



Konstantin Aleksandrovich Naugolnykh, a Fellow of the Acoustical Society of America and one of the pioneers of nonlinear acoustics research in Russia, passed away on August 14, 2017, in Boulder, CO.

Konstantin was born on October 7, 1932, in Baku, Azerbai-

djan (a former Soviet republic). He earned a MS in physics from the Perm State University, Perm, Russia, in 1955 and a PhD in acoustics from the Acoustics Institute, Moscow, in 1959, where he was advised by academician Nikolay Andreyev. The topic of his PhD dissertation was the theory of finite-amplitude acoustic waves. Because of the importance of the results obtained, Konstantin was invited to Brown University, Providence, RI, in 1963, where he collaborated with Robert Beyer and Peter Westervelt on the theory of finite-amplitude wave propagation in viscous fluid. He also solved a problem of modulated-wave rectification in a nonlinear medium that was used in the later studies of extreme regimens of parametric arrays in acoustics.

On returning to Moscow, Konstantin became interested in the generation and propagation of finite-amplitude acoustic pulses from underwater sources such as electric discharges and explosions. He found an analytical solution for a weakly nonlinear spherical wave and showed that it remained close to the general Taylor solution up to a significant acoustic Mach number. These results formed the basis of the Doctor of Science dissertation, which he defended in 1971 at the Acoustics Institute. Subsequently, Konstantin studied the laser generation of sound in fluids, a novel area at that time. This interdisciplinary research between acoustics and laser optics was followed by a field experiment in the Black Sea.

In the late 1980s, Konstantin was among the first to experimentally demonstrate the application of a powerful parametric array to generate a broadband, directed acoustical signal propagating at a long range in the Arctic Ocean. In 1985, Naugolnykh and a group of colleagues were awarded the USSR State Prize for research in nonlinear acoustics.

After the collapse of the USSR, Konstantin, among many other Russian scientists, moved to the United States. From 1994 to 2016, he worked at a NOAA laboratory in Boulder, CO, where he actively studied acoustic monitoring of the atmosphere and ocean.

For many years, Konstantin was a member of the Editorial Board and, later, the International Advisory Board of *Acoustical Physics*, which is the main acoustical journal in Russia. He was one of the founders and a vice president of the Russian Acoustical Society.

Always clear and illustrative in describing his results, Konstantin shared this quality with his colleagues. Apart from his outstanding scientific achievements, Konstantin was a kind and outgoing person. He liked hiking in the mountains and downhill skiing. He is survived by Alla Vovk, whom he married in 1959, a daughter Tanya, and a grandson. Konstantin's memory will be forever kept by his friends and colleagues.

Selected Articles by Konstantin A. Naugolnykh

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