

Niko Muskhelishvili Institute of Computational Mathematics
Scientific Report

2015B

I. Scientific-Research Works Planned and Implemented in 2015 Funded by the State Budget of Georgia

I.2 Transitional (multi-year) research project.

#	Planned and Implemented work with the indication of scientific field and direction	Work Supervisor	Work Performers
1	Direction 1: Computational methods in the tasks of mathematical physics and engineering mechanics Mathematics; Computational mathematics.	J. Sanikidze	M. Zakradze, M. Mirianashvili, G. Khatiashvili, Z. Khukhunashvili, D. Kurdghelaidze, Z. Sanikidze, Ed. Abramidze, K. Kupatadze, A. Chaduneli, N. Koblishvili, N. Peikrishvili, El. Abramidze
#	Planned and Implemented work with the indication of scientific field and direction	Work Supervisor	Work Performers
2	Direction 2: Processing of mathematical models and strongly optimized algorithms of social-economic tasks. Mathematics; Mathematical Modeling	D. Ugulava	J. Giorgobiani, M. Nachkebia, T. Chantladze, Z. Kipshidze, D. Zarnadze, M. Nikoleishvili, T. Khurodze, G. Baghaturia, M. Menteshashvili, L. Khachapuridze, N. Metonidze
#	Name of the Task	Work Supervisor	Work Performers

2.1	Task 1. Mathematical Models for Some Microeconomic Problems of Market and Sectoral Economics	J. Giorgobiani	M. Nachkebia, M. Nikoleishvili, T. Khurodze, L. Khachapuridze, N. Metonidze
#	Name of the Task	Work Supervisor	Work Performers
2.2	Task 2. Constructing optimal and highly optimal (central) spline algorithms for uncertainty by the worse, average and probable settings	D. Zarnadze	D. Zarnadze, D. Ugulava
#	Name of the Task	Work Supervisor	Work Performers
2.3	Task 3. New type symmetric and asymmetric cryptosystems	D. Ugulava	T. Chantladze, Z. Kipshidze
#	Name of the Task	Work Supervisor	Work Performers
2.4	Task 4. Investigation of initial, characteristic and nonclassical problems for second order quasi linear hyperbolic equations with parabolic degeneracy.	M. Menteshashvili	G. Baghaturia, M. Menteshashvili

#	Planned and Implemented work with the indication of scientific field and direction	Work Supervisor	Work Performers
3	Direction 3: Stochastic analysis in algebraic structures. Applications in functional analysis, statistics and discrete optimization. Mathematics; Probability theory and mathematical statistics, functional analysis, discrete	V. Tarieladze	S. Chobaniani, A. Lashkhi, B. Mamporia, V. Kvaratskhelia, G. Giorgobiani, V. Berikashvili, P. Kobakhidze

	optimization		
#	Name of the Task	Work Supervisor	Work Performers
3.1	Task 1: Compact summary of vectors. Applications in functional analysis and scheduling tasks	S. Chobaniani	V. Tarieladze, B. Mamporia, V. Kvaratskhelia, G. Giorgobiani
#	Name of the Task	Work Supervisor	Work Performers
3.2	Task 2. The problem of inducing operators in solving the problem of stochastic differential equations in the Banach space	B. Mamporia	V. Tarieladze, G. Chelidze

#	Planned and Implemented work with the indication of scientific field and direction	Work Supervisor	Work Performers
4	Direction 4: Construction, processing and verification of relevant software algorithms for linear and quasi-linear differential equations and equations systems. Computational Mathematics, Mathematical Modeling, Informatics.	H. Meladze	H. Meladze, M. Pkhovlishvili, G. Silagadze, G. Tsertsvadze, G. Ghloni, I. Chogovadze M. Papiashvili