

Remembering Professor Valerian Tatarskii

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At this special session we commemorate and celebrate life of Professor Valerian Tatarskii. He is recognized in the radio science as one of the founders of a theory of wave propagation in random media. His outstanding seminal works made a global impact on studies of the propagation and scattering of electromagnetic and acoustic waves in the atmosphere and ocean.

Professor Tatarskii's books "Wave propagation in a turbulent medium," published in the U.S.S.R. in 1959 and translated into English in 1961, and "The Effects of the Turbulent Atmosphere on Wave Propagation" (English translation, 1971), earned him worldwide recognition. These books also greatly influenced my motivation to be a researcher in this field.

In this presentation, I will share memories about my long and direct association with Prof. Tatarskii which began in 1971 in the Institute of Atmospheric Physics of the Academy of Sciences of the Soviet Union in Moscow. Under his supervision, I received my PhD degree in physics and mathematics dedicated to studies of strong scintillations of light waves in the turbulent atmosphere. In the following years we worked together on various problems related to electromagnetic wave propagation in random media and scattering from rough surfaces. We employed different techniques for solving these problems such as the parabolic equation, the Markov approximation, and Feynman path integrals for the calculation of field statistical moments at the regimes of strong and saturated scintillations. All these years I enjoyed his wonderful mentoring and priceless expertise. Our collaboration in this field continued in the 1990s when we received an invitation to work at the Wave Propagation Laboratory at the National Oceanic and Atmospheric Administration in Boulder, Colorado.

Professor Valerian Tatarskii will always live in our memory as our esteemed teacher and colleague, and, above all, as an amazing human being.