



Traian Lalescu - an outstanding Romanian mathematician

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Traian Lalescu is together with Gheorghe Titnica and Dimitrie Pompeiu one of the founders of the Romanian mathematics. In what follows we are remembering some of the highlights of his life and work.

Childhood. Traian Lalescu was born on July 12, 1882 in Bucharest. However, its real origin place is the village Cornea near Caransebes where his father was born. This explains, as we can see later, his special relationships with Banat's country. His father was office worker and superintendent at "Creditul Agricol" bank. This leads to several changes of residences. Therefore, the first two years of gymnasium was attended by the young Traian at Craiova, the next two years at Roman and the high school at Iasi.

He was a very gifted child: he was drawing nice, he was playing at cello and he was translating from Italian. He was a brilliant pupil at all the subject matters. From the sixth-form (1899) he is in contact with "Gazeta Matematica".

Education. Traian Lalescu was the first at the entrance examination at the National School of Bridges and Highways. After three years he gave up and he entered to the Faculty of Sciences of the University of Bucharest at the section of mathematics.

He was a precocious mathematician and he was polished by famous professors as David Emmanuel, Gheorghe Tifeica, Anton Davidoglu, N. Coculescu.

In 1905 he graduated mathematics. Obtaining an "Adamachi" scholarship he attended, at Paris, the lectures of Emile Picard. Traian Lalescu stated that "Picard was my master". In 1908 he obtained his PhD with the thesis "Sur l'equation de Volterra".

In 1908-1909 he participated in Göttingen at the scientific seminar lead by D. Hilbert. At June 15, 1909 he obtained the Doctor degree.

In 1915 he attended, as an ordinary student, the lecture of professor Vasilescu Karpen on electricity and electrotechnics at the National School of Bridges and Highways. In 1919 he obtained the diploma of electricity engineer at Ecole Supérieure d'Electricité at Paris.

Professional activity. For a short period Traian Lalescu worked as a teacher at secondary schools. Namely, between 1906-1909 he was teacher at the gymnasium of Giurgiu. In 1911 he moved to the Central Seminar in Bucharest; afterwards to the Șincai gymnasium and to Cantemir gymnasium. At October 1, 1912 he resigned from the position of teacher. The reason was that he was overbid by its activity at university.

At April 1, 1910 he is professor of rational mechanics at University of Bucharest, replacing Spiru Haret (retired) until the arrival of D. Pompeiu as titular. At the same time, at April 1, 1910 he occupied a position of associate professor of algebra at University of Bucharest until 1913.

At January 1, 1911 he was appointed as titular professor of analytical geometry at National School of Bridges and Highways (successor of Spiru Haret). He delivered lectures here (who becomes Polytechnical School) until his death.

Also in 1916 he was appointed as titular professor of algebra and number theory at University of Bucharest until his death.

In 1920 Traian Lalescu succeeded to convince the minister of public works, D. Greceanu, to set up a Polytechnical School at Timisoara. He was the first rector of this university until the death of his wife in September 1921. At Polytechnical School in Timisoara he was titular professor at the chair of mathematical analysis and at the chair of electricity without abandon the two positions in Bucharest.

The trip between Timisoara and Bucharest was done by train and just descended from the train he walked from the North Railway Station in Bucharest to the Polizu's building of Polytechnical School to deliver lectures. Obviously, with such a way of life his health weakened.



Publications. For Traian Lalescu the elementary mathematics occupied the same place as the higher mathematics. The only condition was to be nice and to raise at the highest heights of human spirituality. Unlike Tifeica or Pompeiu he was not limited to a particular field of mathematics. He approached any new mathematical problem which presented mathematical challenges from the group theory of Galois and the theory of integral equations till to Einstein's relativity theory. The diversity of his mathematical work is a feature that stands out from other researchers. He considered him not only a mathematician but also responsible for the education of the young generation.

His book "Introduction a la theorie des equations integrales", Hermann et fils, Paris, 1912 (152 pages) [Bucharest, 1911] was the first book in the world concerning the theory of integral equations.

He provided a direct proof to the fundamental theorem of Galois.

In geometry he started to publish papers from the time of high school. We mention: "Culegere de probleme de geometrie descriptiva si cosmografie" (with Ștefan Mirea) in 1914; "Geometria triunghiului" - postum published by prof. R. N. Raclis; "Tratat de geometrie analitica" (the lecture from Polytechnical School) in 1923.

Preoccupied with the history of mathematics in Romania, he realized that the textbooks of Gh. Lazar, remained as manuscripts, are major contributions to the romanian mathematical language. Therefore, he published "Trigonometria" of Lazar.

In several journals Traian Lalescu published articles about: the mathematical theory of aviation, wireless telegraphy, mathematicians as Mittag-Leffler, Fredholm, Picard, Poincare etc., mathematical books from Transilvania, greek mathematical textbooks from romanian countries.

George Șt. Andonie in "Istoria Matematicii in Romania" counts 222 papers appeared in "Gazeta Matematica" and in "Revista Matematica din Timisoara".

Varia. On March 15, 1921 under his leadership appears the first number from "Revista Matematica din Timisoara". This first number (600 copies) is printed in Bucharest at his expense.

He obtained from Tancred Constantinescu, the general manager of romanian railways, a ground in Calea Grivifei where the House of "Gazeta Matematica" was built.

He was awarded, in France, with "La legion d'honneur".

The war. Due to several health problems he was exempted from the military service. He worked in a certain auxiliary service, namely at the telegraphic censorship.

In December 1916, together with Ion Ionescu, bring out at Iasi "Gazeta Matematica". The editorial process was done in his house.

During 1918-1919 he was in a diplomatic mission at Paris. For the peace conference in 1919 he elaborated the book "Le probleme ethnographique du Banat", Dupont, Paris, 1919 in which he brings historical and statistic proofs in order to attribute this country to the romanian state.

Deputy in the Romanian Parliament. The report concerning the budget project for the year 1925 presented by Traian Lalescu was considered the best report from the whole history of the Romanian Parliament.

It is worth to mention that the quarrels and the polemics in parliament suddenly ceased and all the deputies paid attention to the arguments of high level proposed by Lalescu.

Family. His wife, Ecaterina, a former student, died in 1921 at 28 years old due to a birth. This is the reason of his resignation from Timisoara: to be able to manage with the growth of the children. He had four children: two sons and two daughters.

On June 15, 1929 Traian Lalescu died as a result of a double pneumonia caught in the autumn of 1927. He had a vacation in Nice and he tried a treatment in Paris in 1928 but without success.

We conclude this short presentation of a such amazing life with the words of two close friends of Traian Lalescu. Ion Ionescu, professor at Polytechnical School in Bucharest, said that the appearance of Lalescu is like a comet which shines, amazes and scares with her long tail. Gheorghe Tit-eica stated that the head of Lalescu it's worth much more than ten estates.

References

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