

Mathematics and technical sciences — the basis of the integrity of modern scientific knowledge

© S.A. Lebedev

Bauman Moscow State Technical University, Moscow, 105005, Russia

The article analyzes the problem of the integrity of the modern system of scientific knowledge and the unity of its various fields. The main attention is paid to the mechanism and factors of ensuring this unity. The concept that the main contribution to the integrity of the system of scientific knowledge is made by mathematics and technical sciences, is substantiated.

Keywords: *scientific knowledge, fields of scientific knowledge, the integrity of the system of scientific knowledge, mathematics, technical sciences*

REFERENCES

- [1] Lebedev S.A. *Metodologiya nauchnogo poznaniya* [Methodology of scientific knowledge]. Moscow, Prospekt Publ., 2015, 256 p.
- [2] Lebedev S.A. *Voprosy filosofii – Russian Studies in Philosophy*, 2017, no. 5, pp. 67–80.
- [3] Koloskova A.V., Lebedev S.A. *Gumanitarnyi vestnik MGTU im. N.E. Baumana — Humanities Bulletin of BMSTU*, 2017, no. 5, pp. 5–12.
DOI: 10.18698/2306-8477-2017-5-433
- [4] Lebedev S.A., Tverdynin N.M. *Vestnik Moskovskogo universiteta. Seriya 7. Filosofiya — Moscow University Bulletin. Series 7. Philosophy*, 2008, no. 2, pp. 44–70.
- [5] Feynman R. *Six easy pieces: essentials of physics explained by its most brilliant*. New York, Basic Books, 2011, 146 p. [In Russ.: *Dyuzhina lektsiy: shest poprosche i shest poslozhnee*. Moscow, Binom Publ., 2009, 318 p.].
- [6] Uspenskiy V.A. *Apologiya matematiki* [The Apology of Mathematics]. St. Petersburg, Amfora Publ., 2009, 554 p.
- [7] Kolmogorov A.N. *Matematika. Istoricheskiy ocherk* [Mathematics. Historical essay]. Moscow, Anabasis Publ., 2006, 60 p.
- [8] Hilbert D. *The Foundations of Geometry*. 2nd ed. Chicago, Open Court, 1999, 226 p. [In Russ.: *Osnovaniya geometrii*. Moscow, Leningrad, 1948, 491 p.].
- [9] Weyl H. *Matematicheskoe myshlenie* [Matematicheskoe myshlenie]. (in Russ.) Moscow, Nauka Publ., 1989, 400 p.
- [10] Ruzavin. G.I. *O prirode matematicheskogo znaniya* [On the nature of mathematical knowledge]. Moscow, Mysl Publ., 1968, 301 p.
- [11] Poincare H. *The value of science*. New York, The Science Press, 1907, 147 p. [In Russ.: *Poincare H. O nauke*. Moscow, Nauka Publ., 1983, 736 p.].
- [12] Bourbaki N. *Elements of the History of Mathematics*. New York, Springer, 1999, 301 p. [In Russ.: *Ocherki po istorii matematiki*. Moscow, KomKniga Publ., 2006, 296 p.].
- [13] Kagan V.F. *Ocherki po geometrii* [Essays on geometry]. Moscow, Izdatelstvo Moskovskogo universiteta Publ., 1963, 565 p.
- [14] Lebedev S.A. *Filosofiya nauchnogo poznaniya: osnovnye kontseptsii* [Philosophy of scientific knowledge: basic concepts]. Moscow, Izdatelstvo Moskovskogo psihologo-socialnogo universiteta Publ., 2014, 272 p.

- [15] Lebedev S.A., Ilin V.V., Lazarev F.V., Leskov L.V. *Vvedenie v istoriyu i filosofiyu nauki* [Introduction to the history and philosophy of science]. Moscow, Akademicheskij proekt Publ., 2005, 416 p.
- [16] Lebedev S.A. *European Journal of Philosophical Research*, 2014, no. 1(1), pp. 65–72.
- [17] Lebedev S.A., Avdulov A.N., Borzenkov V.G., Lazarev F.V., Leskov L.V., Mirskiy E.M., Yudin B.G. *Osnovy filosofii nauki* [Fundamentals of the philosophy of science]. Moscow, Akademicheskij proekt Publ., 2005, 544 p.

Lebedev S.A., Dr. Sc. (Philos.), Professor of the Department of Philosophy, Bauman Moscow State Technical University. e-mail: saleb@rambler.ru