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**SCIENTIFIC, PEDAGOGICAL AND ORGANIZATIONAL ACTIVITY OF  
THE OUTSTANDING RUSSIAN STRUCTURAL MECHANICS  
M. FILONENKO-BORODZICZ (1885–1962)**

**Summary**

This paper attempts to outline the main stages of scientific, pedagogical and organizational activities of Mikhail Mitrofanovich Filonenko-Borodzicz (1885–1962) – the famous scientist in the field of mechanics, mathematics, the author of research on strength of materials and theory of elasticity, mechanical strength theory. His scientific, pedagogical and organizational achievements were analyzed. The author briefly analyzed scientific and educational activities of this famous scientist. The attention to his teaching activities was paid. Scientific biography as well as his bibliography was specified.

The article aims at defining key milestones of Filonenko-Borodzicz's professional activities, aspectualizing and providing brief analyses of his achievements as scholar and teacher. The methodological background of the study is the general principle of objectivity and historicism, which provides objective analysis on the basis of scientific and critical study of various sources. The author concludes that scientific and pedagogical heritage of the scientist has not been accurately

studied, emphasizes asymmetry of available information and historiographical sources and the need for a thorough research on the topic.

Mikhail Mitrofanovich was a gifted teacher who skillfully mastered all the qualities of a brilliant lecturer: deep knowledge of the material, open-mindedness, the art of clear and structured presentation of the lecture material. In his studies, and especially in the lectures, he often used geometric explanations, different geometric models for clarity of his presentation.

Professor M. M. Filonenko-Borodzicz perfectly defined concepts such as “information”, “knowledge”, because information is not always knowledge, while knowledge is information that may be seen as a tool to achieve the goal. He is the author of a number of methods and techniques of teaching of the theory of elasticity and strength of materials. His scientific works were translated into many languages, including English, German, Romanian – they are still popular among experts

Mikhail Mitrofanovich had a special skill: in a simple and at the same time scientific and clear way he was able to solve the most complex problems, he used witty analogies and convincing practical examples. The pace of his lectures seemed relaxed and comfortable to his listeners, however by the end of the lectures it was clear that Professor presented all the material without losing its quintessence

**Keywords:** *Mikhail Mitrofanovich Filonenko-Borodzicz, structural mechanics, theory of elasticity, mechanics of materials, Lavr Dmitrievich Proskuryakov, scientific and pedagogical activity, railway engineer, bridge construction, science, technology, history of science and technology.*