

Vladimír Kořínek (1899–1981)

English summary

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Vladimír Kořinek (1899–1981)

Life and Work

Vladimír Kořinek was born on April 18, 1899 in Prague in the family of the court counsellor Vilém Kořinek. He studied at a grammar school in Vinohrady where his interest in mathematics and physics was encouraged by his professor Miloš Kössler (1884–1961). V. Kořinek graduated with honours in June 1918.

From 1918 till 1922 he was a student of the University of Prague, he intensively studied mathematics and physics. He was most influenced by professor Karel Petr (1868–1950) and Kořinek's former grammar school professor M. Kössler, who had habilitated at the faculty by that time. Under Petr's influence, V. Kořinek started researching in arithmetic theory of quadratic forms; between 1924 and 1929 he published eight works on this subject.

In 1923 V. Kořinek received his doctorate, in 1923 and 1924 he passed his state exams in mathematics and physics and obtained certification to teach these subjects at higher secondary schools. He spent the 1923/24 school year at Sorbonna in Paris and at Collège de France. There he attended courses of J. Hadamard (1865–1963), H. Lebesgue (1875–1941), P. Montel (1876–1975) and Ch. Picard (1856–1941).

In September 1924 V. Kořinek started teaching at the grammar school in Vinohrady from which he had graduated a few years before. The following autumn he became an assistant at the Second Institute of Physics and from the 1927/28 school year till the end of April 1931 he was an assistant of the Second Institute of Mathematics of the Czech Technical University, headed by Karel Rychlík (1885–1968). In the 1929/30 school year he studied at the University of Hamburg with the prominent German mathematician Emil Artin (1898–1962), supported by the Rockefeller Scholarship. Under Artin's influence V. Kořinek began working in theory of algebras. In the period 1930–1934 he published four works in this discipline which got international credit and were cited in several monographs and overview articles (e.g. M. Deuring, A. A. Albert, N. Jacobson, M. Eichler). In appreciation of Kořinek's scientific activities he was appointed a member of the *Royal Bohemian Society of Sciences*.

In 1931 V. Kořinek habilitated at the Faculty of Science, Charles University, however, his habilitation was transferred to the Czech Technical University. As a private docent he gave his first lectures at the university, namely courses in algebra and number theory.

From May 1, 1931 V. Kořinek was employed at the State Statistical Bureau, where he worked in the population division and was concerned with mortality tables. As a result of his scientific statistical activities four works were published in the period 1934–1936 and one in 1938. In 1935 V. Kořinek undertook an educational journey to the USSR at universities in Moscow, Leningrad, and Kiev; he was the first Czechoslovak mathematician to initiate scientific connections with Russian mathematicians.

In September 1935 he left the State Statistical Bureau to become an associate professor of the Faculty of Science, Charles University. From the 1935/36 school year he gave lectures in differential and integral calculus and algebra, from the 1938/39 school year was additionally in charge of a mathematical seminar and proseminar. He started working in group theory, on which he had lectured already in the 1931/32 school year; in the period 1937–1940 five works on groups were published. Some of his results are cited in significant monographs (e.g. A. G. Kuroš, D. J. S. Robinson, W. Specht, G. Birkhoff, N. Jacobson, G. Zappa).

During the World War II Czech universities were closed and their professors were put on leave; at that time V. Koříněk was working in lattice theory and compiled his textbook *The Basics of Algebra*. In the period 1941–1951 five works on lattices were published. His results are cited in several monographs and textbooks of world importance (e.g. G. Birkhoff, A. G. Kuroš, L. Rédei, G. Szász).

From May 10, 1945 he began working again; at the request of the National Board of Universities he led the provisional administration of the university building in Viničná Street as well as the established administration of the Mathematical Institute of the German University in this building.

In 1946 he received a retrospective appointment valid from October 28, 1940 to become a full professor of the Charles University. At the same time he became an associate member of the *Czech Academy of Sciences and Arts* and a member of the *Czech National Research Board*.

After the war V. Koříněk put great effort into many aspects of university education. He lectured in mathematics at the Faculty of Sciences and later at the Faculty of Mathematics and Physics. He also was interested in some problems of teaching mathematics at eleven-year schools and general secondary schools, he took part in discussions of some questions how to modernize curriculum, terminology, education and training of teachers of mathematics. In the meantime he produced lengthy and detailed reviews of textbooks. He also worked in various committees.

In 1952 the independent Faculty of Mathematics and Physics, Charles University (MFF UK) came into existence. V. Koříněk became the head of the newly established Department of Mathematics for a short period of time. From October 1, 1953 till August 31, 1955 he was the dean of the faculty. In 1957 he became a member of its scientific council and the head of the Department of Algebra and Geometry. In the 1964/65 school year he was the vice-dean for pedagogical affairs, and the period 1966–1969 V. Koříněk was a member of the Charles University Research Board.

At the faculty he gave compulsory as well as optional courses in algebra, and for many years was in charge of his algebraic seminar, in which a number of later prominent mathematicians (e.g. V. Dlab, L. Procházka, J. Mařík, V. Pták) took part. In 1953 Koříněk's textbook *Foundations of Algebra* was published, its second edition is from 1956. This was the first – and for many years the only – Czech university textbook in algebra.

V. Kořínek was a high-principled person, all tasks he assumed were carried out fairly, unselfishly, and with great effort and devotion. Besides his scientific publications, he wrote a number of reviews, reports, popular and anniversary articles. Unfortunately, his scientific work was given up due to his various focuses. His last two scientific papers (dealing with Frattinian subgroups) were published in 1960. They are also cited in several monographs and textbooks (E. Schenkman, A. G. Kuroš, D. J. S. Robinson, J. D. Dixon).

At the beginning of 1970 V. Kořínek sustained a serious injury which required a long-term rehabilitation. He retired as head of the department, but continued working at the faculty part-time. He died on June 2, 1981.

Other activities

V. Kořínek was a very active member of the *Union of Czechoslovak Mathematicians and Physicists* from his student era (1918): a member of the steering committee (1921–1931, 1940–1945), a librarian (1925–1929, 1945–1950), a member of the scientific council (1937–1940), a member of the presidium (1945–1956), the vice-president (1952–1962), an honorary member (1965), and the president (1969–1970). He gave a number of lectures in the *Union*.

From 1935 he was a member of the *Society for Cultural and Economic Relations with the USSR*, in the period 1954–1966 a member of the *Czechoslovak Board of Defenders of Peace*, in the period 1959–1968 a member of the *Czechoslovak Committee for Cooperation with UNESCO* – within cooperation with UNESCO, as a delegate of Czechoslovakia he attended an assembly of the Advisory Committee for Sciences in Giessen (1959) and Paris (1960).

V. Kořínek markedly encouraged formation of the *Czechoslovak Academy of Sciences* (ČSAV), and in November 1952 he became an academician. In the tempestuous year of 1968 he defended establishment of ČSAV; he acknowledged that social sciences were sorely affected, however, he emphasized the great contribution of the academy to mathematics and sciences. In ČSAV he worked in many appointments.

V. Kořínek was a member of advisory boards for the journals *Časopis pro pěstování matematiky a fyziky* (1938–1949), *Časopis pro pěstování matematiky* (1951–1953), *Czechoslovak Mathematical Journal* (1951–1981), *Commentationes Mathematicae Universitatis Carolinae* (1962–1981), and *Pokroky matematiky, fyziky a astronomie* (1958–1960).

Awards

For his numerous activities Vladimír Kořínek received a number of awards: Silver Medal of the Charles University (1960), Order of Work (1962), Commemorative Medal of the Charles University (1968), Silver Medal of the University of J. E. Purkyně in Brno (1969), Golden Plaque of Bernard Bolzano (1969), and Medal of MFF UK (1978).

Personality

Vladimír Kořínek was politically oriented to the left beginning in his student era, demonstrated when at the beginning of 1930's he took part in activities of the Ethics Movement. He refused to give up the principles which had brought him into this movement and which were further strengthened by his activities. For the whole of his life he showed considerable personal courage, even in situations when others were silent. He did not agree with a number of "era signs" and presented his objections openly, often even formulating his opinions in writing. For the whole of his life he bravely fought bureaucracy, he ignored or crossly reacted to many stupid letters. He was straightforward even during the war and in the worse post-war era. He never joined the Communist Party despite the fact that his acceptance was discussed by the party group and his "guarantees" were determined.

V. Kořínek was convinced that it is necessary to help people regardless of possible risks and to face falseness fearlessly. That is why he involved himself in aid of the Russian emigrant E. Bunický (1874–1952) at the beginning of the World War II. In 1940 he interposed an appeal against conferment of leave; in the same year he ignored a decree about racial origin, delivering materials about his Aryan origin only after an urgent request (under sanctions threat) with a year delay. During the war he helped Jews, after the war he endeavoured to find a position for J. Löwig (1904–1995), a mathematician of German and Jewish origin, in 1953 he took a stand for professor A. Žáček (1882–1961), whose finances were threatened at that time by a radical cut-down of his retirement pension.

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This monograph is devoted to life and work of academician Vladimír Kořínek, one of our prominent algebraicians of the 20th century. It was compiled in the period 1996–2005 at the Faculty of Mathematics and Physics, Charles University. It consists of six chapters plus rich factual and illustrated appendices.

The first chapter describes Kořínek's life. His lifetime is presented in more detail, besides, it is depicted by several elaborate passages which sketch Kořínek's character and attitudes.

The second chapter is dedicated to Kořínek's scientific work. His publications are dividend into five thematic sections, which are exposed in detail. Relations to the preceding as well as subsequent works are mentioned together with their response in the world mathematics.

Kořínek's statistical works are put near and reviewed in the third chapter. They originate from the period when V. Kořínek was employed at the *State Statistical Bureau* or shortly after that. They are separated from other scientific papers in the list of Kořínek's publications, as their specialization differs.

The fourth chapter deals with Kořínek's textbook *Foundations of Algebra* which was used by our students for several decades. In the first part of this chapter the reader learns in detail about the content and structure of this textbook while the second part is devoted to some books and textbooks available for study of algebra during 1865–1990 and which to some extent influenced teaching of algebra in our country.

The fifth chapter is dedicated to other publications of V. Kořínek, such as reviews, reports, popular articles etc. These papers are divided into twenty groups according to their subjects.

In the subsequent chapter some interesting documents which were preserved are printed and included with comments. In the last chapter memories of witnesses follow.

The final part consists of factual appendices (the list of publications of V. Kořínek, the outline of his teaching activities at the Charles University and at the Czechoslovak Academy of Sciences, the list of personalities who obtained some scientific or academic degrees thanks Kořínek's support, and the survey of Kořínek's studies at the university in the period 1918–1923). The rich illustrated appendix contains copies of documents and photographs from Kořínek's estate.

