4th SYMPOSIUM ON MATHEMATICAL ANALYSIS AND ITS APPLICATIONS

Aranđelovac, May 26–30, 1997

Following traditions of three symposia on Complex analysis held in Aranđelovac '84, Budva '86 and Herceg-Novi '88[1], and under the supervision of the Union of Mathematical Societies of Yugoslavia, the Faculty of Mathematics, University of Belgrade organized the **Fourth Symposium on Mathematical Analysis and its Applications** in the resort of Aranđelovac, 45 miles from Belgrade, from Monday, May 26, through to Friday, May 30, 1997.

The organizing and programme committee consisted of *Z. Kadelburg* (chairman), *D. Jocić* (secretary), *V. Dragović, O. Hadžić, J. Knežević-Miljanović, M. Mateljević, V. Mićić, M. Obradović, Ž. Pavićević, M. Pavlović, S. Pilipović, S. Radenović, V. Rakočević, R. Šćepanović.*

The scientific program consisted of invited plenary lectures and research talks. The invited lectures were delivered by *Patrick Achern* (Madison, U.S.A.)*, Tsuyoshi Ando* (Sapporo, Japan)*, Georgii A. Omel'yanov* (Moscow, Russia)*, Edgar Reich,* (Minnneapolis, U.S.A.) and *Antonio Duran* (Sevilla, Spain). The rest of the work of the Symposium was devided into three sections: *Functional Analysis and Operator Theory, Real and Complex Analysis, Differential Equations and Application of Mathematical Analysis.* There were all together 90 lectures held in five days.

The booklets with the Programme and with all the abstracts were available during the Symposium. The present issue of "Matematički vesnik" is devoted to the selected papers from the Symposium which were submitted by the authors and which passed the usual refereeing process.

The financial support for the organization and printing the Symposium materials was given by Ministarstvo za nauku i tehnologiju Republike Srbije and Savezno ministarstvo za razvoj, nauku i životnu sredinu.

We give the full list of lectures delivered during the Symposium. By an asterix are denoted those which are included in the present issue (possibly with an alternate title).

Plenary Lectures. *Tsuyoshi Ando*: Schwarz norm for operators; *Patrick Ahern*: The group of automorphisms of $\mathbf{C}^n$; *Edgar Reich*: Extremal quasiconformal mappings—a historical survey; *Antonio Duran*: Orthogonal polynomials, L^2-spaces

[1]For the Proccedings of these Symposia see Matematički Vesnik **37**, 1 (1985); **38**, 4 (1986) and **40**, 3–4 (1988)

and entire functions; *Georgii A. Omel'yanov*: Stable and unstable processes in a binary alloy*.

Section **Functional Analysis and Operator Theory**. *Danko Jocić*: Norm inequality for the class of self-adjoint absolute value generalized derivations*; *Milorad Mijatović and Stevan Pilipović*: α-times integrated semigroups $(\alpha \in \mathbf{R}^-)^*$; *Ratko Kravarušić, Milorad Mijatović and Stevan Pilipović*: Integrated semigroups of unbounded linear operators in Banach spaces; *Vladimir Rakočević*: On the continuity of Moore-Penrose and Drazin inverses*; *Slaviša Đorđević*: Quasihyponormal operators and the continuity of the essential spectrum*; *Nikolai Vasilevski*: C^*-algebras generated by orthogonal projections and their applications; *Dragan S. Đorđević and Predrag S. Stanimirović*: Representation of generalized inverses; *Dragan S. Đorđević*: Operators obeying a-Weyl's theorem; *Snežana Živković*: Semi-Fredholm operators and perturbation functions; *Milutin Dostanić*: Spectral properties of an operator of Riesz potential type; *Aleksandar S. Pechentsov*: Regularized traces of ordinary differential operators; *Milan Martinović and Milenko Pikula*: The regularized trace of differential operators containing a functional; *Milenko Pikula and Milan Martinović*: The inverse eigenvalue problem for differential-functional operators; *Milenko Pikula and Tihomir Marjanović*: The construction of the potential from the class $L_1[0,\pi]$ for operators with constant delay; *Rade Lazović*: A construction of Sturm-Liouville operator $L(q,\alpha,H_j)$, $(0<\alpha<1,\ H_j \neq 0,\ H_j \neq \infty)$ by sequences of eigenvalues; *Eberhard Malkowsky*: Recent results in the theory of matrix transformations in sequence spaces*; *Ivan Jovanović and Vladimir Rakočević*: Measures of noncompactness of multipliers of mixed-norm sequence spaces*; *Nina A. Yerzakova*: On operators in Bochner space*; *Igor Mihailovič Lavrentiev and Radoje Šćepanović*: On the solvability of nonlinear equations in Banach space; *Ljiljana Gajić*: On optimization problems in TVS; *Olga Hadžić*: A best approximation theorem for multivalued mapping; *Bogoljub Stanković*: Asymptotic expansion of generalized functions and its applications; *Stevan Pilipović*: On the microlocal decomposition of tempered ultradistributions; *Stevan Pilipović and Mirjana Stojanović*: Quasiasymptotics and nonlinear problems in a frame of $\mathcal{G}$; *Arpad Takači*: On the wavelet theory; *Nenad Teofanov and Arpad Takači*: Wavelets and behaviour of distributions*; *Dušanka Perišić and Stevan Pilipović*: The spaces of tempered distributions, tempered ultradistributions and Fourier hyperfunctions, integral transforms; *Pavle M. Miličić*: On g-orthogonalities in quasi-inner product spaces; *Ivan Aranđelović*: A new extension of Kakutani's fixed point theorem; *Ivan Aranđelović and Marina M. Milovanović-Aranđelović*: Hausdorff's measure of noncompactness on separable metric linear spaces; *Stojan Radenović and Zoran Kadelburg*: Weak topology in locally convex spaces with a fundamental sequence of bounded sets*.

Section **Real and Complex Analysis**. *Miroljub Jevtić*: Analytic Besov space B^p on strictly pesudoconvex domain*; *Miloš Arsenović*: On p-Carleson measures on the unit ball; *Rauno Aulaskari*: $Q_p(R)$ on Riemann surfaces; *Vladimir Božin, Vladimir Marković and Miodrag Mateljević*: Unique extremality; *Miodrag Mateljević, Vladimir Božin and Vladimir Marković*: Extremals of Teichmüller functional and Dirichlet energy integral; *Vladimir Marković, Miodrag Mateljević and Vladimir Božin*: Unique extremality in Teichmüller space*; *Nikola Pandeski*: Uniform approximation by interpolating Blaschke products; *Aleksa Malčeski*: Approximation of a singular inner function by interpolating Blaschke product; *Ivan Anić, Miodrag Mateljević and Dragomir Šarić*: Extremal metrics and modulus; *Slavko Simić*: Slowly varying sequences and entire functions of finite order; *Žarko Pavićević*: Normal meromorphic function on groups of conformal automorphisms of the unit disk; *Žarko Pavićević and Jela Šušić*: Boundary behavior of subharmonic functions on the unit disk; *Žarko Pavićević, Romeo Meštrović and Novo Labudović*: The classes N^p $(1 < p < \infty)$ as generalized Hardy algebras; *Romeo Meštrović*: Interpolation theorems for the classes N^p $(1 < p < \infty)$; *Novo Labudović*: Strong analytic normality and Julia points; *Milutin Obradović*: Simple sufficient conditions for univalence*; *Dušan Georgijević*: Solvability condition for an interpolating problem of Loewner type; *Ljiljana Petković and Miodrag Petković*: Convergence of the centered form for analytic functions; *Slobodan Tričković and Snežana Ilić*: On zeros of a class of analytic functions; *G. V. Milovanović and P. M. Rajković*: Some classes of orthogonal polynomials on the radial rays in the complex plane; *L. N. Đorđević, Đ. R. Đorđević, Z. Ilić*: On a functional equality connecting Appell hypergeometric function F_3 and Gauss hypergeometric function F; *Milan Merkle*: Conditions for convexity of a derivative with some applications to the gamma function; *Mimica R. Milošević*: Radau quadratures on $(0, +\infty)$ for the weight function $x^\alpha/(1+x)^\beta$; *Momčilo Bjelica*: Asymptotic linearity of mean values; *Milan V. Jovanović and Vladimir Janković*: Counterexamples for the relation between convexity and nonexpansiveness*; *Milan V. Jovanović*: On two types of quasiconvexity; *Mioljub Nikić*: Some inequalities in the algebra $C(T)$.

Section **Differential Equations and Applications of Analysis**. *Aleksandar Ivić*: Integral transfroms of some number-theoretic error terms; *Đurđica Takači*: The factorization method in the field of Mikusinski operators; *Aleksandar Petojević*: Some equivalents of the Kurepa's left factorial hypothesis; *Julka Knežević-Miljanović*: An asymptotic analysis of differential equations; *Jelena Manojlović*: Asymptotic results for Emden-Fowler system of differential equations; *Ljubomir Protić and Miloš Čanak*: Application of the Shapkarev method to solving of some boundary value problems for linear second order complex differential equation; *Miloš Čanak and Ljubomir Protić*: Some contributions to the theory of polyanalytic differential and differnece equations; *Irina V. Astašova*: On estimates for solutions of the Emden-Fowler type equation with a complex coefficient; *Boško Jovanović and Branislav Popović*: Some convergence rate estimates for finite differences schemes*; *Dejan Bojović and Boško Jovanović*: Convergence of finite difference method for the heat equation—interpolation technique*; *Ljubica Lalović*: On the convergence of finite-difference scheme for the third boundary value problem for the eliptic equation; *Slobodan Dajović*: On convex approximations in optimal control problem; *Milojica Jaćimović*: Computation of fixed points of extremal mappings; *Nada I. Đuranović-Miličić*: A second order projection method for the linearly constrained nonlinear programming problems; *Izedin Krnić*: Optimality of the method for solving of one problem of minimization; *Zagorka Lozanov-Crvenković and Stevan Pilipović*: Colombeau generalized random processes; *Slobodanka S. Mitrović*: On canonical and weak canonical representation of stochastic processes; *Miljana Jovanović and Svetlana Janković*: The rate of convergence of solutions of perturbate stochastic hereditary differential equations; *Miroslav Ristić and Biljana Popović*: Second order autoregressive time series AREX(2); *Dušan M. Milošević*: Visualization of the Pólya operators; *Nakao Hayashi and Hitoshi Hirata*: On the elliptic-hyperbolic Davey-Stewartson system*; *Nebojša Lažetić*: The Fourier method for mixed boundary problems with Sturm-Liouville operator; *Vladimir Dragović*: Integrability of the Kovalevska gyrostat in the magnetic field*.

Belgrade, December 1997 *Zoran Kadelburg*