

## **Brief Memories of Olga Alexandrovna Ladyzhenskaya**

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For more than half a century Olga Alexandrovna Ladyzhenskaya was internationally famous for her fundamental results connected with partial differential equations. I first heard her name when I was an undergraduate in London in 1966 taking classes on fluid dynamics. The British School of fluid dynamics at that time was very strongly influenced by the “grand old men” of Cambridge such as Reynolds, Rayleigh and G.I. Taylor. A reference to a book, “The mathematical theory of viscous incompressible flow” stood out for me when I was told that the author, O.A. Ladyzhenskaya was a woman. Later in my career in the US I heard wonderful stories about this remarkable woman: about her many deep and important contributions to the whole spectrum of PDE, her magnetic personality, her courage in support of those under attack, her great charm and her luminous beauty. As a postdoc at the Courant Institute in 1973 I heard such stories from Peter Lax, Cathleen Morawetz and Louis Nirenberg. During the Stalin period in the 1940s and 1950s mathematicians in the Soviet Union were rigorously isolated from mathematicians in the West. By 1958 there was a relaxation and a large Soviet delegation, including Ladyzhenskaya, was permitted to attend the International Congress of Mathematicians in Edinburgh. This was the beginning of mathematical and personal friendships between Olga and mathematicians at Courant. The ICM in Moscow in 1966 was another outstanding occasion for Western and Soviet mathematicians to get together.

In the following years it became easier for Western mathematicians to visit the Soviet Union but it remained difficult for many mathematicians, including Olga, to visit the West. By the end of the 1980’s professional travel to the West for Soviet scientists became a little easier. In this period, at a conference in Spain, I met for the first time Misha Vishik whose results in fluid dynamics I knew only by reputation. Misha and I discussed our common interests and a few months later in 1988 Misha was able to arrange an invitation for me to visit an Institute of the Academy of Sciences in Moscow where he worked. During my time in Moscow Misha arranged for us to go together to Leningrad. For me the high point of my visit to LOMI was to meet the now very famous and distinguished Olga Ladyzhenskaya. She was gracious and friendly and kindly expressed interest in my work. Over the next decades I enjoyed contacts with members of the impressive mathematical group headed by Olga including Gregory Seregin, Nina Uraltseva, Vsevolod Solnnikov and some of their students and collaborators. I also helped host visits of several Russian fluid dynamicists to Chicago in the 1990s and met Olga again in the US. My involvement with the Russian School of mathematical fluid dynamics was a seminal event in my career.