

Jubilejní almanach Jednoty čs. matematiků a fyziků 1862–1987

English summary

In: Libor Pátý (editor): Jubilejní almanach Jednoty čs. matematiků a fyziků 1862–1987. Sestavil Libor Pátý k sto dvacátému pátému výročí Jednoty. (English). Praha: Jednota čs. matematiků a fyziků, 1987. pp. [209]–225.

Persistent URL: <http://dml.cz/dmlcz/401944>

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RESUMÉ V ANGLIČTINĚ

FROM THE FREE LECTURES CLUB TO THE UNION
OF CZECH MATHEMATICIANS*Jozef Petráň*

It was in March 1862 that the initiative of several students of the Faculty of Philosophy of the Prague University resulted in the foundation of the Club for Free Lectures in Mathematics and Physics. The reform of secondary and university education carried out just then made it possible for Faculty graduates to find jobs as secondary school teachers. However, the pre-reform obsolete method of teaching Mathematics and Physics still survived at the Faculty of Philosophy, based as it was on the propedeutical role of both subjects. The teachers of Mathematics and Physics at the Faculty, J. F. Kulík, W. Matzka, J. G. Böhm and V. Pierre, were all elderly men used to the antiquated approach and even if they wished they could not raise the level of their lectures since most students lacked adequate training in the subjects from the secondary schools. Therefore the founders of the Club intended to improve their education by their own means. The foundation of the Club met with a favourable response of the overwhelming majority of students who studied the subjects with the intention to become secondary school teachers. Among the founders of the Club were talented, professionally ambitious students. Those were the authors of lectures held within the first year. The lectures were delivered mostly in German, which was due above all to the fact that the instruction at Prague University at that time was given in German. From its very beginning the Club was supported by teachers of Mathematics and Physics. Prof. Kulík donated his library to it, thus laying the foundations to the later outstanding library of the Union of Czech Mathematicians and Physicists. Prof. E. Mach who in 1867 succeeded Prof. V. Pierre in the Department of Physics, directed the work of the Club and provided its members with the opportunity of experimenting in his University laboratory.

The late sixties of the last century marked the end of the epoch which laid the foundations of the forthcoming systematical development of Mathematics and Physics, as well as of the other sciences. Accordingly, the need arose for an organization reaching beyond the frame of the faculty and incorporating mathematicians and physicists in general, not only the students of the Faculty. Thus, on the initiative and through the efforts of the Club, the Union of Czech Mathematicians was founded on May 9, 1869. It took over the library of the Club and set down much broader goals for its activity in both Mathematics and Physics. It had a great cultural task: to form Czech special terminology for teaching both subjects in Czech, to make contacts with world science, among other by founding a scientific journal and publishing scientific books, and to encourage research in Mathematics and Physics. Within a few years, the Club with some dozens of members – students became

an organization with 500 members. The Union was joined gradually by almost all secondary school teachers of Mathematics, Physics and Descriptive Geometry, who formed the core of the society. Among the members there were also students of the Polytechnical Institute. A decisive role in directing the professional activities was played by university teachers, even if they quite naturally represented only a minor part of the members. During the first years of its existence the Union published annual reports on its activities. From 1872 it started to publish *Časopis pro pěstování matematiky a fyziky* (Journal for Cultivation of Mathematics and Physics) and then, step by step, textbooks and monographs. This publishing activity led, through exchange of publications, to a remarkable growth of the library, which in 1885 already had 1800 volumes. It was then the largest specialized library, surpassing considerably by the number of items the libraries of the Seminars of the Czech Faculty of Philosophy (the Czech university was born in 1882 when the Prague University was divided into German and Czech parts). The Union of Czech Mathematicians as the oldest and most numerous society with the best organizational structure led the way to the other learned societies and together with them helped Czech science to catch up with the rest of the world (let us mention the Czech geometrical school, the work of M. Lerch in Mathematics, Č. Strouhal and B. Kučera in Experimental Physics, A. Seydler and F. Kolářček in Theoretical Physics, and G. Gruss in Astronomy).

The activities of the Union of Czech Mathematicians, which has to be considered a significant institution of Czech national culture, were in the independent Czechoslovak Republic continued by the Union of Czechoslovak Mathematicians and Physicists. After its reorganization after World War II the Union has maintained the important cultural task – to promote the progress of Mathematics and Physics and to be a link between research and education.

JOURNAL FOR CULTIVATION OF MATHEMATICS AND PHYSICS AND ITS CONTINUATORS

Miroslav Brdička and Štefan Schwabik

Journal for Cultivation of Mathematics and Physics (*Časopis pro pěstování matematiky a fyziky*), which was published by the Union of Czechoslovak Mathematicians and Physicists in the period of 1872–1950, played a very significant role both in scientific and in national life. Its birth coincided with a great upsurge of all forces of the Czech nation in the period of National Revival. The support for the development of national life was clearly pronounced in the Journal's introductory article about Professor Stanislav Vydra. At the moment of the foundation of the Journal, the Czech terminology of fundamental mathematical and physical notions was only being created, and the very first textbooks of Mathe-

matics and Physics appeared in Czech. A great deal of the contents of the Journal was directed at students, and even at secondary school pupils. This was especially the case of the problem section. The first editor, Prof. F. J. Studnička (1836–1903), strongly influenced the Journal not only as its chief officer, but also as the author and translator of numerous papers. From its very beginning the Journal served as the Union's members' journal, bringing reports on the Union's activities and various information and news for the members. Studnička was followed in his office by E. Weyr (1852–1903) for two years and then, from 1884, by A. Pánek (1843–1908) for full twenty years. During this period the Journal not only gained wider publicity in Bohemia but became acknowledged even abroad, especially as concerns geometry, which was then the main field of research in Bohemia. Since 1893 the Journal included a special supplement for secondary school pupils. In the first twenty years the extent of the Journal was about 300 pages per year, with a clearly increasing trend. During the years to follow the extent was continuously increasing and reached 600–700 pages in 1917. At that time the Journal already had two editors: Prof. K. Petr for the mathematical part and Dr. B. Kučera for the physical part. From Vol. 51, the "Supplement" became an independent journal *Horizons of Mathematics and Natural Science* (Rozhledy matematicko-přírodovědné), also published by the Union. Another supplement, for didactics and methodology, appeared in the Journal for the first time in 1926, catering for secondary school teachers. Starting with Vol. 64 (1936), the editors were Prof. V. Jarník (1897–1970) for Mathematics and Prof. F. Závíška (1879–1945) for Physics. During World War II the Journal was banned; the first issue after the war gave evidence of the cruel war period, which afflicted in particular the Physics part of the Editorial Board (Professors Závíška, Dolejšek and Sahánek had fallen victims to the Nazis).

The pages of the Journal offer an opportunity to follow the progress of Czech and Slovak Mathematics and Physics, which in their beginnings were, but for rare exceptions, of local impact but developed up to the world level. The second and third sections of the paper provide a detailed chronological survey of the main items from the contents as well as of the most distinguished authors (let us mention here at least E. Čech and V. Jarník in Mathematics and A. Žáček and V. Dolejšek in Physics).

In 1950, due to a change in its position, the Union stopped publishing the Journal. Its role was taken over by a gradually growing line of successors. The rapid development of Mathematics and Physics led to the foundation of the Journal of Cultivation of Mathematics and of the Czechoslovak Journal for Physics. The publication of both was entrusted to institutes of the Czechoslovak Academy of Sciences. These journals also had international versions publishing papers only in congress languages. Very soon the contents of both versions of the journals differentiated, and at the end of the fifties there already existed four quite independent journals. In the mid-sixties, that is, fifteen years after the separation of the journals, the yearly extent was over 1600 pages in Physics as well as in Mathematics, where still another journal *Applications of Mathematics* (Aplikace matematiky) was founded in 1956.

The Czechoslovak Journal for Physics A, published in Czech, underwent considerable changes in the years 1968–1969 especially thanks to its editor Z. Málek. It concentrated on review and survey papers, mostly translated, on methodological papers, discussions concerning various aspects of the work of physicists, etc. It was also supplemented by an appendix bringing the latest news. Soon after the foundation of the Physical Scientific Section it became its members' official journal.

The journal *Advances in Mathematics, Physics and Astronomy* (Pokroky matematiky, fyziky a astronomie), founded in 1956, is another continuator of the Journal for Cultivation of Mathematics and Physics, and the only one still published by the Union. Since 1957 it has served as the Union's official journal. It caters for a more general public. In the course of time the *Advances* have passed through changes of conception and extent resulting in the present state: it is a bimonthly bringing survey and review papers in Mathematics and Physics, papers on instruction in the subjects, historical essays, scientific and personal news, book reviews, and in particular, reports and news from the life of the Union. The "Supplement" published since 1970 brings the latest information and news concerning the Union's activities.

The last heir of the Journal's traditions, *Horizons in Mathematics and Physics* (Rozhledy matematicko-fyzikální), is a direct continuator of the Journal's original supplement, which became an independent journal in 1921. Since 1957 it has been published by the Ministry of Education, with the expert cooperation of the Union of Czechoslovak Mathematicians and Physicists.

The paper includes the list of all editors and editorial boards of the Journal and its continuators.

JOZEF MAXMILIAN PETZVAL – HIS DESCENT, LIFE AND WORK

Vladimír Svoboda

Jozef M. Petzval, a distinguished mathematician and physicist, was one of the oldest honorary members of the Union of Czech Mathematicians. Recent research in genealogy has proved his lineage above all doubt. His grandfather František Pezival (the Czech word "pecivál" is an emotional expression for a lazy man) was for many years a teacher in the village of Loděnice (southern Moravia), one of his eleven children being J. M. Petzval's father Jan Křtitel Bedřich (John Baptist Frederic). The latter moved later to Spišská Belá (Slovakia), where he became teacher and got married. Among his seven children was Jozef M. Petzval (born 1807). He attended secondary school at Podolinec and Košice and then the Institutum geometricum in Budapest. There he received his Doctor's degree from Budapest University and after some years as Assistant Professor of Mechanics, Mathematics

and Practical Geometry he was appointed Full Professor in 1835. Within a mere two years his work brought him such fame that he was called upon to become professor of Vienna University.

In Vienna Petzval became known not only as an outstanding teacher and researcher but also as a remarkable personality of Vienna society. He published papers in Mathematics — among them a two-volume textbook “Integration der linearen Differentialgleichungen”, and substantially contributed to the development of geometrical optics. He improved Galileo’s telescope, developed the theory of reflecting surfaces and constructed a camera using a combination of a concave mirror and a convex lens. The most important result of Petzval’s research was the evaluation and construction of a complex photographic lens with high F-number (it consisted of two spatially separated pairs of lenses of crown and flint glass). The lens played an important role in the development of photocopiers. J. M. Petzval passed his results to Voigtländer, a manufacturer, who used them in the production of the then most perfect cameras. However, Voigtländer was not fair to Petzval, depriving him of his rightful financial share, and even stooping to calumniate him. Therefore Petzval broke his contacts with him and in his late years lived as an embittered recluse avoiding Vienna society. He retired in 1877 aged 70 years and died in Vienna in 1891. His work had been appreciated already during his lifetime. He was appointed member of Vienna Academy of Sciences and of other learned societies. His merits were acknowledged with a memorial tablet in the honour courtyard of Vienna University and with a tombstone in the honorary section of Vienna cemetery. Another memorial tablet was placed in his birthplace, Spišská Belá, where his museum was founded in 1964.

STRENGTH OF CONVICTION OF VÁCLAV ŠIMERKA

Jiří Fiala

Václav Šimerka was born in the village of Vysoké Veselí in 1819 as a cooper’s son. He was educated at grammar school and then studied philosophy at Prague and theology at Hradec Králové. In 1845 he was ordained priest. As a chaplain he “pleaded for the people in the matter of serf labour and, thus making enemies, could not gain any better post”. He graduated in Mathematics and Physics from the Faculty of Humanities and then became a secondary school teacher in the South-Bohemian town of České Budějovice, where he stayed for nine years. In spite of his outstanding results in teaching, he could not hope for any promotion due to the disfavour of his superiors. Therefore in 1862 he applied for a vicarage. His application was favourably received and he remained in his office till his retirement in 1886, dying only a year later. Besides his clerical duties, all his life was devoted to intensive work in Mathematics. He published a number of papers, mostly in *Časopis*

pro pěstování matematiky a fyziky (Journal for Cultivation of Mathematics and Physics). For his merits in supporting the activities of the Union of Czech Mathematicians he was granted honorary membership. After his death the Union held a commemoration ceremony and provided funds for erecting a monument on his grave at Praskačka.

The first Šimerka's paper was published by the Vienna Academy of Sciences under the title „Die Perioden der quadratischen Zahlformen bei negativen Determinanten“. The Royal Bohemian Learned Society published his "Contributions to indefinite Analysis" in Czech. Soon after, his work "Algebra or General Calculations" with an appendix containing a survey of differential and integral calculus was issued in Prague. This book, in fact the first Czech book on Calculus, was approved as a textbook for secondary schools. The most remarkable Šimerka's work is his "Strength of Conviction" published originally in the Journal for Cultivation of Mathematics and Physics, then as an independent volume, and finally in German version by the Vienna Academy of Sciences. It is essentially an essay on a topic which is now called subjective probability. F. P. Ramsay is usually mentioned as the first author who gave a subjective interpretation of probability in 1926 (his work was printed only in 1931). The same problems were independently treated by de Finetti. However, only in 1954 did L. J. Savage write a book which had a real effect on the development of the theory. Thus Šimerka can be considered both a direct predecessor of the theories of subjective probability and the first Czech mathematician to deal with applications of Mathematics in psychology. The present paper presents some of the main ideas of Šimerka's essay.

PAPERS AND DOCUMENTS FROM THE INHERITANCE OF PROF. DR. A. SEYDLER

Zdeněk Horský

The Historical Committee of the Union of Czechoslovak Mathematicians and Physicists has set itself the task of keeping records of important materials from the inheritance of our distinguished mathematicians and physicists. Valuable information can be expected to be found in private diaries of scientists, in their notebooks, drafts of papers as well as correspondence. These documents may throw light on some until now unsolved problems, showing them and their progress under a different angle. The contact with Mr. J. Seydler, grandson of Prof. A. Seydler, is an example of the activities of the Historical Committee. Mr. J. Seydler showed rare understanding when he partially donated and partially lent for copying a set of archive materials bringing to light more details from the life and work of Prof. A. Seydler, an outstanding member of the Union.

UNION OF CZECHOSLOVAK MATHEMATICIANS AND PHYSICISTS
IN THE PERIOD OF THE "PROTECTORATE"*Libor Pátý*

Since its foundation the Union of Czechoslovak Mathematicians and Physicists has gone through a period of development which was especially intensive between the two world wars. The number of members doubled (to almost two thousand). The Union successfully and with great efforts participated in the school reform, published textbooks, monographs and journals and through provident economic measures created the necessary basis for its activity: a specialized library with almost 20 thousand volumes, a printing house, a bookshop, a workshop for teaching aids and a building of its own. It maintained contacts with foreign learned societies and supported individual contacts between Czechoslovak and foreign scientists.

This successful progress came to an abrupt stop in 1938 when the German army entered the frontier regions and especially in 1939 when Slovakia was torn off from Czechoslovakia, while the remaining parts, Bohemia and Moravia, were forcibly turned into the detested "protectorate". In April 1939 the president of the Union, Prof. Nachtikal, died suddenly. Under the pressure of the circumstances the Union was forced to change its name to Union of Czech Mathematicians and Physicists. In November 1939 Czech universities were forcibly closed, and the consequences of this act heavily affected the Union. First of all, it lost the shelter for its most valuable property – its library, housed until then in the Institute of Physics of Charles University. For this reason, the library had to be moved several times during the war, which caused damage to the library funds and made it necessary to restrict its activity. The Nazis even wilfully removed almost one thousand of the most valuable volumes to Bavaria. Besides, the closing of the Universities also afflicted directly the university teachers of Mathematics and Physics, among them also the officers of the Union. Except for very few, the students were dispersed as well. Thus the Union found itself in the position of the most important scientific, publishing and educational centre of Mathematics and Physics in the country. Aware of this, the members tried to avoid the worst damage: through its journals the Union showed the young people the way to self-education, strove to preserve the level of secondary school instruction and, though it was officially forbidden, continued to publish textbooks. The possibilities of contacts between the officers of the Union and its members deteriorated further after the ban on the Journal for Cultivation of Mathematics and Physics was declared in 1941. The only remaining possibility for Czech scientists to publish their works were the periodicals *Rozpravy ČAVU* (Transactions of the Czech Academy of Sciences and Art) and *Věstník KČSN* (Bulletin of the Royal Bohemian Learned Society), still printed in the printing house of the Union. This of course brought personal risks to the members of the Union, in particular to its president Prof. M. Kössler, director M. Valouch and director of the printing house

K. Wick. The German oppression and germanizing tendencies were gradually growing even stronger, being directed above all at Czech intellectuals and at the young generation – secondary school pupils. In 1943 Prof. F. Závíška was elected president of the Union, but in less than one year he was imprisoned by Gestapo. The regular activity of the Union was being gradually more and more restricted: the bookshop was closed, the production of the workshop and the printing house stagnated. Nevertheless, the Union organized three series of popularizing lectures on modern Physics. The speakers were mostly former university teachers. The courses met with a considerable response and became an important political event, offering a then scarce opportunity for a meeting of Czech intellectuals. Soon after, Prof. Dolejšek was imprisoned for his active part in the Resistance. He died in Terezín fortress early in 1945. The president of the Union Prof. Závíška did not survive the concentration camp either, dying on 17 April 1945. In the Prague uprising the Union joined the Liberation movement, issuing a declaration addressed to the new Czechoslovak government. Gradually, the Union with deep sorrow realized that many members – among them some of the most prominent ones – had fallen victims to the war, and paid tribute to their memory. The hard period of the “protectorate” was over. The Union came out of it with heavy losses but with honour, all the time having persistently defended the ideals which had been at its origins and which accompanied it throughout its history.

REVIEWING THE HISTORY OF THE BRNO BRANCH OF THE UNION OF CZECHOSLOVAK MATHEMATICIANS AND PHYSICISTS

Petr Dub

The branch of the Union of Czechoslovak Mathematicians and Physicists in Brno is the oldest centre of the Union outside Prague. At the end of the last century, in spite of a stubborn opposition of the Germans, the number of Czech secondary schools in Moravia increased and Brno was gradually becoming the centre of Czech mathematics and physics, in particular after the foundation of the Czech Polytechnic University in Brno. Its first professors were simultaneously the first propagators of the Union. The first lecture organized by the Union in Brno took place on November 22, 1902 (Prof. J. Sobotka: “On the simplicity of geometrical constructions”). Further lectures followed, reaching the number of 55 by the year 1911. At first, a chairman was elected for each individual meeting, but from 1904 the meetings were presided over by Prof. K. Zahradník permanently. Dr. F. Nachtikal put forward a proposal for the Committee of the Union to establish a section of the Union in Brno at the very beginning of these activities. However, the statutes of the Union did not admit it; nevertheless, the foundation of a branch library of the Union was

approved. The library received duplicates of books from the library of the Union in Prague, and was further supplemented by new books bought from the Union's funds.

In the year 1911 there were already 67 members of the Union in Brno, and they again demanded their own centre. In 1912 the Union prepared new statutes that would make it possible to establish a section of the Union in Brno. The constituent meeting was held on March 10, 1913. Prof. K. Zahradník was elected chairman of the section. After one year, Prof. V. Novák, who was to become later chairman for many years, was elected vicechairman. The section started to develop successfully especially during the first years after the foundation of the Czechoslovak Republic, when in 1919 Masaryk University was established in Brno. The teachers who were called to its mathematical and physical science departments contributed remarkably to the activity of Brno section (B. Hostinský, L. Seifert, B. Macků). During the inter-war period, the Brno section organized about 200 lectures, often delivered by guests from other places and from abroad. The members of the Union in Brno supported the newly established Mathematical and Physical Science Circle in Bratislava by giving lectures at its meetings. An important part of purposeful work was the organization of methodological courses and seminars in Mathematics, Physics and Descriptive Geometry for secondary school teachers. The library of the section was steadily growing (immediately before World War II it had about two thousand volumes), thus becoming a significant aid for both students and scientists in Brno.

The Brno section continued its work even during the Nazi occupation. By closing the Czech universities the Germans substantially restricted the possibilities of lectures and seminars; nevertheless, thanks to the bravery of secondary school teachers it was possible to hold almost fifty lectures in the classrooms of secondary schools during the war years. The library had to move several times, but it did not interrupt its services. The Brno section suffered severe losses: seven of its members died in concentration camps and Nazi gaols, and among them the librarian F. Sahánek.

After the War, the section's chairman was Prof. O. Borůvka, then (from 1951) Prof. L. Seifert and (from 1952) Prof. J. Kaucký. After the changes in the structure of the Union, the section in Brno became one of its branches. During the fifties, the number and size of mathematical and physical science institutes and departments increased considerably. Many members of their staff joined the Union. The branch continued to organize lectures, at the same time looking for new ways: they included discussions of Physics Departments, courses in Physics in cooperation with the Regional Institute for Education, organization of Mathematical and Physical Olympiads. In 1960 the branch celebrated the centenary of Prof. M. Lerch, and in 1963 fifty years from its foundation. In 1966, the library was donated to the Departments of Mathematics and Physics of the Faculty of Electrical Engineering. One of the most meritorious members of the branch, R. Košťál, who had been member of its committee for many years, was elected chairman in 1969, remaining in his office till his death in 1975.

The present activities of the Brno branch are manysided. They include scientific

conferences, seminars and summer schools, cooperation with the sections of the Union, with research institutes, and schools. When established in 1956, the branch had 79 members; now it has over five hundred, and is the second most numerous branch of the Union.

THE PRAGUE BRANCH OF THE UNION OF CZECHOSLOVAK MATHEMATICIANS AND PHYSICISTS AND ITS DEPARTMENTS

Libor Pátý

The resumption of the activities of the Union of Czechoslovak Mathematicians and Physicists in 1956 was accompanied by a change in the structure of the Union: branches established at regional centres became its organizational units. Among them, after a short period of preparatory work, the Prague branch of the Union was set up at a meeting in December 1956. Its first chairman was Prof. J. B. Slavík. The first aim of the newly established branch was to revive the activity of the Prague mathematical and physical science community, first of all through holding regular lectures. Another aim was to popularize both fields, to enlist secondary school pupils' interest in the subjects as a field of study at University, to help to create special terminology and to review the curricula. These points formed the main contents of the working programme of the branch for many years. Among other events, the Prague branch co-organized the celebration of the centenary of the Union in 1962, preparing a mobile exhibition and organizing a memorial meeting.

The committee of the branch tried hard to enlist the cooperation of the secondary school teachers of Mathematics and Physics and to enforce its influence on the instruction in both subjects, as had been the case in the earlier history of the Union. To this end it formed a net of representatives at secondary schools, who should become intermediaries between the officers of the Union and the teachers and pupils. The branch organized a festival of educational films from Mathematics and Physics and a course for film operators, in this way striving to arouse interest in more up-to-date methods of instruction. The branch also took care of talented pupils for whom it organized special courses. In 1965 major changes took place in the committee. The branch received a new chairman F. Veselý, who brought a number of new elements into the work of the branch. They included regular discussions of mathematicians and of physicists in the Prague Teachers' Club, annual social parties, and new series of lectures, in particular for secondary school teachers and pupils. The number of members of the branch gradually increased (from the original 400 in 1959 to 722 in 1968).

Another change in the committee and also in the conception of the branch's activity occurred in 1970. The new chairman Prof. F. Nožička made great efforts to enhance the activities of specialized mathematical groups, to enlist several collective members (institutes and enterprises), to organize discussions with students and to obtain discounts for the

members buying specialized literature. The improvements received favourable response among the members, and resulted in the growth of their number to 1300. In 1975 it was already clear that the scope of the activities of the branch did not correspond to its possibilities, since the size of the branch made the organizational work very difficult. Therefore, after discussions and negotiations with the Union's central authorities, a proposal was put forward to divide the branch into three departments: mathematical, physical and pedagogical. The last department should group in the first place secondary school teachers. The proposal was approved, the committees of the individual departments were elected, and the presidium of the branch was constituted, consisting of the president and treasurer of the branch and of the chairpersons and secretaries of the individual departments. The first president of the branch after the reorganization was Prof. I. Štoll. At present, the work of the branch is going on in the three departments, which organize seminars, lectures, courses and other events in accordance with the character and needs of the individual fields. The new structure has proved its aptitude to fulfil its tasks, and has succeeded in attracting the interest of over 1500 members.

THIRTY YEARS OF OSTRAVA BRANCH OF THE UNION OF CZECHOSLOVAK MATHEMATICIANS AND PHYSICISTS

Vilém Mádr

Like the other regional branches of the Union of Czechoslovak Mathematicians and Physicists, the Ostrava branch was founded in 1956. Nonetheless, the activity of the members of the Union in Ostrava region dates back to the very foundation of the Club for Free Lectures in Mathematics and Physics, whose second chairman was Josef Lošťák, later director of the Institute for Teacher Education at Příbor and school inspector for Moravia. Besides him there were many other founding members of the Union, who after completing their studies worked in the Ostrava region as teachers and school officials.

The very centre of the present activities of the Ostrava branch lies in the organization of lectures, courses, conferences, summer schools etc., often with international participation. The greatest event organized by the Ostrava branch was the 6th Conference of Czechoslovak Physicists in 1979 with 600 participants. The branch pays attention also to the problems of education in Mathematics and Physics, organizing conferences and seminars dealing with the various aspects of instruction in the subjects. The branch issues a Bulletin informing its members of the events organized by the Union. The members of the branch take part in the education of talented youth, especially by participating in the organization of mathematical and physical competitions ("Olympiads") for secondary school pupils. The branch cooperates with other institutions, helping them significantly in their activities in the field of Mathematics and Physics.

RISE AND DEVELOPMENT OF THE PHYSICAL SCIENTIFIC SECTION OF THE UNION OF CZECHOSLOVAK MATHEMATICIANS AND PHYSICISTS

Libor Pátý

In 1955 the Union of Czechoslovak Mathematicians and Physicists resumed its work in conditions quite different from those directly after World War II. Many of its tasks had been taken over by state institutions (library, printing house, publishing house). New scientific and research institutions appeared: the foundation of the Czechoslovak Academy of Sciences (November 17, 1952) led to the establishment of academic institutes, while specialized research institutes were being set up by various ministries, and the staff of the university departments of Mathematics and Physics were growing. Within a relatively short period of time, several hundreds of researchers started to work – mostly young beginners, who lacked experience and felt urgent need for mutual exchange of ideas and for contacts with foreign specialists (the more so because there were very few older experienced researchers in the country). The resumed activity of the Union, based on traditional lines, did not fully satisfy the young mathematicians and, in particular, physicists. The Union was aware of this situation and therefore constituted two committees (for Mathematics and for Physics) whose task was to promote research in Mathematics and Physics. However, the results of the work of the Committee for Physics were not too satisfactory, either. It was especially after the Second Scientific and Organizational Conference of Czechoslovak Physicists, which was prepared by the Scientific Board for Physics of the Czechoslovak Academy of Sciences in 1967, that the formulation of difficulties of the Physics of that time crystallized. They included unsatisfactory conditions for experimental work, the slow response of the industry to the results of research, the danger of Czechoslovak Physics lagging behind the world level. In the meantime, new ideas and forms of work were gradually gaining ground on a statewide scale. This situation led to the idea of establishing an independent physical society embracing all physicists working in research, and voicing their opinions. Another significant motivation for this plan was supplied by the preparatory activities for the establishment of the European Physical Society (EPS), which were then in progress. Moreover, EPS was to incorporate all national physical societies. Nonetheless, the majority of physicists, taking into account the traditions of the Union as well as quite practical reasons, inclined to retain the Union of Czechoslovak Mathematicians and Physicists provided a section grouping the physicists was established and equipped with the necessary autonomy within the Union.

Preliminary negotiations with the Presidium of the Union where the general agreement with these principles had been expressed, were followed by a state-wide meeting of physicists (June 18, 1968). It approved a resolution on constituting the Physical Scientific Section of the Union as a platform for Czechoslovak physicists pursuing research. The sec-

tion was to be part of the Union subordinated directly to the Union's Central committee, and to become member of EPS. The meeting elected the first chairman, Z. Plajner, and sixteen members of the Preparatory Committee. The early period of work of the committee was very difficult. Nevertheless, it succeeded in gradually implementing the main decisions of the meeting: with the approval of the Czechoslovak Academy of Sciences, the Union represented by the Physical Scientific Section was admitted as a member of EPS, the statutes of the Section were prepared, and the First Conference of Czechoslovak Physicists was held in Brno in August 1969, combined with the plenary assembly of the Section. Following the rules laid down by the Congress of the Union held in April 1969, the assembly approved the statutes, set down the directions for the future activities of the Section, and elected the Committee of the Section under the chairmanship of L. Pátý, thus legally constituting the Physical Scientific Section of the Union. However, the Section found itself only at the beginning of its work proper, which included regular registration of its members, continuous contacts with EPS, improvement of the mutual information of Czechoslovak physicists, establishment of specialized groups within the Section, organization of international contacts, applying for one of the future congresses of EPS and modifying the character of the Czechoslovak Journal for Physics A so that it might become the members' journal of the Section. The Committee set about fulfilling these tasks with great zeal. It issued a directory of members of the Section indicating their special interests, and introduced the institution of the so-called collective members of the Section – institutions where physicists worked or where Physics was applied.

The Second Conference of the Section was organized two years after the first in Bratislava. It based its proceedings on the results of two-years work of the Committee, and was more extensive both in the topics and the number of participants than the first Conference. Part of it was the second plenary assembly of the Section which discussed the results of the previous work, elected a new committee with F. Lukeš in the chair and set down new tasks: to coordinate professional events, deal with the problems of young physicists, and ensure an independent management of the Section within the Union. At that time the Section had 485 members, including 94 extraordinary ones (mostly students). The next period was characterized above all by the development and coordination of specialized groups (the number of which at that time was eight) and the effort to retain the branch secretariate of EPS in Prague. However, the efforts to gain the approval of the Czechoslovak Academy to organize the EPS Congress in Prague, as well as the attempts to start mutual cooperation with physical societies in Austria and FRG, remain unsuccessful.

The third period began with the conference and plenary assembly in Olomouc in September 1973. The conference dealt with important problems of relations between Physics and industry. The main tasks set for the new committee under the chairmanship of J. Pastrňák were to increase the number and develop the activities of specialized groups, to organize contests for young physicists, to favourably influence the publishing of physical literature and to promote the significance of Physics for the society among the wider public.

The fourth conference and plenary assembly took place in Liberec in August 1975; several members of the Government as well as the President of the Czechoslovak Academy of Sciences took part. The conference confirmed beyond all doubts the *raison d'être* of the permanent existence of the Section, and the rightfulness of its efforts.

The successful development of the Section both in depth and width is still going on. One of the greatest achievements of the Section was the organization of the EPS Congress in 1984 in Prague. The Section has gained firm place not only in the Union itself but in the whole Czechoslovak physical community as well. The number of members on September 1, 1985, was 1126, including 155 extraordinary ones, and 7 collective members.

THE PLACE AND VOCATION OF THE UNION OF SLOVAK MATHEMATICIANS AND PHYSICISTS IN THE HISTORY OF THE UNION OF CZECHOSLOVAK MATHEMATICIANS AND PHYSICISTS

Ladislav Berger

The beginning of the successful activities of the present Union of Slovak Mathematicians and Physicists can be traced to the early years of the Union of Czech Mathematicians. This Union attracted also the Slovak mathematicians and physicists, whom the national oppression of the Austrian-Hungarian monarchy prevented from developing their education and knowledge. After World War I, the cooperation of Czechs and Slovaks found expression in the unselfish help of Czech teachers and professors, mostly members of the Union of Czechoslovak Mathematicians and Physicists, during the postwar period when Slovakia suffered from lack of its own specialists. Thanks to these teachers the Union penetrated into the conscience of Slovak students. Many of them still recall with gratitude the import of their Czech teachers for the development of Mathematics and Physics in Slovakia. Here we should mention Prof. J. Hronec who was the first Slovak mathematician to join the Union. The Union gradually gained popularity through its journals and textbooks. The first impulse for the real activity of the Union in Slovakia came from the "Mathematico-Physical Circle" in Bratislava. The first volume in the series "Path to Knowledge" published by the Union was written by the Slovak mathematician Š. Schwarz, with a preface in Slovak (1940).

After the difficult period of World War II there came a stormy development of cultural and scientific life in Slovakia, including the development of the Union. In accordance with the new Statutes (1956), branches of the Union were established in Bratislava, Košice, Nitra, Prešov, Zvolen and Žilina. These branches were directed by the Slovak Committee of the Union. This gave rise to a long series of various events organized by the Union in Slovakia: conferences, seminars, summer schools, etc. Following the federalization of Czecho-

slovakia, the Slovak Committee of the Union of Czechoslovak Mathematicians and Physicists was replaced in 1969 by an independent society, the Union of Slovak Mathematicians and Physicists. Its statutes were approved in 1972 and the new society started to form the conception of its own activities, bringing into reality its intentions step by step.

At present, the Slovak Union has, besides its regional branches, three sections: a mathematical section and two physical sections – one for research and the other for education and didactics. The Slovak Union participates in various ways in the progress of Mathematics and Physics in Slovakia, contributes to the modernization of instruction in both subjects and publishes scientific and popular literature in the field. With its 3500 members it is the most numerous learned society in Slovakia. It closely cooperates with the Czechoslovak Union, thus festering to the unity of the Czech and Slovak nations.

NEW MEDAL OF THE UNION OF CZECHOSLOVAK MATHEMATICIANS AND PHYSICISTS

Libor Pátý

As early as in 1962 when celebrating its centenary, the Union issued memorial medals, which in the course of time were awarded to its honorary and meritorious members as a distinction for research and educational work, as well as to prominent guests from abroad, and to personalities who substantially contributed to the development of the Union of Czechoslovak Mathematicians and Physicists.

On the occasion of the 125th anniversary of the Union's foundation (1987), a new medal was coined. Its author is an outstanding Czechoslovak medallist and sculptor Z. Kolářský. The obverse of the medal shows part of the astrolabe of the Prague ancient horologe as a symbol of time, and several historical buildings symbolizing the two nations, Czechs and Slovaks, as well as the two sciences, Mathematics and Physics: St. Michael Tower in Bratislava, Clementinum Astronomical Tower in Prague, the historical buildings of Charles University (Carolinum) in Prague and of Academia Istropolitana in Bratislava, silhouettes of Prague St. Vitus Cathedral and of Bratislava Castle. The Union is characterized by its emblem – a round plate with letters JČSMF – and its name in Czech. The reverse of the medal repeats the motif of the astrolabe; on its perimeter it introduces a quotation from Horatius which is preserved on Prague tombstone of Tycho de Brahe: "Non fasces nec opes sola artis sceptrā perenn" (neither power nor property, but only the reign of science and art will last). Further, the reverse presents portraits of four Czech and Slovak scientists with some attributes characterizing their fields of research: Tadeáš Hájek of Hájek (astronomer and physician, 16th cent. – a nova), Marcus Marci of Kronland (physician and physicist, 17th cent. – the spectrum), Bernard Bolzano (mathematician and philosopher, 19th cent. – a number sequence in typical notation), Jozef M. Petzval (mathematician and physicist, 19th cent. – a mathematical formula from optics).