

**International Workshop on the Qualitative Theory of Differential Equations
QUALITDE – 2016**

Dedicated to the 100th birthday anniversary of Professor A. Bitsadze

December 24 – 26, 2016

Tbilisi, Georgia

*A. Razmadze Mathematical Institute of I. Javakhishvili Tbilisi State University
6 Tamarashvili Str., Room # 612, Tbilisi 0177, Georgia*

P r o g r a m

December 24, 2016

- 10:45 – 11:00** **Opening of the Workshop**
- 11:00 – 11:30** **T. Jangveladze** – Unique Solvability and Additive Averaged Rothe’s Type Scheme for One Nonlinear Multi-Dimensional Integro-Differential Parabolic Problem
- 11:30 – 12:00** **Z. Kiguradze** – Uniqueness of a Solution and Convergence of Finite Difference Scheme for One System of Nonlinear Integro-Differential Equations
- 12:00 – 12:30** **T. Tadumadze** – Effects of Several Delays Perturbations in the Variation Formulas of Solution for a Functional Differential Equation with the Discontinuous Initial Condition
- 12:30 – 13:00** **T. Shavadze** – Variation Formulas of Solution for One Class of Controlled Functional Differential Equation with Several Delays and the Continuous Initial Condition
- 13:00 – 13:30** **M. Ashordia** – On the Cauchy Problem for Linear Systems of Generalized Ordinary Differential Equations with Singularities
- 13:30 – 14:00** **N. Kekelia** – On Some Sufficient Conditions for the ξ -Exponential Asymptotical Stability in the Lyapunov Sense of Systems of Linear Impulsive Equations
- 14:00 – 14:30** **M. Ashordia , N. Kharshiladze** – On the Cauchy Problem for Linear Systems of Impulsive Equations with Singularities
- 14:30 – 15:00** **Coffee Break**
- 15:00 – 17:00** **Overview of the talks of participants in absentia**
- I. Astashova** – On Power-Law Asymptotic Behavior of Solutions to Weakly Superlinear Emden-Fowler Type Equations
- Ch. Corsato, C. De Coster, F. Obersnel, P. Omari, A. Soranzo** – The Dirichlet Problem for a Class of Anisotropic Mean Curvature Equations
- P. Drábek** – Oscillation and Nonoscillation Results for Half-Linear Equations with Deviated Argument

N. A. Izobov – Non-Lipschitz Lower Sigma-Exponents of Linear Differential Systems

E. K. Makarov – Some Properties of Minimal Malkin Estimates

M. Perestyuk, O. Kapustyan, I. Romaniuk – Global Attractor of Impulsive Parabolic System Without Uniqueness

I. Rachůnková – Existence and Asymptotic Properties of Kneser Solutions to Singular Differential Problems

I. N. Sergeev – The Plane Rotatability Indicators of a Differential System

S. Staněk – On Fractional Boundary Value Problems with Positive and Increasing Solutions

A. N. Stanzhytskyi, A. O. Tsukanova – On Existence, Uniqueness and Continuous Dependence from Initial Datum of Mild Solution for Neutral Stochastic Differential Equation of Reaction-Diffusion Type in Hilbert Space

December 25, 2016

11:00 – 11:30 **S. Kharibegashvili** – On the Solvability of One Multidimensional Boundary Value Problem for a Semilinear Hyperbolic Equation

11:30 – 12:00 **O. Jokhadze, S. Kharibegashvili** – On the Solvability of the Mixed Problem for the Semilinear Wave Equation with a Nonlinear Boundary Condition

12:00 – 12:30 **G. Berikelashvili** – Fully Linearized Difference Scheme for Generalized Rosenau Equation

12:30 – 13:00 **N. Partsvania** – The Cauchy-Nicoletti Weighted Problem for Nonlinear Singular Functional Differential Systems

13:00 – 13:30 **I. Kiguradze** – On Proper Oscillatory Solutions of Higher Order Emden-Fowler Type Differential Systems

13:30 – 14:00 **Coffee Break**

14:00 – 16:00 **Overview of the talks of participants in absentia**

G. Agranovich, E. Litsyn, A. Slavova – Stabilization of Integro-Differential CNN Model Arising in Nano-Structures

B. Ahmad, R. P. Agarwal, S. K. Ntouyas – Recent Development of Boundary Value Problems of q -Difference and Fractional q -Difference Equations and Inclusions

E. Bravyi – On a Four-Point Boundary Value Problem for Second Order Linear Functional Differential Equations

P. Feketa, Yu. Perestyuk – Invariant Tori and Dichotomy of Linear Extension of Dynamical Systems

R. Hakl, J. Vacková – Bounded Solutions to Systems of Nonlinear Functional Differential Equations

J. Jaroš, T. Kusano, T. Tanigawa – Structure and Asymptotic Behavior of

Nonoscillatory Solutions of First-order Cyclic Functional Differential Systems

R. I. Kadiiev, A. Ponosov – Linear Stochastic Functional Differential Equations: Stability and N. V. Azbelev's W -Method

T. Kiguradze, N. Al-Jaber – Multi Dimensional Boundary Value Problems for Linear Hyperbolic Equations of Higher Order

T. Kiguradze, R. Ben-Rabha – On Well-Posed Boundary Value Problems for Higher Order Nonlinear Hyperbolic Equations with Two Independent Variables

A. Lomtadze, J. Šremr – On Non-Negative Periodic Solutions of Second-Order Differential Equations with Mixed Sub-Linear and Super-Linear Non-Linearities

V. P. Maksimov – An Estimate for Solutions to a Uniformly Charged Functional Differential Equation with Full Memory

Z. Opluštil – Non-Oscillation Criteria for Two-Dimensional System of Nonlinear Ordinary Differential Equations

A. Rontó, M. Rontó, J. Varha – Investigation of Carathéodory Functional Boundary Value Problems by Division into Subintervals

December 26, 2016

10:00 – 12:00

Overview of the talks of participants in absentia

E. A. Barabanov, A. V. Konyukh – Exact Extreme Bounds of Mobility of the Lower and the Upper Bohl Exponents of the Linear Differential System Under Small Perturbations of its Coefficient Matrix

E. A. Barabanov, A. S. Vaidzelevich – On the Baire Classes of the Sergeev Lower Frequency of Zeros, Signs, and Roots of Linear Differential Equations

E. B. Bekriaeva – On the Property of Separateness of the Angle Between Stable and Unstable Lineals of Solutions of Exponentially Dichotomous and Weak Exponentially Dichotomous Systems

M. S. Belokursky, A. K. Demenchuk – Periodic Reflecting Function of Linear Differential System with Incommensurable Periods of Homogeneous and Nonhomogeneous Parts

V. Bykov – On Baire Classes of Lyapunov Invariants

K. Dulina and T. Korchemkina – On Asymptotic Behavior of Solutions to Second-Order Regular and Singular Emden-Fowler Type Differential Equations with Negative Potential

S. Ezhak and M. Telnova – On Estimates for the First Eigenvalue of Some Sturm-Liouville Problems with Dirichlet Boundary Conditions and a Weighted Integral Condition

M. V. Karpuk – Lyapunov Exponents of Parametric Families of Linear Differential Systems

V. Krakhotko, G. Razmyslovich – Controllability Linear Differential Systems with Many Inputs by Means of Differential-Algebraic Regulator

A. S. Platonov, S. G. Krasovskii – An m -Dimensional Linear Pfaff Equation with Arbitrary Characteristic Sets

V. V. Rogachev – On Existence of Solutions with Prescribed Number of Zeros to Third Order Emden-Fowler Equations with Singular Nonlinearity and Variable Coefficient

S. Zabolotskiy – On Exponential Equivalence of Solutions to Nonlinear Differential Equations

12:00 – 12:30 **Coffee Break**

12:30 – 14:30 **Overview of the talks of participants in absentia**

F. Asrorov – Green-Samoilenko Function and Existence of Integral Sets of Linear Extensions of Differential Equations with Impulses

M. O. Bilozerova – Asymptotic Behavior of Some Special Classes of Solutions of Essentially Nonlinear n -th Order Differential Equations

O. O. Chepok – The Asymptotic Properties of Slowly Varying Solutions of Second Order Differential Equations with Regularly and Rapidly Varying Nonlinearities

V. M. Evtukhov, A. A. Stekhun – Asymptotic Behaviour of Solutions of One Class of Third-Order Ordinary Differential Equations

G. A. Gerzhanovskaya – Asymptotic Properties of Special Classes of Solutions of Second-Order Differential Equations with Nonlinearities in Some Sense Near to Regularly Varying

A. O. Ivashkevych, T. V. Kovalchuk – Existence of Optimal Control on an Infinitive Interval for Systems of Differential Equations with Pulses at Non-Fixed Times

K. S. Korepanova – Asymptotic Behaviour of Solutions of n -Order Differential Equations with Regularly Varying Nonlinearities

L. I. Kusik – On Asymptotic Behavior of Singular $P_{t_*}(Y_0, Y_1, \lambda_0)$ -Solutions of Second-Order Differential Equations

V. V. Mogylova, O. E. Lavrova – Approximation of the Optimal Control Problem on an Interval with a Family of Optimization Problems on Time Scales

N. V. Sharay, V. N. Shinkarenko – Asymptotic Behavior of Solutions of Third Order Nonlinear Differential Equations Close to Linear Ones

S. A. Shchogolev, V. V. Jashitova – On Some Special Classes of Solutions of the Countable Block-Diagonal Differential System