

# Naum Il'ich Akhiezer

## I. Research Articles

- [1] Akhiezer, N. I., On a minimum problem in function theory and the number of roots of an algebraic equation inside the unit disc, *Izv. Akad. Nauk SSSR Mat. Estestv. Nauk* **9** (1930), 1169–1189; translated from the Russian in, *Topics in interpolation theory* (Leipzig, 1994), Oper. Theory Adv. Appl., **95** 19–35, Birkhäuser, Basel, 1997.
- [2] Akhiezer, N. I., Sur un probleme de minimum de la theorie des fonctions et sur le nombre de racines d'une equation algebraique situees a l'interieur du cercle de rayon un. (Russian) *Bull. Acad. Sci. URSS*, **7** (1931), no. 9, 1169–1189.
- [3] Akhiezer, N., Über ein Tschebyscheffsches Extremumproblem. (German) *Math. Ann.*, **104** (1931), 739–744.
- [4] Akhiezer, N. I., Über einige Funktionen, welche in zwei gegebenen Intervallen am wenigsten von Null abweichen. I. (Russian) *Bull. Acad. Sci. URSS*, **7** (1932), no. 9, 1163–1202.
- [5] Akhiezer, N. I., Über einige Funktionen, welche in zwei gegebenen Intervallen am wenigsten von Null abweichen. II. (Russian) *Bull. Acad. Sci. URSS*, **7** (1933), no. 3, 309–344.
- [6] Akhiezer, N. I., Über einige Funktionen, welche in zwei gegebenen Intervallen am wenigsten von Null abweichen. III. (German) *Bull. Acad. Sci. URSS*, **7** (1933), no. 4, 499–535.
- [7] Akhiezer, N., Über den Jacksonschen Approximationsatz. (German) *Commun. Soc. Math. Kharkoff et Inst. Sci. Math. et Mecan., Univ. Kharkoff*, **4** (1934), Ser. 8, 3–12.
- [8] Akhiezer, N., Über eine Eigenschaft der “elliptischen” Polynome. (German) *Commun. Soc. Math. Kharkoff et Inst. Sci. Math. et Mecan., Univ. Kharkoff*, **4** (1934), Ser. 9, 3–8.
- [9] Akhiezer, N. I., Krejn, M. G., Über Fouriersche Reihen beschränkter summierbarer Funktionen und ein neues Extremumproblem. I. (German) *Commun. Soc. Math. Kharkoff et Inst. Sci. Math. et Mecan., Univ. Kharkoff*, **4** (1934), Ser. 9, 9–28.
- [10] Akhiezer, N. I., Krejn, M. G., Über Fouriersche Reihen beschränkter summierbarer Funktionen und ein neues Extremumproblem. II. (German) *Commun. Soc. Math. Kharkoff et Inst. Sci. Math. et Mecan., Univ. Kharkoff*, **4** (1934), Ser. 10, 3–32.
- [11] Achyesser, N., Verallgemeinerung einer Korkine-Zolotareffschen Minimum-Aufgabe, *Commun. Soc. Math. Kharkoff et Inst. Sci. Math. et Mecan., Univ. Kharkoff*, **13** (1936), Ser. 4, 3–14.
- [12] Akhiezer, N. I., Über die beste Annäherung einer Klasse stetiger periodischer Funktionen. (Russian) *C. R. (Dokl.) Acad. Sci. URSS*, **17** (1937), 455–457.
- [13] Akhiezer, N., Sur un théorème de S. Bernstein concernant la formule de quadrature de P. Tschebycheff. (Ukrainian; with French summary) *J. Inst. Math. Acad. Sci. Ukraine*, **3** (1937), 75–82.
- [14] Akhiezer, N. I., Über die beste Annäherung analytischer Funktionen. (German) *C. R. (Dokl.) Acad. Sci. URSS*, **18** (1938), 241–244.
- [15] Akhiezer, N. I., Krein, M. G., On some quadrature formulas of P. Tschebysheff and A. Markoff. (Russian) Memorial volume dedicated to D. A. Grave [Sbornik posvjaščenii

pamjati D. A. Grave], pp. 15–28, publisher unknown, Moscow, 1940.

- [16] Akhiezer, N. I., Infinite Jacobi matrices and the problem of moments. (Russian) *Uspekhi Matem. Nauk*, **9** (1941), 126–156.
- [17] Akhiezer, N., On some inversion formulae for singular integrals. (Russian. English summary) *Bull. Acad. Sci. URSS. Se'r. Math.* [Izvestia Akad. Nauk SSSR], **9** (1945), 275–290.
- [18] Akhiezer, N. I., On a proposition of A. N. Kolmogorov and a proposition of M. G. Kreĭn. (Russian) *Doklady Akad. Nauk SSSR (N.S.)*, **50** (1945), 35–39.
- [19] Akhiezer, N., On some properties of integral transcendent functions of exponential type. (Russian. English summary) *Bull. Acad. Sci. URSS. Se'r. Math.* [Izvestia Akad. Nauk SSSR], **10** (1946), 411–428.
- [20] Akhiezer, N. I., On the polynomials of B. M. Lewitan. *C. R. (Doklady) Acad. Sci. URSS (N.S.)*, **54** (1946), 3–5.
- [21] Akhiezer, N. I., Integral operators with Carleman kernels. (Russian) *Uspehi Matem. Nauk (N.S.)*, **2** (1947), no. 5(21), 93–132.
- [22] Akhiezer, N. I., Babenko, K. I., On weighted polynomials of approximation to functions continuous on the whole real axis. (Russian) *Doklady Akad. Nauk SSSR (N.S.)*, **57** (1947), 315–318.
- [23] Akhiezer, N., On a class of integral operators. (Ukrainian) *Akad. Nauk Ukrain. RSR. Zbirnik Prac'Inst. Mat. 1946*, **8** (1947), 111–120.
- [24] Akhiezer, N. I., On the theory of entire functions of finite degree. (Russian) *Doklady Akad. Nauk SSSR (N.S.)*, **63** (1948), 475–478.
- [25] Akhiezer, N. I., Concerning the approximation of continuous functions on the whole real axis. I. (Russian) *Zapiski Naučno-Issled. Inst. Mat. Meh. Har'kov. Mat. Obšč.*, (4) **19** (1948), 21–25.
- [26] Akhiezer, N. I., On interpolation of entire transcendental functions of finite degree. (Russian) *Doklady Akad. Nauk SSSR (N.S.)*, **65** (1949), 781–784.
- [27] Akhiezer, N. I., A. A. Markov's problem of moments relative to an arbitrary number of intervals. (Russian) *Ukrain. Mat. Žurnal*, **1** (1949 or 1952??), no. 3, 41–50.
- [28] Akhiezer, N. I., Marčenko, V. A., On some questions of approximations of continuous functions on the whole real axis. II. (Russian) *Har'kov. Gos. Univ. Uč. Zap. 29 = Zap. Mat. Otd. Fiz.-Mat. Fak. i Har'kov. Mat. Obšč.*, (4) **21** (1949), 5–9.
- [29] Akhiezer, N. I., On solutions of the power problem of moments in the indeterminate case. (Russian) *Učenyje Zapiski Har'kov. Gos. Univ. Zapiski Naučno-Issled. Inst. Mat. Meh. i Har'kov. Mat. Obšč.*, (4) **28**(20) (1950), 99–106.
- [30] Akhiezer, N. I., On entire functions of finite degree deviating least from zero. (Russian) *Mat. Sbornik N.S.* **31**(73) (1952), 415–438.
- [31] Akhiezer, N. I., On entire transcendental functions of finite degree having a majorant on a sequence of real points. (Russian) *Izv. Akad. Nauk SSSR. Ser. Mat.*, **16** (1952), 353–364.

- [32] Akhiezer, N. I., On a family of entire functions of finite degree and a problem of Čebyšev. (Russian) *Izv. Akad. Nauk SSSR. Ser. Mat.*, **16** (1952), 459–468.
- [33] Akhiezer, N. I., On weak weight functions. (Russian) *Doklady Akad. Nauk SSSR (N.S.)*, **93** (1953), 949–952.
- [34] Akhiezer, N. I., Bernšteĭn, S. N., Generalization of a theorem on weight functions and application to the problem of moments. (Russian) *Doklady Akad. Nauk SSSR (N.S.)*, **92** (1953), 1109–1112.
- [35] Akhiezer, N. I., On best weighted approximation on the whole axis by means of entire functions of finite degree. (Russian) *Dokl. Akad. Nauk SSSR (N.S.)*, **94** (1954), 983–986.
- [36] Akhiezer, N. I., On a generalization of the Fourier transform and the Wiener-Paley theorem. (Russian) *Dokl. Akad. Nauk SSSR (N.S.)*, **96** (1954), 889–892.
- [37] Akhiezer, N. I., On some dual integral equations. (Russian) *Dokl. Akad. Nauk SSSR (N.S.)*, **98** (1954), 333–336.
- [38] Akhiezer, N. I., Levin, B. Ya., On interpolation for entire transcendental functions of finite degree. (Russian) *Har'kov. Gos. Univ. Uč. Zap. 40 = Zap. Mat. Otd. Fiz.-Mat. Fak. i Har'kov. Mat. Obšč.*, (4) **23** (1952), 5–26 (1954).
- [39] Akhiezer, N. I., Proof of the multiplier-rule for the isoperimetric problem. (Russian) *Har'kov. Gos. Univ. Uč. Zap. 40 = Zap. Mat. Otd. Fiz.-Mat. Fak. i Har'kov. Mat. Obšč.*, (4) **23** (1952), 91–93 (1954).
- [40] Akhiezer, N. I., Kreĭn, M. G., On a generalization of the lemmas of Schwarz and Loewner. (Russian) *Har'kov. Gos. Univ. Uč. Zap. 40 = Zap. Mat. Otd. Fiz.-Mat. Fak. i Har'kov. Mat. Obšč.* (4) **23** (1952), 95–101 (1954).
- [41] Akhiezer, N. I., On some coupled or dual integral equations. Translated by Morris D. Friedman. Morris D. Friedman, 2 Pine St., West Concord, Mass., 1955. 6 pp. ????
- [42] Akhiezer, N. I., The uniqueness theorem for the heat equation. (Russian) *Har'kov. Politehn. Inst. Trudy. Ser. Inž.-Fiz.*, **5** (1955), 51–55.
- [43] Akhiezer, N. I., Ahiezer, A. N., On the diffraction of electromagnetic waves by a circular hole in a flat screen. (Russian) *Dokl. Akad. Nauk SSSR (N.S.)*, **109** (1956), 53–56.
- [44] Akhiezer, N. I., On weighted approximations of continuous functions by polynomials on the entire number axis. (Russian) *Uspehi Mat. Nauk (N.S.)*, **11** (1956), no. 4(70), 3–43; translated in *American Math. Soc. Transl., Series 2* **22** (1962), 95–137.
- [45] Akhiezer, N. I., Levin, B. Ya., Inequalities for derivatives analogous to Bernstein's inequality. (Russian) *Dokl. Akad. Nauk SSSR (N.S.)*, **117** (1957 or 1958??), 735–738.
- [46] Akhiezer, N. I., Levin, B. Ya., Generalization of S. N. Bernšteĭn's inequality for derivatives of entire functions. (Russian), *Issled. Sovrem. Probl. Teor. Funkts. Kompleksn. Perem.*, (1960), 111–165; translated (into French) in *Fonct. d'une Variable Complexe, Probl. Contemp.*, (1962), 109–161.
- [47] Akhiezer, N. I., On polynomials orthogonal on a circular arc. *Dokl. Akad. Nauk SSSR*, **130** (1960), 247–250 (Russian); translated as *Soviet Math. Dokl.*, **1** (1960), 31–34.
- [48] Akhiezer, N. I., Orthogonal polynomials on several intervals. *Dokl. Akad. Nauk SSSR*,

- 134** (1960), 9–12 (Russian); translated as *Soviet Math. Dokl.*, **1** (1960), 989–992.
- [49] Akhiezer, N. I., Kreĭn, M. G., An extremal problem for polynomials. (Russian) *Ann. Univ. Sci. Budapest. Eötvös Sect. Math.*, **3–4** (1961), 9–14.
- [50] Akhiezer, N. I., Correction to The classical moment problem and some related topics in analysis. (Russian) *Zap. Meh.-Mat. Fak. i Har'kov. Mat. Obšč.*, (4) **28** (1961), 173.
- [51] Akhiezer, N. I., Tomčuk, Ju. Ja., On the theory of orthogonal polynomials over several intervals. (Russian) *Dokl. Akad. Nauk SSSR*, **138** (1961), 743–746; translated as *Soviet Math. Dokl.*, **2** (1961), 687–690.
- [52] Akhiezer, N. I., Continuous analogues of orthogonal polynomials on a system of intervals. (Russian) *Dokl. Akad. Nauk SSSR*, **141** (1961), 263–266; translated as *Soviet Math. Dokl.*, **2** (1961), 1409–1412.
- [53] Akhiezer, N. I., A space analogue of polynomials orthogonal on a circular arc. (Russian) *Dokl. Akad. Nauk SSSR*, **141** (1961), 769–772; translated as *Sov. Math. Dokl.*, **2** (1961), 1526–1529.
- [54] Akhiezer, N. I., Continual analogue of some theorems on Toeplitz matrices. (Russian) *Ukrain. Mat. Ž.*, **16** (1964), 445–462; translated as *American Math. Soc. Transl., Series 2*, **50** (1966), 295–316.
- [55] Akhiezer, N. I., Orthogonal polynomials on a system of intervallen and their continuous analogues (Russian). *Tr. IV Vsesoyuz. Mat. Sezda, Leningrad, 1961, no. 2*, 623–628, (1964).
- [56] Akhiezer, N. I., On the Lamé' equation. (Russian) *Zap. Meh.-Mat. Fak. Har'kov. Gos. Univ. i Har'kov. Mat. Obšč.*, (4) **30** (1964), 5–17.
- [57] Akhiezer, N. I., Extremal properties of entire functions of exponential type. (Russian) *Teor. Funkciĭ Funkcional. Anal. i Priložen. Vyp.*, **1** (1965), 111–135; translated in *American Math. Soc. Transl., Series 2*, **86** (1970), 1–30.
- [58] Akhiezer, N. I., On the maximum on a ray of the derivative of a monotone entire function of normal type and order one-half. (Russian) *Teor. Funkciĭ Funkcional. Anal. i Priložen. Vyp.*, **1** (1965), 136–140.
- [59] Akhiezer, N. I., Rybalko, A. M., Continual analogues of polynomials orthogonal on a circle. (Russian) *Ukrain. Mat. Ž.*, **20** (1968), no. 1, 3–24; translated as *Ukr. Math. J.*, **20** (1968), 1–21.
- [60] Akhiezer, N. I., A remark on A. M. Rybalko's "The Fourier transform in the space  $L^2(-\infty, \infty)$  with weight" (*Mat. Fiz. i Funkcional. Anal. Vyp.* 1 (1969), 147–164). (Russian) *Mat. Fiz. i Funkcional. Anal. Vyp.*, **1** (1969), 165–171, 261–262.
- [61] Akhiezer, N. I., An indeterminate equation of Čebyšev type in problems of the construction of orthogonal systems. (Russian) *Mat. Fiz. i Funkcional. Anal. Vyp.*, **2** (1971), 3–14, 236.
- [62] Ahiezer, N. I., Ronkin, L. I., Separately analytic functions of several variables, and "edge of the wedge" theorems. (Russian) *Uspehi Mat. Nauk*, **28** (1973), no. 3(171), 27–42.
- [63] Akhiezer, N. I., Ronkin, L. I., Separately analytic functions of several variables. (Russian) *Questions on mathematical physics and functional analysis* (Proc. Res. Sem. Inst. Low Temp. Phys. Engrg., Kharkov) (Russian), 3–10, **171**, "Naukova Dumka", Kiev, 1976.

[64] Akhiezer, N. I., On the spectral theory of Lamé's equation. (Russian) *Istor.-Mat. Issled.*, **23** (1978), 77–86.

[65] Akhiezer, N. I., Function theory according to Chebyshev, in *Mathematics of the 19th century. Function theory according to Chebyshev, ordinary differential equations, calculus of variations, theory of finite differences*, edited by A. N. Kolmogorov and A. P. Yushkevich. Translated from the 1987 Russian original by Roger Cooke, Birkhäuser Verlag, Basel, 1998.

## II. Books

[1a] Akhiezer, N. I., *Lekcii po Teorii Approksimacii*. (Russian) [Lectures on the Theory of Approximation], Khar'kov, 1940, 136 pp.

[1b] Akhiezer, N. I., *Lekcii po Teorii Approksimacii*. (Russian) [Lectures on the Theory of Approximation] OGIIZ, Moscow-Leningrad, 1947, 323 pp.

[1c] Achieser, N. I., *Vorlesungen über Approximationstheorie*. (German) Akademie-Verlag, Berlin, 1953, 309 pp.

[1d] Achieser, N. I., *Theory of Approximation*, translated from the Russian 1947 edition by Charles J. Hyman, Frederick Ungar Publishing Co., New York, 1956, 307 pp.

[1e] Akhiezer, N. I., *Lekcii po Teorii Approksimacii*. (Russian) [Lectures in the Theory of Approximation], second revised and enlarged edition, Izdat. "Nauka", Moscow, 1965, 407 pp.

[1f] Achieser, N. I., *Vorlesungen über Approximationstheorie*. (German) Zweite verbesserte Auflage. Übersetzt aus dem Russischen unter Anleitung von L. Kaloujnine. Übersetzung der Ergänzungen für die Zweite Auflage: Klaus Fiedler, Mathematische Lehrbücher, Band II, Akademie-Verlag, Berlin, 1967, 412 pp.

[1g] Achieser, N. I., *Theory of Approximation*, translated from the Russian and with a preface by Charles J. Hyman, reprint of the 1956 English translation, Dover Publications, Inc., New York, 1992.

[2a] Akhiezer, N. I., *E'lementy teorii e'lliptičeskikh funkcij*. (Russian) [Elements of the Theory of Elliptic Functions] Gosudarstv. Izdat. Tehn.-Teor. Lit., Moscow-Leningrad, 1948, 291 pp.

[2b] Akhiezer, N. I., *E'lementy teorii e'lliptičeskikh funkcij*. (Russian) [Elements of the Theory of Elliptic Functions] Second revised edition] Izdat. "Nauka", Moscow, 1970, 304 pp.

[2c] Akhiezer, N. I., *Elements of the Theory of Elliptic Functions*, translated from the second Russian edition by H. H. McFaden. Translations of Mathematical Monographs, **79**, American Mathematical Society, Providence, RI, 1990, 237 pp.

[3a] Akhiezer, N. I., Glazman, I. M., *Teoriya linejnyh operatorov v gil'bertovom prostranstve*. (Russian) [The Theory of Linear Operators in Hilbert Space] Gosudarstv. Izdat. Tehn.-Teor. Lit., Moscow-Leningrad, 1950, 483 pp.

[3b] Achieser, N. I., Glasman, I. M., *Theorie der linearen Operatoren im Hilbert-Raum*. (German) Akademie-Verlag, Berlin, 1954 (or 1958??), 369 pp.

[3c] Akhiezer, N. I., Glazman, I. M., *Theory of Linear Operators in Hilbert Space*. Vol.

- I, translated from the Russian by Merlynd Nestell, Frederick Ungar Publishing Co., New York, 1961, 147 pp.
- [3d] Akhiezer, N. I., Glazman, I. M., *Theory of Linear Operators in Hilbert Space*. Vol. II, translated from the Russian by Merlynd Nestell, Frederick Ungar Publishing Co., New York, 1963 218 pp.
- [3e] Akhiezer, N. I., Glazman, I. M., *Teoriya lineĭ nykh operatorov v Gil'bertovom prostanstve*. (Russian) [Theory of Linear Operators in Hilbert Space], second revised and augmented edition, Izdat. "Nauka", Moscow, 1966, 543 pp.
- [3f] Achieser, N. I., Glasman, I. M., *Theorie der linearen Operatoren im Hilbert-Raum*. (German) Siebente unveränderte Auflage. Mit einem Vorwort von G. Köthe. Übersetzt aus dem Russischen von H. Baumgärtel. Mathematische Lehrbücher und Monographien, I. Abteilung, Band IV, Akademie-Verlag, Berlin, 1977 (1975??), 488 pp.
- [3g] Achieser, N. I., Glasmann, I. M., *Theorie der linearen Operatoren im Hilbert-Raum*. (German) With a foreword by G. Köthe. Translated from the Russian by H. Baumgärtel. Reprint of the second German edition, Verlag Harri Deutsch, Thun-Frankfurt, 1977, 488 pp.
- [3h] Akhiezer, N. I., Glazman, I. M., *Teoriya lineĭ nykh operatorov v Gil'bertovom prostanstve*. Tom I. (Russian) [Theory of Linear Operators in Hilbert Space. Vol. I] Third edition, corrected and augmented, "Vishcha Shkola", Kharkov, 1977, 315 pp.
- [3i] Akhiezer, N. I., Glazman, I. M., *Teoriya lineĭ nykh operatorov v Gil'bertovom prostanstve*. Tom II. (Russian) [Theory of Linear Operators in Hilbert Space. Vol. II] Third edition, corrected and augmented, "Vishcha Shkola", Kharkov, 1978.
- [3j] Achieser, N. I., Glasmann, I. M., *Theorie der linearen Operatoren im Hilbert-Raum*. (German) [Theory of Linear Operators in Hilbert Space] Eighth edition. Translated from the Russian by H. Baumgärtel. With a foreword by G. Köthe. Verlag Harri Deutsch, Thun, 1981, 496 pp.
- [3k] Akhiezer, N. I., Glazman, I. M., *Theory of Linear Operators in Hilbert Space*. Vol. I. Translated from the third Russian edition by E. R. Dawson. Translation edited by W. N. Everitt. Monographs and Studies in Mathematics, **9**, Pitman (Advanced Publishing Program), Boston, Mass.-London, 1981.
- [3l] Akhiezer, N. I., Glazman, I. M., *Theory of Linear Operators in Hilbert Space*. Vol. II. Translated from the third Russian edition by E. R. Dawson. Translation edited by W. N. Everitt. Monographs and Studies in Mathematics, **10**, Pitman (Advanced Publishing Program), Boston, Mass.-London, 1981.
- [3m] Akhiezer, N. I., Glazman, I. M., *Theory of Linear Operators in Hilbert Space*. Translated from the Russian and with a preface by Merlynd Nestell. Reprint of the 1961 and 1963 translations. Two volumes bound as one. Dover Publications, Inc., New York, 1993.
- [4a] Akhiezer, N. I., *Lekcii po variacionnomu isčisleniyu*. (Russian) [Lectures on the Calculus of Variations.] Gosudarstv. Izdat. Tehn.-Teor. Lit., Moscow, 1955, 248 pp.
- [4b] Akhiezer, Naum I., *The Calculus of Variations*. Translated from the Russian by Aline H. Frink. Blaisdell Publishing Co., New York-London, 1962, 248 pp.

- [5a] Akhiezer, N. I., *Klassicheskaya problema momentov i nekotorye voprosy analiza, svyazannye s neyu.* (Russian) [The Classical Moment Problem and Some Related Topics in Analysis] Gosudarstv. Izdat. Fiz.-Mat. Lit., Moscow, 1961, 310 pp.
- [5b] Akhiezer, N. I., *The Classical Moment Problem and Some Related Questions in Analysis.* Translated by N. Kemmer, Hafner Publishing Co., New York, 1965, 253 pp.
- [5c] Akhiezer, N. I., *The Classical Moment Problem and Some Related Questions in Analysis.* Oliver & Boyd, Edinburgh-London, 1965, 253 pp.
- [6a] Akhiezer, N. I., Krein, M. G., *Some Questions in the Theory of Moments,* translated by W. Fleming and D. Prill. Translations of Mathematical Monographs, **2**, American Mathematical Society, Providence, R.I., 1962, 265 pp.
- [7] *Matematicheskaya fizika i funktsional'nyĭ analiz. Vyp. 4.* (Russian) [Mathematical Physics and Functional Analysis, no. 4] Edited by N. I. Akhiezer and V. O. Marčenko, Fiz.-Tehn. Inst. Nizkih Temperatur, Akad. Nauk Ukrain. SSR, Kharkov, 1973, 164 pp.
- [8] *Matematicheskaya fizika i funktsional'nyĭ analiz. Vyp. V.* (Russian) [Mathematical Physics and Functional Analysis, no. 5] Edited by N. I. Akhiezer and V. A. Marčenko, Akad. Nauk Ukrain. SSR Fiz.-Tehn. Inst. Nizkih Temperatur, Kharkov, 1974, 160 pp.
- [9a] Akhiezer, N. I., *Variatsionnoe ischislenie.* (Russian) [Calculus of Variations] “Vishcha Shkola”, Kharkov, 1981, 168 pp.
- [9b] Akhiezer, N. I., *The Calculus of Variations.* Translated from the Russian by Michael E. Alferieff, Harwood Academic Publishers, Chur, 1988, 280 pp.
- [10a] Akhiezer, N. I., *Lektsii ob integral'nykh preobrazovaniyakh.* (Russian) [Lectures on Integral Transformations] “Vishcha Shkola”, Khar'kov, 1984, 120 pp.
- [10b] Akhiezer, N. I., *Lectures on Integral Transforms.* Translated from the Russian by H. H. McFaden. Translations of Mathematical Monographs, **70**, American Mathematical Society, Providence, RI, 1988, 108 pp.
- [11] Akhiezer, N. I., Demidov, S. S., Dorofeeva, A. V., Petrova, S. S., Medvedev, F. A., Simonov, N. I., Solov'ev, A. D., *Matematika XIX veka.* (Russian) [XIXth Century Mathematics] *Chebyshevskoe napravlenie v teorii funktsiĭ. Obyknovennye differentsial'nye uravneniya. Variatsionnoe ischislenie. Teoriya konechnykh raznostei.* [Chebyshev's direction in the theory of functions. Ordinary differential equations. The calculus of variations. Theory of finite differences]. Edited and with a foreword by A. N. Kolmogorov and A. P. Yushkevich. With an index by A. F. Lapko. “Nauka”, Moscow, 1987, 307 pp.
- [12] Akhiezer, N. I., Selected Works on the Theory of Functions and Mathematical Physics. Vol. 1. (Izbrannye trudy po teorii funktsij i matematicheskoy fizike, Tom 1). (Russian) Klasyka Ukrain's'koi Nauky. Khar'kov, AKTA, 2001, 352 pp.
- [13] Akhiezer, N. I., Selected Works on the Theory of Functions and Mathematical Physics. Vol. 2. (Izbrannye trudy po teorii funktsij i matematicheskoy fizike. Tom 2). (Russian) Klasyka Ukrain's'koi Nauky. Khar'kov, AKTA, 2001, 518 pp.

### III. Other

- [1] Akhiezer, N. I., The constructive theory of functions in the Kharkov University and

- Mathematical Institute (1917–1947). (Russian) *Uspehi Matem. Nauk (N.S.)*, **2** (1947), no. 3(19), 158–174.
- [2] Akhiezer, N. I., The work of academician S. N. Bernšteĭn on the constructive theory of functions (for his seventieth birthday). (Russian) *Uspehi Matem. Nauk (N.S.)*, **6** (1951), no. 1(41), 3–67.
- [3] Sonin, N. Ja., Studies on cylindrical functions and special polynomials, edited and comments by N. I. Akhiezer. (Russian) Bibliothek der Russischen Wissenschaft. Mathematik, Mechanik, Physik, Astronomie. Moskau, Staatsverlag für technisch-theoretische Literatur, Moscow, 1954, 244 pp.
- [4] Akhiezer, N. I., Akademik S. N. Bernšteĭn i ego raboty po konstruktivnoĭ teorii funkciĭ. (Russian) [Academician S. N. Bernstein and his work on the constructive theory of functions.] *Izdat. Har'kov. Gosudarstv. Univ.*, Kharkov, 1955, 112 pp.
- [5] Akhiezer, N. I., Das Akademiemitglied S. N. Bernstein und seine Arbeiten zur konstruktiven Funktionentheorie. (German) [Academician S. N. Bernstein and his works on constructive function theory]. Translated from the 1955 Russian original and with a preface by Ralitzka K. Kovacheva and Heinz H. Gonska. *Mitt. Math. Sem. Giessen*, No. 240 (2000), 97 pp.
- [6] Akhiezer, N. I., Efimov, N. V., Boris Yakovlevič Levin (on the fiftieth anniversary of his birth). (Russian) *Uspehi Mat. Nauk (N.S.)*, **12** (1957), no. 2(74), 237–242.
- [7] Akhiezer, N. I., Petrovskii, I. G., The contribution of S. N. Bernšteĭn to the theory of partial differential equations. (Russian) *Uspehi Mat. Nauk*, **16** (1961), no. 2 (98), 5–20; translated as *Russ. Math. Surv.*, **16** (1961), no. 2, 1–15.
- [8] Akhiezer, N. I., Marčenko, V. A., Boris Moiseevič Levitan (on his fiftieth birthday). (Russian) *Uspehi Mat. Nauk*, **20** (1965), no. 3 (123), 227–234; translated as *Russ. Math. Surv.*, **20** (1965), no. 3, 175–182.
- [9] Akhiezer, N. I., Berezans'kii, Ju. M., Iohvidov, I. S., Mitropol'skii, Ju. A., Potapov, V. P., Mark Grigor'evič Kreĭn (on his 60th birthday). (Russian) *Ukrain. Mat. Ž.*, **19** (1967), no. 5, 114–118; translated as *Ukr. Math. J.*, **19** (1967), 601–605.
- [10] Akhiezer, N. I., Blank, Ja. P., Marčenko, V. A., Mitropol'skii, Ju. A., Alekseĭ Vasil'evič Pogorelov, on his fiftieth birthday. (Russian) *Ukrain. Mat. Ž.*, **21** (1969), 354–360; translated as *Ukr. Math. J.*, **21** (1969), 295–300.
- [11] Aleksandrov, P. S., Akhiezer, N. I., Gnedenko, B. V., Kolmogorov, A. N., Sergeĭ Natanovič Bernšteĭn: Obituary. (Russian) *Uspehi Mat. Nauk*, **24** (1969), no. 3 (147), 211–218; translated as *Russ. Math. Surv.*, **24** (1969), no. 3, 169–176.
- [12] Akhiezer, N. I., Ljubič, Ju. I., Žmud', E'. M., Marčenko, V. A., Izrail'Markovič Glazman: An obituary. (Russian) *Uspehi Mat. Nauk*, **24** (1969), no. 5 (149), 215–226; translated as *Russ. Math. Surv.*, **24** (1969), no. 5, 185–189.
- [13] Akhiezer, N. I., Vorovič, I. I., Efimov, N. V., Zaharjuta, V. P., Levin, B. Ja., Mihaĭl Grigor'evič Haplanov (on the occasion of his seventieth birthday). (Russian) *Uspehi Mat. Nauk*, **28** (1973), no. 3 (171), 199–204; translated as *Russ. Math. Surv.*, **28** (1973), no. 3, 141–146.



[14] Akhiezer, N. I., Efimov, N. V., Kreĭn, M. G., Lavrent'ev, M. A., Marčenko, V. A., Ostrovskii, I. V., Šabat, B. V., Boris Jakovlevič Levin (on the occasion of his seventieth birthday). (Russian) *Uspehi Mat. Nauk*, **32** (1977), no. 5 (197), 211–213; translated as *Russ. Math. Surv.*, **32** (1977), no. 5, 181–184.

#### IV. About Akhiezer

[1] Kreĭn, M. G., Levin, B. Ja., Naum Il'ich Akhiezer (on his sixtieth birthday). (Russian) *Uspehi Mat. Nauk*, **16** (1961), no. 4 (100), 223–234.

[2] Berezans'kii, Ju. M., Kolmogorov, A. N., Kreĭn, M. G., Levin, B. Ja., Levitan, B. M., Marčenko, V. A., Naum Il'ich Akhiezer (on the occasion of his seventieth birthday). (Russian) *Uspehi Mat. Nauk*, **26** (1971), no. 6 (162), 257–261.

[3] Kolmogorov, A. N., Kreĭn, M. G., Levin, B. Ya., Levitan, B. M., Lyubich, Yu. I., Marchenko, V. A., Ostrovskii, I. V., Povzner, A. Ya., Pogorelov, A. V., Naum Il'ich Akhiezer. Obituary. (Russian) *Uspekhi Mat. Nauk*, **36** (1981), no. 4 (220), 183–184.

[4] Lyubich, Yu. I., Naum Il'ich Akhiezer. (Russian) *Teor. Funktsii Funktsional. Anal. i Prilozhen.*, **56** (1991), 3–14; translation in *J. Math. Sci.*, **76** (1995), no. 4, 2441–2451.

[5] Marchenko, V. A., Mitropol'skii, Yu. A., Pogorelov, A. V., et al. Naum Il'ich Akhiezer (on the centenary of his birth). (Russian) *Ukraiĭ. Mat. Zh.*, **53** (2001), no. 3, 291–293; translation in *Ukrainian Math. J.*, **53** (2001), no. 3, 333–335.