NOVOSIBIRSK ACADEMY TOWN – the LAND of SCIENCE and FREEDOM

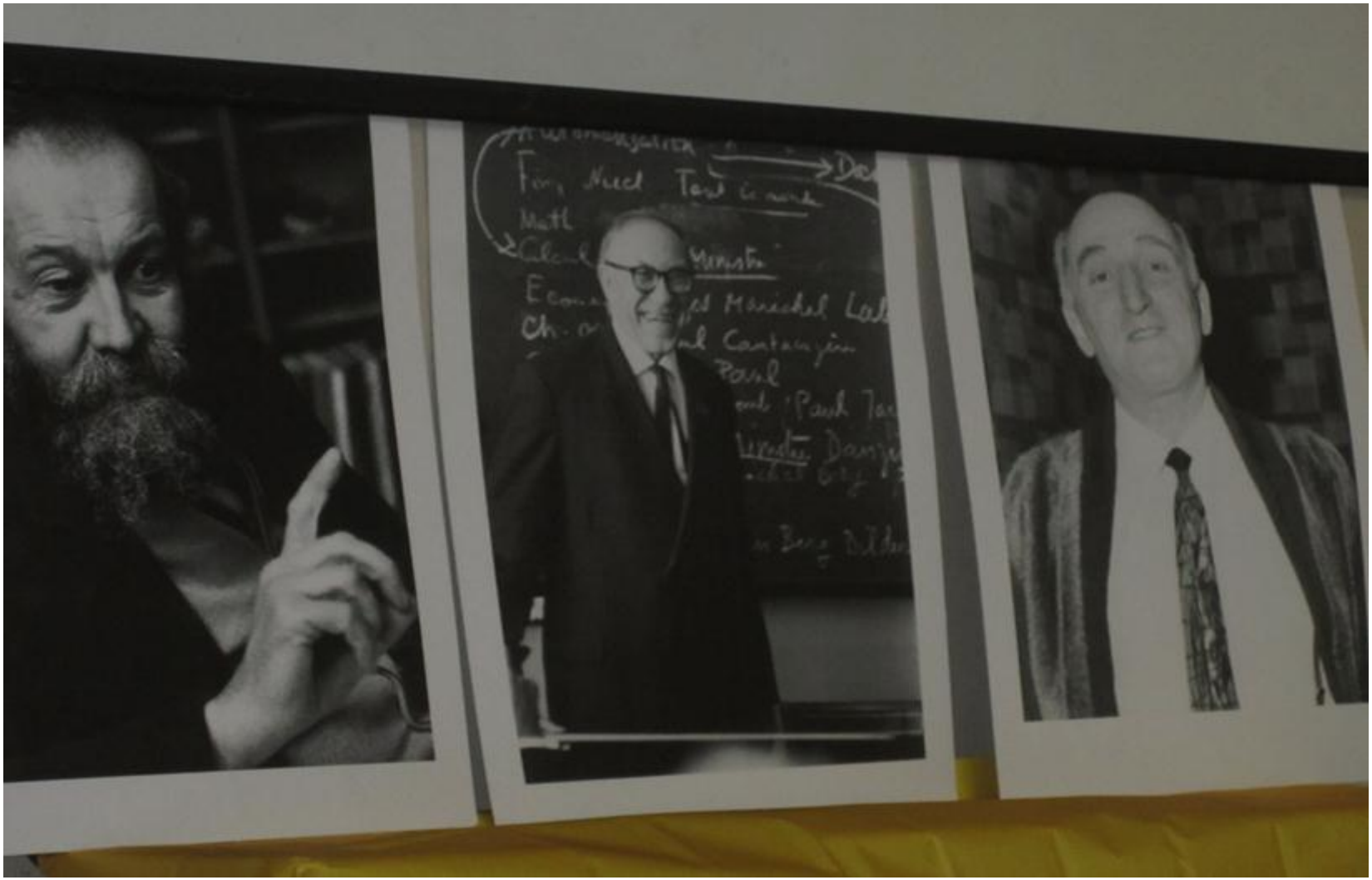
1957 – 1967

Gennady Fridman

Akademgorodok. Beginning.

- It was a wonderful time and a wonderful place. Akademgorodok emerged during the Khrushchev thaw. About 20 research institutes were created, a University was opened, and in Akademgorodok talented youth followed swift on the heels of prominent scientists.
- It seemed that freedom really reigned (in the Soviet Union!), in communication, and in scientific endeavor. Many of the usual domestic problems were absent: all the students lived in a dorm, young scientists quickly received flats, and there were many vacant positions in research laboratories.
- Moreover, it appeared that anti-Semitism, not uncommon in the USSR, was completely absent. For example, a quarter of the students on my course at the Faculty of Mathematics Novosibirsk State University were Jews from all over the country, from Ukraine, Moldova and the Baltic to Turkestan and Kamchatka.
- Akademgorodok was open-minded: there was a club of young scientists "Under the Integral", a strong team of KVN (a cheerful and resourceful club), a community of poets, a community theatre…

Alexei Lyapunov, Mikhail Lavrent'ev and Gersh Budker



FMSh

- In 1962, on the initiative of outstanding scientists Mikhail Lavrent'ev, Alexei Lyapunov and Gersh Budker, the annual Physical and Mathematical Summer School for teenagers was organised.
- In January 1963, the world's first Physical and Mathematical School – **FMSh** began, where I was fortunate enough to study.
- The idea of the Chairman of the FMSh, Alexei Lyapunov, was to involve talented youth in real science as early as possible.
- Thus, in addition to general classes, we could participate in scientific seminars at Novosibirsk University and research institutes.

The first lecture at FMSh

Early entry into Science

Great results appeared soon.

- Gersh Budker took an FMSh student Vasily Parkhomchuk to the Institute of Nuclear Physics (now Budker INP). In only his fourth year at the University, Parkhomchuk designed his own experiment, and was granted his own research team, with which he built his own installation to conduct this experiment. Today Vasily Parkhomchuk is a very eminent physicist.

Vasili Parkhomchuk and Gennady Fridman

Another three students published a paper in the Proceedings of the Academy of Sciences of the USSR.

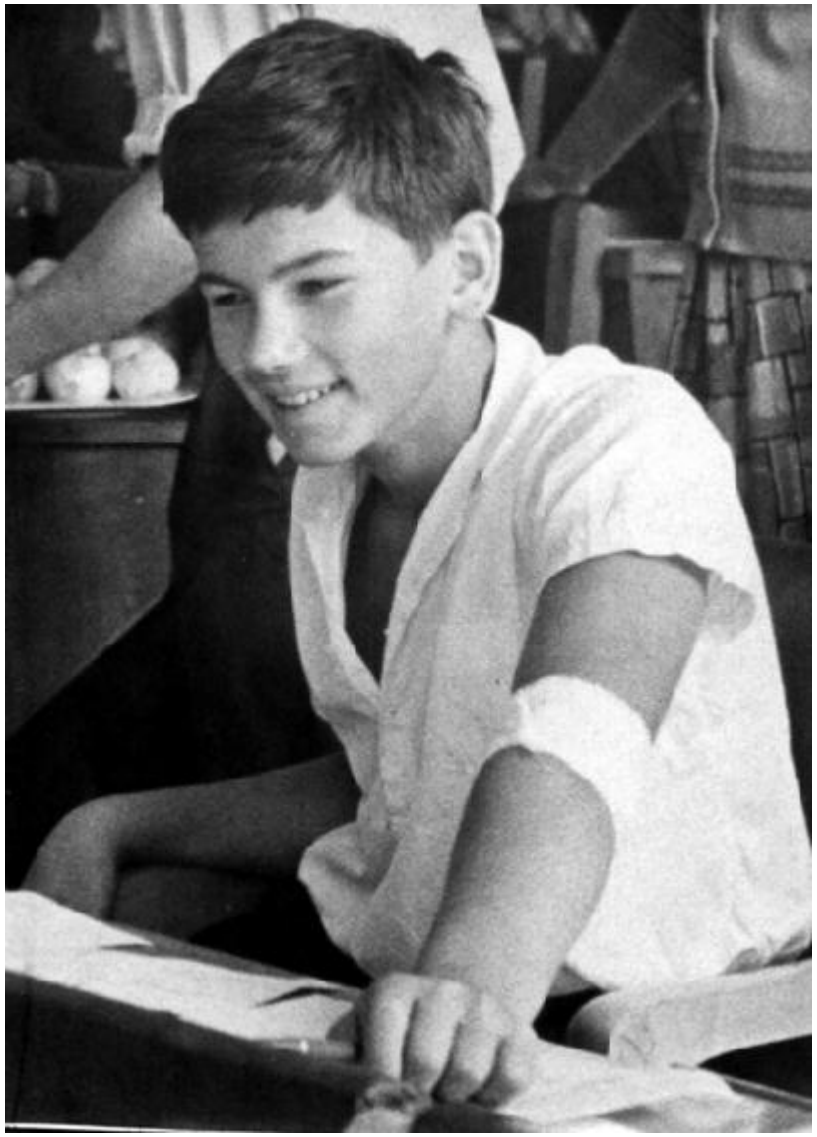
But not only Science - ZFMSh

But not only Science. It seemed at that time you could do everything and everything happened. For example, in the summer of 1965, I received information that Israel Gelfand was starting MSU ZMSh (Mathematics School for Distance Learning). I, having just finished the first year of University, decided to organize ZFMSh. We attracted friends and university students (mathematics and physics) as supervisors; the pupils who did not remain in FMSh, after Summer School, we invited into ZFMSh. In October, just a month after Gelfand started, the first tasks in physics and mathematics went to Siberia, the Urals, in Turkestan and the Far East as part of the distance learning programme. By the way, all of us worked as volunteers. Now ZFMSh is part of the University and next year we will celebrate its fiftieth anniversary. Eugene Khukhro, my former student and now a professor, wrote about ZFMSh in the De Morgan Journal 3 (2013), 1 – 6.

Alexander Gorban

- The same year, I met Sasha Gorban. He was then, it seems, 13 years old and he was in the Summer School. After the Summer School his mother, a great philologist, hesitated to let him go into the FMSh.
- I'm very proud that my insistent recommendation convinced his mother to bless the young Alexander’s induction into science.
- After a couple of years, when Alexander was a freshman at the University, the famous physicist Yuri Rumer, a friend and fellow Nobel laureate Lev Landau said about Sasha: "I first met someone more talented than Landau."

Alexander (Olympiad, 1965) and he with Mother (1967)



Khrushchev thaw over

- But the Khrushchev thaw was soon over, and so started the rotten time of Brezhnev. Then began attempts to try to imprison writers and so on.
- After one of these nefarious processes (the Ginzburg and Galanskov Trial), protest posters were daubed on the walls in paint posters (8 January 1968). The KGB found the "writers" quickly; the youngest of them and the organizer of the protest was Alexander Gorban.
- So, after two years of investigation, these young people were excluded from the University. Alexander returned to Omsk, graduated from vocational school and worked as a lathe operator in a factory.
- For several years he wandered around Siberia, and was repeatedly fired from his jobs. These were tragic pages in his life.

Wanders and Good Boys

On the other hand, there have always been the people who helped him.

- Vocational school director Vladimir Arzamastcev who helped Sasha to get a diploma from Omsk Pedagogical Institute. So this Pedagogical University can claim the highest rating now.
- Mathematician Vladimir Melamed, with whom Alexander published his first mathematical paper.
- Chemist Gregory Yablonsky, who has repeatedly helped Sasha to get a job,
- Applied mathematician Valery Bykov, who helped Sasha to move to Krasnoyarsk.

“What doesn't kill us makes us stronger,”- this is true sometimes, for some people

- After his expulsion from the University, Alexander developed for himself an extensive educational program in many sciences and followed this program for many years.
- He began to wander through the various fields of science, regularly getting outstanding results.
- It is wonderful that in every direction, he created a new scientific school: in non-equilibrium statistical physics, in physical and chemical kinetics, in bioinformatics, and neurocomputing, data mining, and adaptometry with a variety of applications.
- And yet he has remarkable results in mathematics and hydrodynamics.
- Moreover, he studied and developed technologies of collective thinking and analytical games, led many large analytical and development projects and even became a part-time Professor in a Department of Psychology.

Krasnoyarsk

- Alexander stayed in Krasnoyarsk for a long time, he defended two dissertations, took the position of vice-director in the Institute of Computational Modelling of the Academy of Sciences and became an outstanding scientist.
- He created the Laboratory for Modelling of Non-equilibrium Systems at the Institute of Computational Modelling, Russian Academy of Sciences, and was the head of this lab from 1995 to 2005.
- He created the first Neurocomputing Department in Russia (1993, Krasnoyarsk Technical University), and was the chair of this department from 1993 until 2006.
- Together with his friends and collaborators in the 1990s he organized the first Regional Scientific Foundation in Russia (Krasnoyarsk) which then attracted funds for support of research at this extremely difficult time.

Academytown. New Time.

But back to Akademgorodok. Life had changed, especially after the invasion of Czechoslovakia.

- Alexei Lyapunov and his followers were expelled from the FMSh, and political purges took place in the University.
- By the way, in 1970 there were no longer any Jews admitted to the Faculty of Mathematics of NSU.
- In 1972 there was a remarkable order by the new dean of the Faculty of Mathematics, "for the collapse of the ZFMSh dismiss Gennady Fridman." But I did not work in the ZFMSh formally, we were all volunteers, and indeed ZFMSh formally had nothing to do with NSU. It was a branch of the correspondence school in Novosibirsk City for adults. This institutionalization of ZFMSh was a great invention of my oldest friend and a good mathematician Alexander Rubinov. So, ironically, this order was the only formal evidence that Gennady Fridman was involved in ZFMSh.
- Many fled abroad; some of these people we see here.

Life goes on

- Alexander Gorban was invited to the Clay institute (as Clay scholar), to the Courant institute (NY) and IHES (Paris), spent two years at ETH Zurich, and then found a new home at the University of Leicester and continues to work actively.
- Maybe he has not enough postdocs and good PhD students around him, maybe too much teaching, but everything else is perfect, I think.
- His former students work in various countries and regions, from Vancouver and Arizona to Vladivostok and Beijing.

Alexander Leyfer. Unravel the plan of God.

- Many years ago I decided that I should write a book about Akademgorodok and its people. But that book, with all of its interesting events, should be like a detective story.
- And so in the center of the story is to be Alexander Gorban, because his whole life is like an adventure.
- Eventually, I realized that I myself cannot write this book. I met a good writer Alexander Leifer, he took on the idea with great enthusiasm, met with various people in Omsk (including the mother of Alexander), Krasnoyarsk, Moscow and now this book in front of you.
- In my opinion, it is a very good book.

Some Theses

God's Chosen Overcome any Obstacles and Implement that which is Commanded.

Mathematician Will Do IT Better.

And Alexander Gorban certainly confirms these theses.

Very popular is a completely wrong thesis:
“The World is Narrow”.
No, the World is Huge. The truth is that

The Layer is Thin.
But while this layer exists, hope is alive.

As well, We are All gathered here!

Thanks and Good Luck!