TIMAN'S TYPE RESULT ON APPROXIMATION BY ALGEBRAIC POLYNOMIALS YURI BRUDNYI

The paper presents two approximation results of the Jackson-Timan type, which were included in my lecture at the All-Union Conference in Approximation Theory (Dniepropetrovsk, June 26-28, 1990). The conference was dedicated to the seventieth birthday of Professor Alexander Timan (26.6.1920-13.8.1988). Unfortunately, proceedings of the conference never appeared because of the well-known events in the former Soviet Union, and only the abstracts were published (see [#3]). Here we present the approximation method which has been used in the proof of these results. In fact, it can be applied to many other approximation problems of such a kind.

In view of the character of this volume, let me give some details regarding Timan's life, which has many common features with Glazman's life. Professor Timan belonged to the same unfortunate generation as Professor Glazman, with whom he was closely acquainted. More precisely, they were included in the small part of that generation which was lucky enough to survive.

Professor Alexander Timan was born in the small Ukrainian town Zolotonosha. At the age of sixteen, Alexander Timan entered the Dnepropetrovsk State University. He started his creative work under the strong influence of academicians Kolmogorov and Kagan, who had positions at the university. After graduating in 1941, Alexander Timan passed the entrance examinations for postdoctoral studies at the Moscow State University. The Second World War drastically changed his plans. From September 1941 until the end of the war, Alexander Timan was an artillery officer at the front line. As Glazman, he took part in many heavy battles, including the Moscow military operation of 1941 and the capture of Berlin in May 1945.

After returning to Dnepropetrovsk he started working at the university. In 1952, he became a professor and head of the Chair of Function Theory and Geometry. His mathematical achievements during that fruitful period of his scientific career were summarized in his classical book "Approximation Theory of Real Functions" (the third edition was published recently, see [T'2]).

In 1961, high ranking party officials put pressure on the university administration to dismiss him from his university position. The official reason given was some dispute with another colleague. But the real reason was his Jewish origins with which he strongly identified. This event had an extremely negative effect on his mathematical creativity and on the subsequent scientific careers of his Jewish students. (One of them lost his job almost immediately, after trying to defend his teacher.)

For the rest of his life, Alexander Timan worked as a professor at the Dnepropetrovsk Institute of Chemical Technology.