

Oskar Fabian, the First Head of the Department for Theoretical Physics at the University of Lviv

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A short biographical sketch of Oskar Fabian, the first Professor of Mathematical Physics at the University of Lviv is given. A complete bibliography is presented.

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1. Introduction

A rapid development of physics in the course of the 19th century led to the narrowing of the specialization among physicists. As a result, in the second half of the 19th century theoreticians started to occupy separate chairs at universities, where extraordinary and later ordinary professorships in mathematical physics (this is how theoretical physics was called at that time) were created [1]. This process was primarily typical for Germany and Austria, as well as for the lands of the German language influence ([2], p. 49–51). Just to mention a couple of names, Rudolf Clausius was appointed to the Chair of Mathematical Physics at the Polytechnikum in Zürich in 1855, Ludwig Boltzmann became an extraordinary professor of mathematical physics at the University of Graz in 1863 and an ordinary professor there in 1869, Emil Warburg was hired as an extraordinary professor of mathematical physics at the University of Strassburg, Gustav Kirchhoff occupied the Chair of Mathematical Physics at the University of Berlin in 1875. Even earlier chairs elsewhere, such as that at the University of Turin, where Avogadro was appointed in 1821 [3], and later Cauchy in 1831 ([4], p. 368), stand somewhat aside from this process, concerning this branch physics rather *nomine, non re*, as they did not become theoretical chairs later in the history. Note that the first chair of mathematical physics in the U.S. was established in 1871 at Yale College and was occupied by Josiah Willard Gibbs ([5], p. 56).

The Jagiellonian University in Cracow and the University of Lviv/Lwów/Lemberg were among those where the first departments of mathematical physics were created in the years 1872–73, and headed by Edward Skiba and Oskar Fabian, respectively [6].

2. Biography

Oskar Fabian (see Fig. 1) was born on February 28, 1846, in Nowy Dwór (near Warsaw) in the family of Szymon Fabian, a pharmacist, and his wife Bertha. In

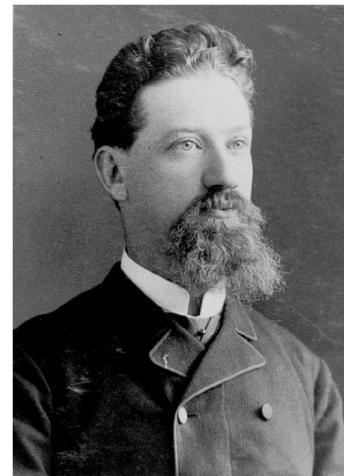


Fig. 1. Oskar Fabian. Photo by Edward Trzemeski, in Lviv.

1864, he finished the Gymnasium in Warsaw and entered the Warsaw Main School (Szkoła Główna). There Oskar Fabian studied at the Physico-Mathematical Faculty until 1868 and then continued his education at the Philosophical Faculty of the University of Vienna (1868–1870). There, on May 10, 1870, Oskar Fabian obtained the doctorate and then moved to the University of Heidelberg (1870–1871). In Vienna, he was also qualified as a teacher of mathematics and physics for gymnasia (high schools). In the years 1871–1873, Oskar Fabian was a teacher in the Real School in Lviv [7, 8].

In 1872, he obtained *Veniam Legendi* and became a private docent of mathematical physics in the University of Lviv [9] on the basis of two works: *O zbieżności i rozbieżności szeregów nieskończonych* [*On convergence and divergence of infinite series*] and *Uginanie się świata i długość fal* [*Light refraction and the length of waves*]. On September 14, 1873, Oskar Fabian was approved an extraordinary Professor of mathematical physics, and on March 20, 1881, he became an ordinary Professor at the

University of Lviv [10]. In the years 1876–1881 Oskar Fabian was simultaneously a private docent at the Lviv Polytechnics [10, 11].

Oskar Fabian was the Dean of the Philosophical Faculty of the University of Lviv twice, in 1884/85 [8, 10] and 1896/97 [12]. In the years 1877–80 he was the secretary and in 1882–83 was elected the president of the Copernicus Naturalist Society in Lviv (Towarzystwo Przyrodników imienia Kopernika we Lwowie), and was later a vice-president for several years. In 1874 Dr. Fabian became a member of the Examination Commission for the teachers of gymnasia and real schools [13]. Oskar Fabian was also a member of the Leopoldina Academy in Halle since 1885 [14]. In May, 1883, he was nominated as a corresponding member of the Academy of Learning (Akademia Umiejętności) in Cracow; however he gathered seven votes instead of required eight, and thus failed to be elected [15].

Oskar Fabian was active in popularizing science. Available literature includes in particular references about his reports *O życiu roślin* [*On the life of plants*] at scientific lectures for ladies (Lviv 1871) [16] and *Ueber Crooks'sche Versuche bezüglich der strahlenden Materie, mit Experiment* [*On Crookes' experiment related to the radiant matter, with experimental test*] for the Military-scientific Society (Lviv 1881) [17].

The data on Professor Fabian's personal life are rather scarce. His wife Eugenia (1854–1922) was a daughter of Wawrzyniec (Lorenz) Źmurko, a mathematician known as a precursor of the Lviv Mathematical School. Oskar's younger brother Aleksander (1847–1910) followed their father's profession and became a physician [7, 18].

Oskar Fabian died on October 27, 1899 in Lviv, aged 53 [12, 19], and was buried at the Lychakiv cemetery (Cmentarz Łyczakowski, see Fig. 2).



Fig. 2. Oskar Fabian's tombstone. Photo by Olena Kiktyeva, May 2009 in Lviv.

Scientific interests of Dr. Fabian included various aspects of mathematics (in particular the problems of series convergence), physics (propagation of light, properties of water and ice, radiant state of matter), as well as some issues of astronomy, meteorology, and pedagogy. He authored over thirty publications, which are listed in the next Section. The list contains in particular several re-

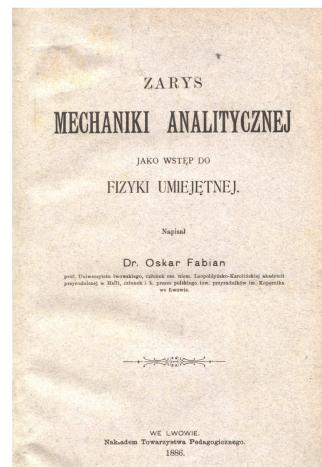


Fig. 3. Book cover of *Zarys mechaniki analitycznej*.

views on topical questions of modern science, a school textbook on mathematics (in Polish and German) and a university course on analytical mechanics (Fig. 3).

Unfortunately, despite his short, but vivid organizational and scientific life, Oskar Fabian did not leave scientific successors. After his untimely demise in 1899, the chair at Lviv University was occupied by famous Polish physicist Marian Smoluchowski.

3. Bibliography of Oskar Fabian

The compilation of this bibliography began with a list of publications given by Finkel and Starzyński [10]. Other important sources include Karol Estreicher's bibliography [20] and accounts on Polish scientific writings [21]. The papers in the publications of the Academy of Learning can be cross-checked in [22]. Unfortunately, these sources do not provide exact references in all the cases, and sometimes give only an approximate title of a paper.

In order to obtain the complete publication list, all the issues of *Kosmos* for the years 1876–1899 as well as the relevant journals of the Academy of Learning were checked throughout.

To avoid mistakes, all the positions in the list below were checked *de visu*. The initial pages of some papers are shown in Figs. 4–6.

1. "O zbieżności i rozbieżności szeregów nieskończonych", *Roczn. Tow. techn.*, T. II, S. 1–18 (1871).
2. "Uginanie się światła i długość fal", *Roczn. Tow. techn.*, T. II, S. 91–150 (1871).
3. "Bemerkung über die Bedingung der kleinsten präzisionschen Ablenkung der Lichtstrahlen", *Repertorium Phys.*, B. IX, S. 84–87 (1873).
4. *Matematyka dla szkół średnich, napisana wedle systemu i ze współdziałaniem Wawrzyńca Źmurki:*

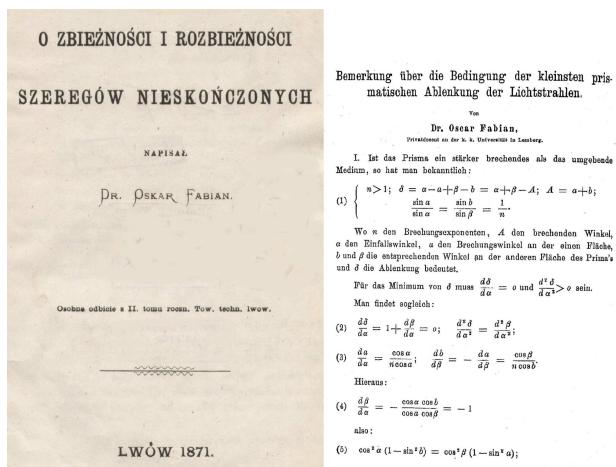


Fig. 4. Some early papers by Oskar Fabian.

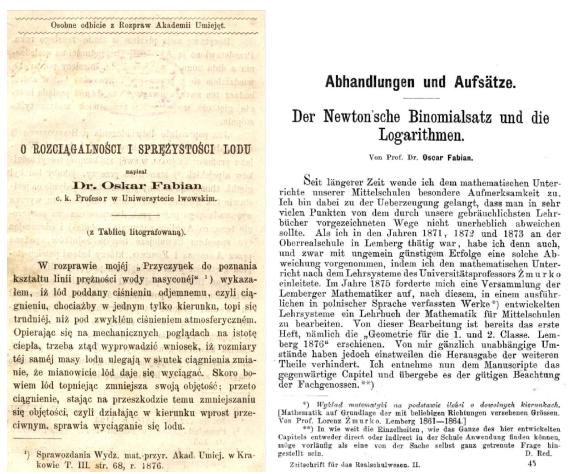


Fig. 5. Fabian's papers from 1877.

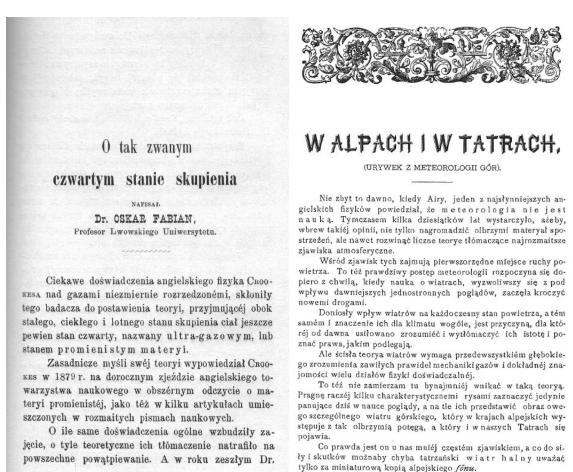


Fig. 6. Some Fabian's papers from 1880s.

I.A. Geometrya na klasy niższe. Zeszyt I, na 1-szą i 2-gą klasę (Lwów, Nakładem księgarni Seyfartha i Czajkowskiego, 1876), IV + 104 s.

5. Lehrbuch der Mathematik, bearbeitet nach dem Lehrlsysteme und unter Mitwirkung des Universitätsprofessors Lorenz Žmurko: I.A. Geometrie für die unteren Klassen. I. Heft, für die 1^{ste} und 2^{te} Klasse (Lemberg: Verlag von Seyfarth und Czajkowski, 1876), IV + 90 S.
6. "Beitrag zur Kenntniss der Spannungskurve des gesättigten Wassers", Repertorium Phys., B. XII, S. 397–404 (1876).
7. [Review:] "Recherches sur l'élasticité de l'air sous de faibles pressions, par M. Amagat, Comptes rendus Nr. 15, 1876", Kosmos, Rok I, S. 232–233 (1876).
8. [Review:] "Vitesse du flux thermique dans une barre de fer, par M. Decharme, Comptes rendus Nr. 13 et Nr. 16, 1876", Kosmos, Rok I, S. 233–234 (1876).
9. "Przyczynek do poznania kształtu linii prężności wody nasyconej", Rozpr. sprawozd. Wydz. mat.-przyr. Akad. Umiej., T. III, S. 68–83, Tabl. IV (1876).
10. "Obliczanie wartości szeregów nieskończonych, a zwłaszcza o bardzo słabej zbieżności", Pam. Akad. Umiej. Wydz. mat.-przyr., T. II, S. 37–56 (1876).
11. "O rozciągalności i sprężystości lodu", Rozpr. sprawozd. Wydz. mat.-przyr. Akad. Umiej., T. IV, S. 159–176, Tabl. IV (1877).
12. "Ueber Dehnbarkeit und Elasticität des Eises", Repertorium Phys., B. XIII, S. 447–457 (1877).
13. "Rozciągalność i sprężystość lodu", Kosmos, Rok II, S. 138–140 (1877).
14. [Review:] "Ueber die Natur der Gasmoleküle; von Prof. Ludwig Boltzmann in Graz (Sitzungsberichte d. k. Akad. d. Wiss. in Wien. Dezember 1876)", Kosmos, Rok II, S. 144–145 (1877).
15. [Review:] "Ueber die Diffusion und die Frage, ob Glas fur Gase undurchdringlich ist; von Prof. Quincke in Heidelberg (Poggendorffs Annalen Bd. CLX)", Kosmos, Rok II, S. 144–145 (1877).
16. "Der Newton'sche Binomialsatz und die Logarithmen", Zs. Realschulwesen, II. Jahrgang, S. 705–720 (1877).
17. "O zasadniczych prawach przyrody", Kosmos, Rok IV, S. 161–198, 269–290, 377–387 (1879).

18. [Review:] "Dr. J. Puluj. Ueber die Abhaengigkeit der Reibung der Gase von der Temperatur (Sitzungsberichte der Wiener Akademie der Wissenschaften. Bd. LXXVII.)", *Kosmos*, Rok IV, S. 207–209 (1879).
19. [Review:] "Dr. J. Puluj. Ueber die Reibung der Gase der Daempfe (Sitzungsberichte der Wiener Akademie der Wissenschaften. Bd. LXXVIII.)", *Kosmos*, Rok IV, S. 209–210 (1879).
20. [Review:] "Dr. J. Puluj. Ueber die innere Reibung in einem Gemische von Kohlensaeure und Wasserstoff (Sitzungsberichte der Wiener Akademie der Wissenschaften. Bd. LXXIX.)", *Kosmos*, Rok IV, S. 210 (1879).
21. [Synopsis of Knoblauch's] "Ueber die elliptische Polatization der von Metallen reflectirten Waermestrahlen", *Kosmos*, Rok V, S. 209–210 (1880).
22. "O tak zwanym czwartym stanie skupienia", *Rozpr. sprawozd. Wydz. mat.-przyr. Akad. Umiej.*, T. VIII, S. 231–267 (1881).
23. "Zasada momentów przygotowanych, przyczynek do analitycznej mechaniki", *Rozpr. sprawozd. Wydz. mat.-przyr. Akad. Umiej.*, T. VIII, S. 287–298 (1881).
24. "Nauka fizyki w Uniwersytecie", *Kosmos*, Rok VI, S. 466–478 (1881).
25. "O ruchach cząsteczkowych w gazach", *Kosmos*, Rok VI, S. 2–4 (1881).
26. "O doświadczeniach Crookes'a", *Kosmos*, Rok VI, S. 89 (1881).
27. "O promienistym stanie materyi", *Wszeszyiat (Warszawa)*, T. I, Num. 1, S. 2–5, 22–25, 37–41 (1882).
28. "O pojęciu grawitacji", *Kosmos*, Rok VII, S. 56–66 (1882).
29. "O przejściu Wenery przed tarczą słońca" *Kosmos*, Rok VIII, S. 5 (1883).
30. "Jeszcze słówko o tak zwanym czwartym stanie skupienia", *Kosmos*, Rok IX, S. 82–89 (1884).
31. "[Mowa zagajajaca XII. Walne Zgromadzenie Polskiego Towarzystwa Przyrodnikow imienia Kopernika we Lwowie = Inauguration speech at the 12th Congress of the Polish Copernicus Naturalist Society in Lviv]", *Kosmos*, Rok IX, S. 37–39 (1884).
32. *Zarys mechaniki analitycznej jako wstęp do fizyki umiejętności* (Lwów: nakł. Towarzystwa Pedagogicznego, 1886), 240 s.
33. "Kartka z życiorysu astronoma", *Kosmos*, Rok XI, S. 164–174 (1886).
34. "W Alpach i w Tatrach (urywek z meteorologii gór)", *Ateneum*, Rok XIII, T. III, Zeszyt I (Lipiec), S. 54–74 (1888).
35. "Urywek z najnowszych dziejów fizyki", *Kosmos*, Rok XV, S. 1–16 (1890).
36. [Review:] "Siły przyrody. Popularny wykład fizyki i jej głównych zastosowań na podstawie dzieła Le monde physique. Guillemin. Opracowali Rozalia Nusbaumowa i Henryk Silberstein. Warsz. 1893", *Kosmos*, Rok XIX, S. 139–140 (1894).

Journal title abbreviations:

Ateneum = *Ateneum: pismo naukowe i literackie (Warszawa)*;

Kosmos = *Kosmos: czasopismo Polskiego Towarzystwa Przyrodników imienia Kopernika (Lwów)*;

Pam. Akad. Umiej. Wydz. mat.-przyr. = *Pamiętnik Akademii Umiejętności w Krakowie. Wydział matematyczno-przyrodniczy*;

Repertorium Phys. = *Repertorium für Experimentalphysik, für physikalische Technik, mathematische und astronomische Instrumentenkunde (München)*;

Roczn. Tow. techn. = *Rocznik Towarzystwa technicznego (Lwów)*;

Rozpr. sprawozd. Wydz. mat.-przyr. Akad. Umiej. = *Rozprawy i sprawozdania z posiedzeń Wydziału matematyczno-przyrodniczego Akademii Umiejętności w Krakowie*;

Zs. Realschulwesen = *Zeitschrift für das Realschulwesen (Wien)*.

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