time Vinogradov wasn't involved.

G. M. Yes, this time they didn't cause me any problems. But after this trip to Germany there were a few times when they didn't let me out of the country again. I think this was largely thanks to the efforts of certain mathematicians whom we both know.

E. D. By the way, how do these mathematicians fare today? Do they have less power?

G. M. Some of them passed away.

E. D. But do you still have to obtain someone's permission to travel abroad. How does this process work today?

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[12] http://www-history.mcs.st-andrews.ac.uk/Biographies/Bers.html
[13] http://encyclopedia2.thefreedictionary.com/Bitsadze,+Andrei+Vasilevich

G. M. No, we still have an application procedure, but it goes through our Section of the Academy of Sciences.[14]

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[14] http://en.wikipedia.org/wiki/Science_and_technology_in_the_Soviet_Union