Niko Muskhelishvili Institute of Computational Mathematics
Scientific Report

2013B

Sector of Computational Methods

Scientific-Research Works Planned and Implemented in 2013 Funded by the State Budget of Georgia

#	Work	Work Supervisor	Work Performers
1	Proximity schemes for Cosh type and relevant singular integrals. Basic criteria for their use.	J. Sanikidze	J. Sanikidze, K. Kupatadze
#	Work	Work Supervisor	Work Performers
2	Some flat tasks for areas covered by confocal ellipses	G. Khatiashvili	G. Khatiashvili
#	Work	Work Supervisor	Work Performers
3	About some tasks of the elementary particle theory	D. Kurdghelaidze	D. Kurdghelaidze
#	Work	Work Supervisor	Work Performers
4	Generalized flat boundary tasks of theory of harmonious functions	M. Zakradze	M. Zakradze
#	Work	Work Supervisor	Work Performers
5	Some of the schemes of solving the approximation of the individualized differential equations	J. Sanikidze	J. Sanikidze, M. Mirianashvili
#	Work	Work Supervisor	Work Performers

#	Work	Work Supervisor	Work Performers
6	The use of rotational membranes theory in building constructions	E. Abramidze	E. Abramidze
#	Work	Work Supervisor	Work Performers
7	Algebraic properties of the autonomous differential equations and their use	Z. Khukhunashvili	Z. Khukhunashvili

Sector of Probability-Statistic Methods

Scientific-Research Works Planned and Implemented in 2013 Funded by the State Budget of Georgia

#	Work	Work Supervisor	Work Performers
1	Investigation of Gauss and structure of the relevant probable measures	V. Tarieladze	N. Vakhania, V. Kvaratskhelia
#	Work	Work Supervisor	Work Performers
2	Study of the structure of vector columns. Analyzing the problem of Ulyanov for the orthogonal columns of the Kolomorov hypothesis and the equally crowded Fourier series.	S. Chobaniani	V. Tarieladze, V. Kvaratskhelia, G. Giorgobiani, G. Chelidze
#	Work	Work Supervisor	Work Performers
3	Study of linear stochastic differential equations in Banach Space. Investigation of weakly independent random elements and Wyner's processes.	V. Tarieladze	V. Tarieladze, B. Mamporia, A. Shangua

Sector of Mathematical Modeling

Scientific-Research Works Planned and Implemented in 2013 Funded by the State Budget of Georgia

#	Work	Work Supervisor	Work Performers
1	Development of mathematical model of hydro power systems for one multilevel problem management system. Risk assessment and management models for farmers.	J. Giorgobiani	J. Giorgobiani, M. Nachkebia, M. Nikoleishvili
#	Work	Work Supervisor	Work Performers
2	Investigation of the correlation of environmental pollution and cardiovascular diseases based on new statistical material of monitoring	J. Giorgobiani	T. Khurodze
#	Work	Work Supervisor	Work Performers
3	Study of cryptographic tasks with the methods of elliptical curve theory.	D. Ugulava	N. Kandelaki, T. Chantladze, D. Ugulava
#	Work	Work Supervisor	Work Performers
4	Construction of generalized central algorithms for the incorrect and computed tomography tasks.	D. Zarnadze	D. Zarnadze, D. Ugulava

Sector of Informatics

Scientific-Research Works Planned and Implemented in 2013 Funded by the State Budget of Georgia

#	Work	Work Supervisor	Work Performers

#	Work	Work Supervisor	Work Performers
1	Aggregation issues of Markov type systems.	G. Tsertsvadz	G. Tsertsvadz, G. Ghlonti
#	Work	Work Supervisor	Work Performers
2	Symmetric encryption cryptographic systems	Z. Kipshidze	Z. Kipshidze, G. Ghlonti
#	Work	Work Supervisor	Work Performers
3	Parallel algorithms for solving mathematical-physics tasks	H. Meladze	H. Meladze
#	Work	Work Supervisor	Work Performers
4	Verification of functional programs	M. Pkhovlishvili	M. Pkhovlishvili, G. Silagadze