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Professor RNDr. Miroslav Laitoch, CSc., Head of Department of Mathematical Analysis and Numerical Mathematics of the Faculty of Science, Palacký University at Olomouc, was born on 22 February, 1922 in Olomouc. After his leaving examination at Olomouc secondary school in 1940, he worked during the Nazi occupation as tramway driver and worker. After the reopening of the Czech universities in 1945 he entered the Faculty of Science of Brno University, studying mathematics and descriptive geometry. After graduating from the University he worked as secondary school teacher at Bílovec for one year. His interest in research work in mathematics,

raised above all by Professors O. Borůvka and L. Seifert, led him to the Faculty of Education in Olomouc, where he started to work as Assistent Professor with Professor J. Novák. Under the guidance of Professor Borůvka he prepated and in 1950 defended his doctoral thesis. The years 1952–55 were of crucial importance for Laitoch's scientific development: he stayed at Brno as student of Professor O. Borůvka. In 1956 he was granted the scientific degree Candidate of Science on the basis of his dissertation *Applications of the theory of dispersions in the theory of linear homogeneous differetial equations of the second order.* In Brno, M. Laitoch also was member of the seminar led by Professor K. Koutský, the topics of which were geometry and didactics of mathematics.

After obtaining his scientific degree, M. Laitoch returned to Olomouc to the School of Education, which was later incorporated in Palacký University. In 1960, already as Associated Professor he became Head of Department of Mathematical Analysis. Since then, he has held this office till now, being appointed Extraordinary Professor in 1965 and Ordinary Professor in 1970. Since 1960, Prof. Laitoch was Vice-Dean and Dean of the Faculty of Science and Vice-Chancellor of Palacký University; at present he is Dean of the Faculty of Science. He has held a number of important offices in research and education; let us only mention his membership in the Scientific Board of Mathematics of the Czechoslovak Academy of Sciences. He has actively worked in the Society of Czechoslovak Mathematicians and Physicists, among other as its Vice-Chairman. At present, he is member of its Central Committee and Chairman of the Olomouc branch.

As Head of Department, Professor Laitoch has always created favourable conditions for scientific work for his colleagues. He has paid special attention to the problems of mathematical education not only at universities but at secondary schools as well, always supporting modern and progressive methods and forms of education in mathematics.

For his manysided and creditable activities, Professor Laitoch was awarded numerous distinctions; let us only mention the medal "For outstanding results" bestowed upon him by the President of the Republic in 1974.

The scientific work of M. Laitoch concerns the theory of transformations of second order linear differential equations. Let us give a brief survey of the main results.

A generalization of the Floquet theory is carried out in [1] and [6] for differential equations of the type

$$y'' = q(t)\, y \tag{q}$$

and

$$y'' + 2\, a(t)\, y' + a'(t)\, y = 0\,,$$

without the assumption of periodicity of the coefficients.

Oscillation and non-oscillation criteria for (q) are given in [2], [7]. These criteria offer a unified view of the Kneser theorems and made it possible to determine the number of zero points of (q) on a given interval.

The problem of coincidence of the basic central dispersions of the first and second kinds for the oscillatory equation (q) was solved in [3]. The notion of dispersion was introduced by O. Borůvka (cf. his monograph *Linear Differential Transformations of the Second Order*, The English Univ. Press, London 1971).

The solution of Abel's functional equation $F[\varphi(t)] - F(t) = 1$, where φ is the basic central dispersion of the first kind of the oscillatory equation (q), was found in [4] and was considered in various contexts also in [1], [3], [6], [8].

The theory of orthogonal weighted functions was developed and the Fourier

method was applied to the partial differential equation

$$p(x)\left[\frac{\partial^2 u}{\partial t^2} - Q(t)\,u\right] = q(t)\left[\frac{\partial^2 u}{\partial x^2} - P(x)\,u\right]$$

with continuous (generally non-periodic) coefficients.

The theory of transformation of solutions of (q) was used to study the self-adjoint linear differential equations of the third order [6].

In [11], starting from the classical theory of phases and dispersions due to O. Borůvka, Laitoch studied certain nonlinear differential equations of the third order of Kummer's type.

Further results on zero points of the equation

$$y'' - q(t)\,y = r(t)$$

and (q) are given in [12] on the basis of the notion of nodes of the first and second kinds.

The subject of [10] is completely different. Here the author introduces the so-called linear sequences, which form a linear space over the reals. Further, he introduces the so called special linear sequences (which actually represent all solutions of a certain homogeneous difference equation with constant coefficients) and considers injective linear mappings of the family of special sequences into itself. It is shown that the geometrical sequences are eigenfunctions of this mapping and that they form a basis of the linear space of special linear sequences.

The scientific work of Professor Laitoch can be characterized on one hand by original approaches to the solution of problems from the qualitative theory of linear differential equations, and on the other by opening new prospects and possibilities of research. That is why numerous mathematicians, particularly of the younger generation, further develop Laitoch's ideas.

In addition to his scientific papers, Professor Laitoch is author of lecture notes and various popularizing essays.

The six decades have detracted nothing from Prof. Laitoch's energy, enthusiasm and devotion, nor from his friendly and tactful approach to his colaborators and students.

Professor Laitoch's friends, colleagues and students, together with all the Czechoslovak mathematical community, wish him good health, personal happiness and new successes in research and education.

LIST OF PUBLICATIONS OF PROFESSOR M. LAITOCH

[1] Расширение метода Флоке для определения вида фундаментальной системы решений дифференциального уравнения второго порядка $y'' = Q(x)\,y$. Чех. мат. журнал т. 5 (*80*), 1955, 164—174.

[2] Sur une théorie des critères comparatifs sur l'oscillation des intégrales de l'équation dif-

férentialle $u'' = P(x)\,u$. Spisy vydávané přírodovědeckou fakultou MU v Brně č. 365, 1955, 1—12.
[3] Совпадение центральных дисперсий 1-го и 2-го рода соотвествующих дифференциальному уравнению второго порядка $y'' = Q(x)\,y$. Чех. мат. журнал т. *6* (*81*), 1956, 365—380.
[4] On certain solutions of the functional equation $F[\varphi(x)] - F(t) = 1$. (Czech). Časopis Pěst. Mat. *81*, 1956, 420—425.
[5] On orthogonality of solutions of second order linear differential equation $y'' = q(x)\,y$. (Czech). Sborník VŠP v Olomouci, přírodní vědy VI, 3, 1959, 7—22.
[6] О преобразованиях решений линейных дифференциальных уравнений. Чех. мат. журнал т. *10* (*85*), 1960, 258—270.
[7] Über die Nullstellenanzahl der Lösungen der Differentialgleichung $y'' = Q(t)\,y$. Acta Univ. Palackianae Olomucensis FRN *3*, 1960, 5—9.
[8] К проблеме ортогональных систем функций с весом. Acta Univ. Palackianae Olomucensis FRN *3*, 1960, 11—28.
[9] L'équation associée dans la théorie des transformations des équations différentielles du second ordre. Acta Univ. Palackianae Olomucensis FRN *12*, 1963, 42—62.
[10] Linear sequences. (Czech). Acta Univ. Palackianae Olomucensis FRN *27*, 1968, 51—67.
[11] Homogene lineare zu sich selbst begleitende Differentialgleichung zweiter Ordnung. Acta Univ. Palackianae Olomucensis FRN *33*, 1971, 61—72.
[12] A modification of the Sturm's theorem on separating zeros of solutions of a linear differential equation of the 2nd order. Acta Univ. Palackianae Olomucensis FRN *53*, 1977, 27—33.