

# 12<sup>Th</sup> Khwarizmi International Award

Feb 1999



**Researcher:** Nazarbai Bliev

**Research Title:** Generalized Analytic Functions (GAF) in fractional spaces

**Rank:** First Joint

**Field:** Basic Sciences

**Country:** Kazakhstan

## **Abstract:**

The project is devoted to the Theory of GAF in the Besov's Spaces scale. Results of it are natural development of the widely known to specialists J.N.Vekua's, L.bers' theory. Theory GAF is deeply connected with Quasi-conformal mapping, surfaces theory, and theory of elasticity. In a number of cases Some results already became classical has been revised, e.g. a sub-space of non-necessarily holder continuous functions, in which singular integral Egnations are Noether (Fredholm) is indicated. Elliptic Equations with coefficients from such spaces assume classical solutions.

This project studies the foundations of the general theory of generalized analytic functions in fractional spaces. The employment of fractional spaces and embedding theorems support applications of the theory of generalized analytic functions. The results obtained are applicable to the theory of singular integral equations, boundary value problems for elliptic differential equations, functions of a complex variable, as well as the theory of plates and shells.

*N.K. Blive was born in September 15, 1935. He received his M.Sc. in mathematics in Almaty Kazakhstan, and Doctor of science in physics and mathematics from Steklov mathem. Institute in USSR. (1980).*

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