

V.A. Marchenko's memory of A.V. Pogorelov

First of all Aleksei Vasiljevich Pogorelov was the outstanding mathematician who had solved a number of challenging problems unamenable to the efforts of other mathematicians. We can think, for example, of the problem of unambiguous definiteness of general closed convex surfaces by their metrics for which he, a very young man, was awarded Stalin Prize. Later on, he was awarded Lobachevski Prize, Lenin Prize, the State Prize of Ukraine and some others. But at the moment I would like to recall some scenes of his life because A.V. was a remarkable person. Being a very serious man, he was easy in personal contacts.

Once in his youth A.V. participated in a Mathematical Olympiad in which one had, at the most, to derive a formula for the roots of cube polynomial. And he was able to cope with the task, thus attracting the Olympiad organisers' attention.

I would like to remind you of one episode of his services in the forces during the World War II. Once he was ordered to fill up the tanks of a plane which was several kilometers from the military unit. When he reached the plane he saw that it was seriously damaged. And A.V. decided that there was no point in filling the tanks so he did not carry out the order. But when he returned to the military unit the chief officer asked him about executing the order. Aleksei Vasiljevich explained that the plane had heavy damage and could not fly, so from logical considerations he did not fill the tanks because of absurdity. But in the forces orders are orders and the logic is invalid. As a result, A.V. was reprimanded.

(Comments by I.H. Sabitov: I also heard that story and want to supplement it with a few new details. It turned out that a repair team was sent to the plane after A.V.'s return but he did not know about the fact. In that case the actions of the chief officers were reasonable and logical. Indeed, orders are orders in the forces.)

I remember how we sailed down the Volga by canoes. The leader in our team was Vladimir Vasiljevich Repko who gave all orders. When it was A.V.'s turn to be on duty in our camp, he approached the point with full responsibility, picked up brushwood, kindled a fire, prepared meal.

Aleksei Vasiljevich rowed the canoe in a quite original way – he took the oars not from above, as was the usual practice, but from below. In so doing he convinced us that it was the most rational way of rowing. We could not make him change his mind.

Aleksei Vasiljevich was a bold man in both mathematics and engineering. He held that he could solve any problem. That was the case, for instance, with a super-conducting generator where he was a pioneer. The current produced by a generator is normally picked up off a stator. Taking into account the specific character of super-conducting generators, A.V.

suggested that the current would be picked off a rotating part (a rotor). Prototypes were constructed, at *Elektrosila* included. But it turned out that approach was unsuitable in long-term service, in long-term picking up current. That idea had been used in pulse oscillators applied in space research.

A.V. had a striking capacity for work and a knack of concentrating on tasks despite all everyday problems. It always seemed to me that at conferences A.V. wanted to go home as soon as possible to continue his scientific work. Scientific work gave him pleasure, and he called himself a lucky fellow.

A.V. was also engaged in inventing in photography. He suggested a camera that could take at once several photos of which one could choose the best shot after photographic development. That invention called attention of KGB. He was seriously keen on colour photography too. He even had some patents in that field. Of course, at that time there were no such possibilities as we have now. In addition, A.V. made a bookcase in his youth.

Let us recall how A.V. inserted a Volga motor-car engine into his "Pobeda" and it was on the go as if nothing were wrong.

Recollection by Leonid Vasiljevich, the son

I want to express my deep gratitudes to the participants of the Seminars for their attention to the memory of my father. I would like to supplement the recollections by Vladimir Aleksandrovich with my own ones, which demonstrate what a determined man was my father and how he tackled even unknown problems...

Once he decided to learn tailoring and sew trousers. He made curves, as prescribed, cut the details out of the fabric but the body configuration had not been taken onto account. And it came to nothing. Those fabric pieces remained unused. Each speciality has its secrets.

I also remember the bookcase made by my father.

Then V.A. Marchenko read the autobiography written by Aleksei Vasiljevich and prepared by A.I. Medyanik.