**LUBOMIR
TSCHAKALOFF
(1886 – 1963)**

Lubomir Tschakaloff was born on February 18, 1886 in the town of Samokov, in a poor and large family with 11 children. His father was a homespun tailor.

Lubomir Tschakaloff finished high school in the town of Plovdiv where one of his brothers worked and could see him through his studies there. Following his strong desire to pursue mathematics, in the autumn of 1904 Lubomir Tschakaloff walked the way from Samokov to Sofia to enroll in the University. He graduated with honors from the Department of Mathematics and Physics in June 1908, but in the period 1907-1908 (when Sofia University was closed) he studied in Zagreb and Belgrade. He then worked for a year at the First Sofia Male High School. Since 1909 Lubomir Tschakaloff became a full-time assistant at Sofia University.

Being a promising young mathematician, he was sent on a two-year specialization in Germany, mainly in Leipzig and Göttingen (1910–1912), where at that time had been working D. Hilbert, F. Klein, E. Landau, H. Weyl. Göttingen was the mathematical world center. There, being influenced by Landau, Tschakaloff became absorbed by Number Theory, and Complex Analysis. His scientific accomplishments from that period had been presented in his habilitation work "Analytical Characteristics of the Riemann Function $\zeta(z)$".

In 1922 Tschakaloff was elected a full-time professor in mathematics at Sofia University. A second postgraduate specialization in the period 1924-1925 gave him the opportunity to work in Paris, Pisa, and Naples. At the University of Naples he wrote and defended his PhD dissertation on "Riccati Equations". Tricomi described it as "a work of significant value". After his return to Bulgaria in 1925 he was elected a correspondent member of the Bulgarian Academy of Sciences, and in 1930 he became a regular member of the Academy.

Since 1922 till his death in 1963 he chaired the Advanced Analysis Department of Sofia University. He was Dean of the Faculty of Mathematics and Physics in 1923–1924 and Rector of Sofia University in 1943–1944. He was the first Director of the Mathematical Institute.

Lubomir Tschakaloff was member of the Physics and Mathematics Union. He was member of the Royal Czech Academy of Sciences, the Geography Union in Lima, the Warsaw Academy of Sciences.

He died on September 11, 1963.

Tschakaloff's basic contribution to science is in the field of Function Theory, Number Theory, and Quadrature Formulae.

His studies on "squarable lunes" expanded Landau's results and directed another great mathematician's attention – that of Tschebotareff, to the complete solution of Klausen's problem from 1840.

Tschakaloff studied the integral representation and applications of Newton's quotients (divided differences), founded and described basic principles and recurrent relations of their Peano kernels, which much later the famous American mathematician Isaac Schoenberg called B-splines. They became the fundament of the emerging in the '60s theory of spline functions. This was one of the most significant developments in applied analysis during that century.

The first results in this field Tschakaloff announced on the International Mathematical Congress in Oslo in 1936. Unfortunately, being ahead of their time, his publications passed unnoticed for a long time. Furthermore, Tschakaloff was the first to explain the integral representation of B-splines.

In a series of publications, Lubomir Tschakaloff studied Gaussian quadrature formulae with multiple nodes, offered original methods for the calculation of their coefficients and representation of the remainders, and proved the existence of the Gaussian nodes. These studies had led to difficult extremal problems that were in the focus of attention of specialists in classical and applied analysis for decades. Typical example is the problem of uniqueness of the optimal Gaussian nodes that was completely solved in 1975.

Tschakaloff found out the exact limits of the subinterval, where the indeterminate point in the Roll's theorem lies, when the function considered was a polynomial of any fixed degree. Thus he solved the known Pompeiu problem. This result brought him a world-wide fame. The method suggested by Tschakaloff and developed in later times by Favar remained in literature as Tschakaloff-Favar approach.

Tschakaloff was the author of 110 scientific publications. He wrote books on theory of analytical functions and differential equations.

Among his students and followers have been Acad. Nikola Obrechkoff, Acad. Lubomir Iliev, Prof. Yaroslav Tagamlitski, Prof. Arkady Stoyanov.

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