

**MY DAD:  
AN ENGINEER IN MATH  
AND IN THE REAL WORLD**

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My dad graduated from high school with a medal. This formally should have allowed him to enter any university in the former Soviet Union. But at that time there was a “quota”, especially for Jews . . .

Thus my dad, who wanted to be an engineer or physicist and who applied to the Polytechnic Institute, had to go to the Mathematics Department at The Leningrad University instead. He became a mathematician.

My dad is a very versatile man. He was a Ping Pong champion at The Leningrad State University. Many years later, when he was about seventy years old, he played for Penn State on the team with two other guys who were 18 and 20. He did not lose a single game. He was a mountaineer, like Delauney and A. D. Alexandrov; he even climbed the Fedchenko Glacier in the Pamir Mountains. He used to do figure skating. He is a good chess player. He can fix a car and build a house. He was strongly opposed to the regime during the Soviet times. Though he was never jailed or exiled, he was banned from teaching at the university and traveling abroad before “perestroika”. For as long as I can remember he has had a large dog. He sure has one now, and he walks her at least three times a day. The dog is adorable!

In addition to his numerous mathematical contributions, he is also a great father (of two sons) and grandfather (of five grandchildren). There is much more, but this is a shaky direction for an introductory article to this volume.

These are my personal memories. No doubt I should have started by talking about my dad as a remarkable and brilliant mathematician, which he is.

My father approached mathematics with the attitude of an engineer and a physicist. (On a personal note: I have inherited this approach to mathematics from him, just as he inherited this way of thinking from his father.)

When I think about my dad’s contributions to science, in my humble opinion there are two major things (of course, there are many more). But there is one more which cannot be forgotten: Advising his students.

First, he contributed to and largely promoted an approach to geometry through geometric inequalities, not only for the sake of getting specific inequalities but also for using them as powerful tools.

Perhaps more importantly, he is one of the creators of what we now know as (modern) Alexandrov Geometry. He developed this with Gromov, with his students Perelman and Petrunin, and with other mathematicians. I remember from talking with my dad that he had a dream of developing this theory several years before the groundlaying paper by Yuri Burago, Gromov, and Perelman was started.

My dad has had many fantastic students who hold the banner. He was awarded the L. Steel Prize for *A Course in Metric Geometry*, a book published by the American Mathematical Society. He took part in the work for the United States Civilian Research

and Development Foundation for the Independent States of the former Soviet Union. He taught for Penn State as a Distinguished Visiting Professor. He is also the Head of the Geometry and Topology Lab at the Steklov Institute for Mathematics in St. Petersburg.

On behalf of the editors of this issue, I want to thank everyone who submitted papers to this volume and journal. We received many papers, none weak or even average. We greatly appreciate your contributions!

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