

NIKOLA OBRESHKOFF (1896–1963)

Born: March 6, 1896, Varna, Bulgaria.

University Education: 1915–1920, University of Sofia.

University Positions (University of Sofia):

Assistant professor: 1920–1921;

Associated professor: 1922–1927;

Full professor: 1928;

Head of the Chair of Algebra: 1928–1963.

Scientific Degrees:

Doctor of Mathematics of Palermo University (Italy): 1932;

Doctor of Sciences of Paris University (Sorbonne): 1933.

Academic Positions:

Member of the Bulgarian Academy of Sciences: 1945;

Director of the Institute of Mathematics at the Bulgarian Academy of Sciences: 1951–1963.

Selected Addresses:

Hamburg University, Berlin University, Geneva University, Rome University, Palermo University, Paris University (Sorbonne), Leipzig University, Dresden University.

Invited Speaker:

World Congresses of Mathematicians (Oslo 1936, Edinburgh 1958); First Congress of Slav Mathematicians (Warsaw, 1929); Congress of Balkan Mathematicians (Athens 1935); Congresses of Hungarian Mathematicians (Budapest 1950, 1960); Conference (Tagung) on Probability and Statistics (Berlin 1954); International Colloquium on Numerical Analysis (Dresden 1955).

SCIENTIFIC HERITAGE

Papers: more than 250.

Monographs:

Zeros of polynomials, Sofia 1963, Publishing House of the Bulgarian Academy of Sciences, 289 p. (Bulgarian);

Verteilung und Berechnung der Nullstellen reeller Polynome, Berlin 1963, VEB Deutscher Verlag der Wissenschaften, 298 p.;

La statistique mathématiques, Paris 1938, Herman, 66 p.;

Quelques classes de fonctions entières limites de polynômes et de fonctions méromorphes limites de fractions rationnelles, Paris 1941, Herman, 49 p.

Research Areas:

Location of Zeros, Summability of Divergent Series, Theory of Numbers, Real and Complex Analysis, Differential Equations, Numerical Analysis, Integral Geometry, Probability and Statistics, Mechanics.

Main Contributions:

- generalization of Budan-Fourier theorem and Descartes rule for complex zeros of algebraic polynomials;
- generalization of Laguerre, Poulain-Hermite and Malo theorems;
- summation of the differentiated Fourier series;
- summation of the ultraspherical series by arithmetical means;
- absolute summation by typical means;
- generalizations of Mittag-Leffler and Borel methods of summation;
- characterization of entire and meromorphic functions as limits of classes of polynomials and rational functions;
- generalization of the classical Laplace transform;
- asymptotic properties of the derivatives of functions defined on a ray of the real axis;
- solution of the problem for the exact value of the Borel constant;
- approximation of irrational numbers by continuous fractions;
- asymptotics of probability densities;
- integral geometry in the hyperbolic plane;
- generalization of Taylor formula;
- numerical methods for solution of algebraic equations.