## **BIBLIOGRAPHY**

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## Mathesis publications archive

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From 1904 to 1925, the first Russian "book publishing house of scientific and popular scientific compositions from the field of physico-mathematical sciences, Mathesis" operated in Odessa. During the time of its existence, the book publishing house issued more than 150 books.

"... the appearance of books acquainting the general public with the latest studies of physicists and chemists is highly desirable, and we ought to be grateful to the Odessa book publishers Mathesis who released a number of excellent popular science books on mathematical and physico-chemical sciences."

Russkoe Bogatstvo (Russian Wealth), 1910

The published books covered pure and applied mathematics, physics, chemistry, astronomy, and biology. Some were part of the series "Library of Classics of Exact Knowledge," "Library of Elementary Mathematics," "Advances in Exact Knowledge," and "Library of Scientific News." The series "Advances in Exact Knowledge" included collections containing papers concerning the most important advances in mathematics, physics, chemistry, astronomy, mechanics, and biology. Two issues of the collections "Advances in Physics" appeared (issue I: 1905, 1907, 1910 (three re-editions); issue II: 1911). They became precursors of the journal Uspekhi Fizicheskikh Nauk (Physics-Uspekhi).

> "The second issue of the collection possesses the same positive features as the first one, namely, rich content, clear presentation, and perfect scientific intention of the papers. [...] The choice of papers vividly exhibits the state of the art in physics."

> > P Bel'skii. Priroda (Nature), 1912

During the history of the publishing house, the popular science genre was only beginning its life in Russia, and many issued books were translations. However, important work, in particular, book selection, was being done here, too.

The following books in physics appeared for the first time in the Russian language: O Wiener (Über Farbenphotographie, 1911) (About Color Photography), P Seeman (The Origin of Spectral Colors, 1909), J Kaiser (Modern Development of Spectroscopy, 1909), O Lodge (Ether of Space, 1911), H Lorentz (Course in Theoretical Physics, 1910), A Michelson (Light Waves and Their Uses, 1912), S Newcomb (Astronomy for Everybody, 1905; Theory of the Moon's Motion, 1910), J Perry (Spinning Tops, 1906), M Planck (Relation of Latest Physics to the Mechanical Outlook, 1911), W Ramsay (Noble

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Книгоиздательство научныхъ и популярно-научныхъ сочиненій изъ области физико-математическихъ наукъ.

## 1904-1925 ОДЕССА ул. НОВОСЕЛЬСКАГО, д. 66

"The Mathesis publishing house of scientific and popular scientific compositions from the fields of physical and mathematical sciences." 1904-1925 ODESSA Novosel'skago street, Bld 66

and Radioactive Gases, 1909; Introduction to the Study of Physical Chemistry, 1910), A Righi (Die moderne Theorie der physikalischen Erscheinungen) (Modern Theory of Physical Phenomena), 1908; Electrical Origin of Matter, 1911), A Slabi (The Wireless Telephone, 1909; Resonance and Attenuation of Electric Waves, 1909), F Soddy (Radium and its Secret, 1910), S Thomson (Procurement of Light, 1909), J J Thomson (Corpuscular Theory of Matter, 1910), A Eddington (Space, Time and Gravity, 1923; The Theory of Relativity and Its Influence on Scientific Thought, 1923).

> "This is the book to show vividly how people of true knowledge, not of corporation science only, are capable of dealing with scientific material in its popularization .... "

> > S Shokhor-Trotskii, Russkaya Shkola (Russian School), 1907

The above list is quite impressive. First, the list of authors includes many first-class scientists striving to acquaint their contemporaries with the latest results. Second, the speed of the Mathesis publishers is amazing, with some books appearing in the Russian translation just a year or two after the publication of the original.

> "The Mathesis book publishers have already proven themselves by selecting the most interesting and outstanding books for publication."

Russkaya Mysl' (Russian Thought), 1905

"A very felicitous choice of books for translation, perfection of the translation itself and an elegancy of the issue—all this characterizes the activity of Mathesis."

Prof. O D Khvol'son Journal of the Ministry of People's Education, 1908

Reviews of the books of the publishing house appeared in many periodicals of that time, which is convincing evidence of the general comprehension of the importance of publishing popular scientific books.

> "Long have we not read such captivating and clearly written scientific popular booklets.... The philosophy of physics does not have more profound and at the same time more difficult notions to comprehend than energy and especially entropy...."

> > Mir Bozhii (The Divine World), 1905

The books issued by the Mathesis publishers and digitized in the electronic archive are of indubitable value for the contemporary reader. Some of these books became classical and some were undeservedly forgotten. And although some books were later reprinted, they are all rarities. Their reading would be useful for the younger generation and for those engaged in education and upbringing. A noticeable advancement has been made over the past decades in some sciences, in particular, in physics. However, the clarity and accessibility of the presentation of material in the books held in the archive will now help the reader not only to learn the history of science but also to understand its present-day achievements.

"This is simultaneously a quite scientific, absolutely accessible, and elegantly written book. It may serve as a manual for self-education and a tutorial in taking the course...."

Vestnik Vospitaniya (Herald of Education), 1906

The electronic archive of the Mathesis publishing house contains over 30 thousand printed book pages digitized to date. The scanning and manual processing of each page took no less than five minutes. Even in the 21st computerised century, the purely technical work of digitization took nearly 2500 hours, that is, over a year of continuous work according to a formal industrial calendar with a seven-day, 40-hour work week. And in the early 20th century, this entire array of very valuable texts was put together (writing, translation, editing, design, and issuing proper) by a small group of people.

These enthusiasts, the founders of the publishing house, are named in the staff report by M L Shpentser:

"...I have the honor to report that the participants in the fellowship for publishing scientific and popular scientific compositions from the field of physico-mathematical sciences in the company Mathesis Book Publishers in Odessa are:

(1) State Councilor Fedor Andreevich Babichev,

(2) University graduate Mikhail Moiseevich Iglitskii,

(3) University freelance assistant professor Venyamin Fal'kovich Kagan,

(4) State Councilor Artemii Robertovich Orbinskii,

(5) University freelance assistant professor Samuil Osipovich Shatunovskii, and (6) Odessa merchant of the 2nd guild Moisei Lipovich Shpentser.

Address of the Company: Printing house of M Shpentser, Novosel'skago street, building 66.

Representative of the MATHESIS Fellowship M Shpentser, 1908."

The history of the participants in the Fellowship and the publisher's work itself are partly presented on the the archive site. It is impossible to present it here exhaustively, and therefore we refer the reader to the work of the bibliographer and archivist of the Odessa House of Scientists, Inna Emil'evna Rikun, in particular, to her book *Vidavnitstvo MATHESIS (1904–1925): Materials from History and the Catalogue of Books* (Kiev: Kn. Palata Ukrainy, 2002), an extensive version of which is now being prepared in the Russian language.

The abovementioned electronic archive introduces new standards of old-book scanning. The originals were scanned with a resolution of 600 dpi and color depth of 24 bits, and an image browsing program has been put into operation. These and other specificities of the archive try as far as possible to draw the reader to the feeling of contact with the book.

The founders of the archive express their gratitude to all those who helped them in their work. Especially helpful were Ivan Arzhantsev (Moscow State University), Vitaly Arnold (Moscow Center for Continuous Mathematical Education), Vasilii Busev (Ushinskii Pedagogical Library, Russian Academy of Education), Elena Zernyshkina (Ozery Institute for Technology, National Research Nuclear University 'Moscow Institute for Physics Engineering'), Sergei Petrovich Konovalov (Steklov Mathematical Institute, Russian Academy of Sciences), Mikhail Mamakov (Mathematical Etudes foundation), Mikhail Panov (Moscow Center for Continuous Mathematical Education), Nikita Panyunin (Steklov Mathematical Institute, Russian Academy of Sciences), Inna Emil'evna Rikun (Odessa House of Scientists), and Nikita Shavel'zon (Mathematical Etudes foundation). The project was sponsored by the Dynasty Foundation of Dmitry Zimin and was realized at the Laboratory of Popularization and Propaganda of mathematics, Steklov Mathematical Institute, Russian Academy of Sciences.

The electronic archive is free to access on the Internet: http://mathesis.ru. A disc has been made with a local version of the archive. The Mathematical Etudes project (http:// etudes.ru), as would have been written in those times, 'sends out the disc free to schools, teachers, and libraries on request."

> "This Mathesis issue should be welcomed, along with the others, as a respectable contribution to Russian science deserving dissemination and serious attention."

F I Pavlov. Russkaya Shkola (Russian School), 1910

We end this brief review with a citation from the foreword by A R Orbinskii to Newcomb's book *Astronomy for everybody*, which was one of the first issued books: "For a country where half of the population cannot yet read, such a thing as a book with the words 'for everybody' in the title is a self-contradiction. And I sincerely hope that this book finds many readers, and add the hope that the time will come soon in Russia when really 'everybody' is able to read and enjoy such books."