

SECOND ANNOUNCEMENT

of the
Second International Conference

MODERN PROBLEMS IN APPLIED MATHEMATICS

Dedicated to the
95th Anniversary of the I. Javakhishvili Tbilisi State University (TSU) &
45th Anniversary of the I. Vekua Institute of Applied Mathematics (VIAM TSU)

The Conference will be held in TSU on September, 4-7, 2013

ORGANIZERS

I. Javakhishvili Tbilisi State University (TSU)
I. Vekua Institute of Applied Mathematics of TSU
Department of Mathematics of the Faculty of Exact and Natural Sciences of TSU
Tbilisi International Centre of Mathematics and Informatics (TICMI)
Georgian National Committee of Theoretical and Applied Mechanics

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Topics of the Conference:

- Mathematical problems of mechanics of continua and related problems of analysis
- Mathematical modeling and numerical mathematics
- Discrete mathematics and theory of algorithms
- Probability theory and mathematical statistics

FORMAT AND STRUCTURE

Each presentation will be scheduled for 35 minutes including discussion time. Generous time will be scheduled at refreshment breaks and social events, in order to maximize the scientific interaction and intellectual exchange between participants. The electronic version of the abstracts of all accepted presentations will be available on the web-page:

<http://www.viam.science.tsu.ge/conferences/TSU95&VIAM45/index.htm>.

Proceedings will be published later in either Proceedings of I.Vekua Institute of Applied Mathematics of TSU or Lecture Notes of TICMI.

TENTATIVE TALKS

Umit Aksoy (Turkey). Neumann-type boundary value problem for second order partial differential equations on the unit ball in Clifford analysis

Lela Alkhazishvili (Georgia). About genetic algorithm approach for one dynamic model of communication market

Holm Altenbach (Germany). On some non-standard problems in the theory of thin-walled structures

Jemal Antidze (Georgia). Programming means for modeling of natural and formal languages

Nikoloz Avazashvili (Georgia). On the main boundary value problems of the theory of elasticity for some non-homogeneous plane bodies

Petre Babilua, E. Nadaraya, G. Sokhadze (Georgia). Some limit properties of maximal likelihood estimation in a Hilbert space

Heinrich Begehr, T. Vaitekhovich (Germany). Green functions for irregular plane domains

Lamara Bitsadze (Georgia). On some solutions of equations of the 2D dynamical theory of thermoelasticity with microtemperatures

Ramaz Bochorishvili, Omar Purtukhia (Georgia). Mathematics in TSU since foundation

Pietro Caramuta, A. Cialdea (Italy). An application of theory of self-conjugate differential forms to the Dirichlet problem for Cimmino system

Ahmet Okey Celebi, U. Aksoy (Turkey). On a boundary value problem for nonlinear elliptic complex partial differential equations in the upper half plane

Gela Chankvetadze, G. Mikanadze (Georgia). Implementation of an algorithm for classification of unranked propositional logic formulas

Khatuna Chargazia, O. Kharshiladze (Georgia), **G. Zimbardo** (Italy). Theoretical and experimental detection of nonlinear electromagnetic waves as the elements of turbulence in the geospace environment

Alberto Cialdea (Italy). L^p -dissipativity of the Lamé' operator

Natalia Chinchaladze (Georgia). Hierarchical models for biofilms occupying thin prismatic domains with variable thickness

Teimuraz Davitashvili, D. Gordeziani, G. Geladze, G. Gubelidze, A. Papukashvili, M. Sharikadze (Georgia). Assessment of risk factors of emergency cases at Georgian section of transport corridor Europe-Caucasus-Asia by means of mathematical modeling

Besarion Dochviri, P. Babilua, O. Purtukhia, G. Sokhadze (Georgia). On the problem of optimal stopping with incomplete data

Emanuela Dolce, A. Cialdea, A. Malaspina (Italy). On the potential theory in Cosserat elasticity

Pridon Dvalishvili, B. Midodashvili (Georgia). On one method of constructing optimal mixed strategies in fuzzy antagonistic matrix games

Giovanni Formica, M. Lembo, P. Podio-Guidugli (Italy). Modeling laminated plates

Akaki Gabelaia (Georgia). Samuelson's model realization problem for Georgia

Giorgi Geladze (Georgia). Numerical simulation of some complex mesometeorological processes

Olga Gil-Medrano (Spain). Minimal vector fields on Riemannian manifolds

Grigor Giorgadze (Georgia). Regular systems of ODE on Riemann surfaces and Reimann-Hilbert boundary value problem

Omar Glonti, O. Purtukhia (Georgia). Clark representations and independence and dependence of Brownian functionals

Leri Gogoladze, R. Meskhia (Georgia). Absolute convergence of multiple Fourier series

David Gordeziani (Georgia). On solution of one nonlocal boundary value contact problem

David Gordeziani (Georgia). Additive difference schemes for solution of problems of thermo-elasticity in micro temperature field

Nika Gorgodze (Georgia). Well-posedness of the Cauchy problem for one class of neutral functional differential equation taking into account delay perturbation

Bakur Gulua (Georgia). On construction of approximate solutions of equations of the non-shallow spherical shell for the geometrically nonlinear theory

Ardeshir Guran (Canada), **T. Frantik** (Czech Republic). Stability, bifurcation and post-critical behavior of a flexible missile under an end thrust

Zurab Isakadze, B. Gvaberidze (Georgia). On some bicriterial problems of the discrete optimization

George Jaiani (Georgia). I. Vekua Institute of Applied Mathematics of TSU - 45

- Temur Jangveladze** (Georgia). Difference scheme of variable directions and averaged model of sum approximation for one nonlinear system
- Valerian Jikia** (Georgia). Dolbeaut's lemma for the functions of the class $L_p^{loc}(C)$, $p > 2$
- Kartlos Kachiashvili** (Georgia). The results of investigation of statistical hypotheses testing methods
- Irakli Kardava** (Georgia). Morphological analysis of Georgian words using formal grammar
- Sergo Kharibegashvili, O. Jokhadze** (Georgia). On one boundary value problem for a wave equation with power nonlinearity
- Gaioz Khatiashvili** (Georgia). The solution of three auxiliary problems and Saint-Venant's problems for three-layer confocal elliptic tube for elastic materials with different Poisson ratio
- Nino Khatiashvili, K. Pirumova, V. Akhobadze** (Georgia). On the mathematical model of artificial crystals growth
- Nugzar Khvedelidze** (Georgia). On the existence of bounded and vanishing at infinity solutions of linear ordinary differential equations of third order
- Zurab Kiguradze** (Georgia). Semi-discrete scheme for one system of nonlinear integro-differential equations
- Roman Koplataidze** (Georgia). Oscillation criteria for differential equations with several delays
- Dietmar Kröner** (Germany). Two phase flows with phase transitions
- Diana Kvaratskhelia, D. Demetrashvili** (Georgia). Numerical investigation of some peculiarities of hydrological mode in the upper layer of the Black Sea for spring season
- Vakhtang Kvaratskhelia, V. Tarieladze, N. Vakhania** (Georgia). On exponential integrability of subgaussian series
- Flavia Lanzara** (Italy). Fast cubature of volume potentials over rectangular domains by approximate approximations
- Marzio Lembo, G. Formica, P. Podio-Guidugli** (Italy). Second-order internal constraints in theories of shear-deformable beams and plates
- Badri Mamporia** (Georgia). New approach in development of stochastic differential equations in Banach space
- Nino Manjavidze, G. Akhalaia** (Georgia). Functional classes of the solutions of elliptic systems on the plane
- Michael Mania, R. Tevzadze** (Georgia). On the properties of the dynamic value functions in the problem of optimal investing in incomplete markets
- Tengiz Meunargia** (Georgia). On one method of construction the nonlinear theory of non-shallow shells
- Elizbar Nadaraya, G. Sokhadze, A. Tkeshelashvili** (Georgia). On functionals from Gasser-Müller estimators
- David Natroshvili, O. Chkadua, T. Buchukuri** (Georgia). Regularity of solutions to mixed interface crack problems
- Nana Odishelidze, K. Kutkhashvili** (Georgia). On multi-criteria algorithms and the analysis for some discrete optimization problems
- Gogi Pantsulaia** (Georgia). On a certain problem of H. Shi in Solovay's model

Archil Papukashvili, D. Gordeziani, T. Davitashvili, M. Sharikadze (Georgia). On some methods of approximate solution of antiplane problems of elasticity theory for composite bodies weakened by cracks

Ekaterina Pesetskaya, D. Kapanadze (Georgia), **G. Mishuris** (UK). On improved algorithm for analytical solution of the heat conduction problem in periodic 2D composites

Konstantine Pkhakadze, G. Chichua, M. Chikvinidze, A. Maskharashvili (Georgia). The technological alphabet of the Georgian language - aims, methods and results

Paolo Emilio Ricci, D. Babusci, G. Dattoli, M. Quattromini (Italy). Extensions of the Dirac factorization and applications

Jemal Rogava, N. Dikhaminjia, M. Tsiklauri (Georgia). Operator splitting for quasi-linear evolution equation with variable operator

Lali Tibua, Kh. Rukhaia (Georgia). One algorithmic process for deciding validity of some unranked tauSR- logic

Bert-Wolfgang Schulze (Germany). Operators on manifolds with singularities of higher order

Malkhaz Shashiashvili, K. Shashiashvili, J. Rogava (Georgia). From the uniform approximation of a solution of the PDE to the L_2 -approximation of the gradient of the solution

Sofia Shengelia, R. Megrelishvili (Georgia). The fractal structures and their properties

George Sokhadze, Z. Zerakidze (Georgia). On statistical estimation in infinite dimensional spaces

Kosta Svanadze (Georgia). Effective solution of the basic mixed boundary value problem of statics of the theory of elastic mixture in a circular domain

Maia Svanadze (Georgia). Boundary value problems of the linear theory of viscoelasticity for Kelvin-Voigt materials with voids

Tamaz Tadumadze (Georgia). Variation formulas of solution for a class of neutral functional differential equation taking into account delay function perturbation and the continuous initial condition

Liparit Tepoyan (Georgia). Nonself-adjoint degenerate differential-operator equations of higher order

Vakhtang Tsagareishvili, L. Gogoladze (Georgia). On partial sums of Fourier series of functions of boundary variation

Ivane Tsagareli (Georgia). The solutions of dynamical problems for elastic bodies with microstructures

Varden (Badri) Tsutskiridze, L. Jikidze (Georgia). Some issues of conducting fluid unsteady flows in a circular tube

Duglas Ugulava, D. Zarnadze (Georgia). A linear generalized central spline algorithm of computerized tomography

Tamaz Vashakmadze (Georgia). On computation modeling and numerical mechanics of solids

Ana Vasilic (United Arab Emirates). Multiscale acoustic modeling of porous media

Mamuli Zakradze, N. Kobliashvili (Georgia). On solving the Dirichlet generalized problem for a harmonic function in the case of an infinite plane with holes

Natela Zirakashvili, N. Khomasuridze, R. Janjgava, M. Narmania (Georgia). Solution and analysis of classical and non-classical boundary value contact problems of thermoelasticity for a rectangular parallelepiped consisting of elastic contractible and non-contractible layers and a corresponding program

Banquet

Banquet will be organized on September 5, 8-10 pm
Fee: €25

Excursion for Participants

Excursion will be organized on September 6
Fee: €50

The tour will start in Tbilisi at 9 am. You will go to Kakheti through Tsivi-Gombori breathtaking mountainous road. On the way the first stop will be at the ruins of Ujarma city-citadel (III-XVII cc. AD) located on the top of the hill with beautiful views over the Iori River Gorge.



At about 11:30 you will pass the historical and modern Administrative Centre of Katheti Province – Telavi – one of the oldest cities of Georgia and go straight to the direction of Kvareli district. On the way you will cross the famous Alazani Valley located between Gombori and the Caucasion Mountains along the River Alazani and visit the Gremi Monastery, a distinguished sample of Georgian cultural heritage (XVI c).



At about 13:30 you will have an excursion and wine-tasting in a very unique Wine Tunnel (hewn under the rock) belonging to the winery “Khareba” and have an opportunity to buy some bottles of wine in the winery shop.



Soon after you will have lunch at the famous Kvareli Lake Resort restaurant on the verandah over the lake surrounded by the Caucasion Mountains.



After lunch you will visit Alexandre Chavchavadze (XIX c. famous Georgian poet and public man) home-museum surrounded by a wonderful dendro park in the Village of Tsinandali near Telavi.



At the end of the tour (at 18:00) you will have dinner in Chateau Mere (one of the most fascinating places in Kakheti) accompanied with the wines produced in the Chateau winery.



Late in the evening (at about 20:00) you will go back to Tbilisi with unforgettable impressions about the day.

The Banquet and excursion in Kakheti fees could be paid by bank transfer to the following Bank Account:

Intermediary Bank: Commerzbank, Frankfurt, Germany; SWIFT: COBADEFF

Account With Institution: Bank of Georgia, SWIFT: BAGAGE22; 29a Gagarin Street, Tbilisi 0160, Georgia

Beneficiary: "GEORGIAN NATIONAL COMMITTEE OF THEORETICAL AND APPLIED MECHANICS" UNION

Account: GE26BG000000181896100

Remark: VIAM45, Social events fee of Name Surname

It could be also paid after arrival provided the organizers will be informed about it before July 31.

For More Information Please Contact to the Secretariat of the Conference

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