News and Notices. Third Czechoslovak conference on differential equations and their applications EQUADIFF 3 in Brno

NEWS and NOTICES

THIRD CZECHOSLOVAK CONFERENCE ON DIFFERENTIAL EQUATIONS AND THEIR APPLICATIONS EQUADIFF 3 IN BRNO

Czechoslovak conference on differential equations and their applications EQUADIFF 3 was organized by the University of J. E. Purkyně in Brno and the Czechoslovak Academy of Sciences and held in Brno, August 28 — September 1, 1972. The conference was arranged by the Organizing Committee starting its activities in May 1971 and working till September 1972. The Committee consisted of the following members: M. GREGUŠ (Chairman), M. RÁB (Scientific Secretary), D. LETENSKÁ (Secretary), E. BARVÍNEK, O. BORŮVKA, J. BRILLA, P. BRUNOVSKÝ, Z. HUSTÝ, J. KURZWEIL, M. LAITOCH, J. NEČAS, F. NEUMAN, M. PRÁGER, V. RADOCHOVÁ, S. ŠANTAVÁ, V. ŠEDA, J. VOSMANSKÝ, M. ZLÁMAL.

The conference was attended by 154 mathematicians from Czechoslovakia and 109 from the following countries: Austria (1), Belgium (6), Bulgaria (4), Canada (8), Egypt (2), Federal Republic of Germany (11), Finland (1), France (1), German Democratic Republic (16), Hungary (7), Italy (8), Netherlands (1), Poland (9), Roumania (4), Soviet Union (7), Sweden (5), Switzerland (2), United Kingdom (5), U.S.A. (9), Yugoslavia (2).

The scientific program of the conference included 8 one-hour survey lectures, 31 half-an-hour lectures and 119 communications. The sessions took place in three sections:

1. Ordinary differential equations.
2. Partial differential equations.
3. Numerical methods and applications.

The following one-hour survey lectures were delivered at the plenary sessions:

BORŮVKA O., Czechoslovakia: Sur la structure algébrique de la théorie des transformations différentielles linéaires du deuxième ordre.

BRAMBLE J. H., U.S.A.: On the approximation of eigenvalues of non-selfadjoint elliptic operators.

DESCLOUX J., Switzerland: Finite elements and numerical stability.

EVERITT W. N., United Kingdom: Some Dirichlet integral results for ordinary differential expressions.

JANENKO N. N., Soviet Union: On some problems of the theory of the difference schemes.

MAGENES E., Italy: Problèmes de frontière libre liés à certaines questions d'hydraulique.

SOVA M., Czechoslovakia: Équations semilinéaires abstraites.

VOLKOV J. A., Soviet Union: On two-sided difference methods for ordinary differential equations.
    One half-an-hour lecture was delivered at the plenary session instead of the lecture of L. Marcus who was not able to attend the conference, namely:

OLECH C., Poland: On asymptotic stability of a plane system.

The afternoons were devoted to the sessions of sections and subsections, the following half-an-hour lectures being delivered in the sections:

1. Ordinary differential equations:

ARSCOTT F. M., United Kingdom: Orthogonal bipolynomials.

BRUNOVSKÝ P., Czechoslovakia: Generic one-parameter flows on the torus and bifurcations of periodic orbits.

CORDUNEANU C., Roumania: Some differential equations with delay.

GREGUŠ M., Czechoslovakia: Three-point boundary value problem in a differential equation of the third order.

HUSTÝ Z., Czechoslovakia: Algebraische Theorie der Transformation der linearen Differential-gleichung.

NEUMAN F., Czechoslovakia: Oscillation in linear differential equations.

RÁB M., Czechoslovakia: Periodic solutions of a nonlinear equation.

SELL G., U.S.A.: On the qualitative theory of Volterra integral equations.

ŠEDA V., Czechoslovakia: On a nonlinear boundary value problem of higher order.

ŠVEC M., Czechoslovakia: Quelques notes sur l'équivalence asymptotique.

VORÁČEK J., Czechoslovakia: Sur les propriétés des solutions de quelques équations différentielles ordinaires non linéaires du troisième ordre (*delivered by A. A. Mahgoub*).

2. Partial differential equations:

FUČÍK S., Czechoslovakia: Non-linear spectral analysis.

HEDSTROM G., Sweden: The accuracy of Dafermos' method for nonlinear hyperbolic equations.

HELLWIG G., F.R.G.: Regularitätsfragen bei der Spektraltheorie elliptischer Differentialopera-toren.

KRÁL J., Czechoslovakia: Regularity of potentials.

LOVICAR V., Czechoslovakia: Almost periodic solutions of partial differential equations.

MASLENNIKOVA V. N., Soviet Union: The asymptotic behavior at the large time of solutions of some mathematical physics problems.

NEČAS J., Czechoslovakia: Spectral analysis of nonlinear operators.

VEJVODA O., Czechoslovakia: Periodic solutions of partial differential equations of evolution.

VRKOČ I., Czechoslovakia: An optimal control problem for Itô stochastic equations.

3. Numerical methods and applications.

BRILLA J., Czechoslovakia: Variational methods in mathematical theory of viscoelasticity.

HLAVÁČEK I., Czechoslovakia: On finite element procedures of high order accuracy for parabolic equations.

MAREK I., Czechoslovakia: Some problems of mathematical physics and their numerical solutions

NIETSCHE J., F.R.G.: Interior error estimates of projection methods.

POPOVICIU T., Roumania: Application de la théorie des fonctions convexes d'ordre supérieur à l'étude de certains procédés d'intégration numérique des équations différentielles.

VITÁSEK E., Czechoslovakia: Some new methods for numerical solution of initial-value problems (*delivered by M. Práger*).

WHITEMAN J. R., United Kingdom: Finite element methods for elliptic boundary value problems containing singularities.

ZLÁMAL M., Czechoslovakia: Curved elements in the finite element method.

ŽENÍŠEK A., Czechoslovakia: Hermite interpolation on simplexes in the finite element method.

The lectures included the results which had been obtained in the respective branches during the last years as well as some unpublished results suggesting the directions of further research in the corresponding fields. The complete text of these lectures will be included in the Proceedings of the conference which will appear at the beginning of the year 1973 as the first volume of the new series of publications of the University of J. E. Purkyně in Brno "Monographia".

Owing to the big number of communications, each section was further divided into two parallel subsections. In the section of ordinary differential equations, 43 communications were delivered; in the section of partial differential equations, 42 communications; in the section of numerical methods and applications, 34 communications.

The scientific contribution of the conference as well as its social program and the general organization was highly appreciated in the letters sent by Professor W. N. EVERITT to the President of the Czechoslovak Academy of Sciences, Academician J. KOŽEŠNÍK and to the President of the University of J. E. Purkyně Professor J. VAŠKŮ and by Professor E. MAGENES to the President of the Czechoslovak Academy of Sciences, Academician J. KOŽEŠNÍK.

The organization of the conference was estimated as perfect by all the participants. They appreciated particulary the punctuality in keeping the daily schedule and the instant and continuous information concerning all conference activities.

The social program for the participants was carefully prepared. The first night of the conference, almost all participants attended the opening party which took place in the Castle Wine-cellar. On Thuesday night there was a gala concert of the old Czech music at the castle Slavkov (Austerlitz) which was extraordinarily successful. On Wednesday afternoon most participants joined one of the four bus tours (Moravian Karst, Buchlov, Lednice, Telč). The farewell party took place at Queen Eliška Wine-cellar. The foreign participants were accompanied by 26 persons and children who were offered a special program.

The conference passed in a remarkably friendly atmosphere and enabled all the foreign guests to see the life and work of the people of our republic, its natural beauties and to enjoy the friendly hospitality of its people. The high scientific, social and organizational level of the conference form a good ground to believe that the conference EQUADIFF 4 which is to be held in Prague in 1977 will continue this tradition.

Miloš Ráb, Brno

BOOK REVIEWS

Petr Vopěnka, Petr Hájek: THE THEORY OF SEMISETS. Academia, Prague 1972, 400 pp., 100,— Kčs.

The reviewed book deals with the theory of semisets which is a generalization of the theory of sets. The authors set themselves two aims: on the one hand, to sum up some classical results of the set theory and, on the other hand, to establish the theory of semisets. The classical results presented here include in particular the theory of ordinal and cardinal numbers, the theory of complete Boolean algebras, Gödel's constructive model (which among other makes it possible