CURRICULUM VITAE

First Name	Last name
Natela	Zirakashvili

Date of birth: February 28, 1946

Place of birth: Tbilisi, Republic of Georgia

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Education

	Year	Name of University	Specialty	Academic Degree
1	1963-1968	Iv. Javakhishvili Tbilisi State University	Mathematic	Diplomaed (Dipl. Ч # 768461)
2	1997	Iv. Javakhishvili Tbilisi State University	05.13.18	Cand. of Sci.Phys.&Math. (Dipl. #001479)

Work Experience

	Years	Position	Department/Division	Name of Organization
1	1968-77	Mathematician-programmer.	Division of mathematical software	Institute of Applied Mathematics of TSU
2	1978-90	Senior engineer-mathe-matician-programmer.	Division of shells theory	I.Vekua Institute of Applied Mathematics of TSU
3	1991-97	Science researcher	Division of shells theory	I.Vekua Institute of Applied Mathematics of TSU
4	1998-2006	Senior science researcher	Division of shells theory	I.Vekua Institute of Applied Mathematics of TSU
5	2007	Researcher	I.Vekua Institute of Applied Mathematics	Iv. Javakhishvili TSU
6	2009	Specialist	I.Vekua Institute of Applied Mathematics	Iv. Javakhishvili TSU
7	2010 - 2011	Researcher	I.Vekua Institute of Applied Mathematics	Iv. Javakhishvili TSU
8	2010 - 2011	Invited specialist	Scool of IT and Mathematics	The University of Georgia
9	2012 up to now	science researcher	I.Vekua Institute of Applied Mathematics	Iv. Javakhishvili TSU
10	2011 up to now	Associate Professor	Scool of IT and Mathematics	The University of Georgia

Selected Publications

	Year	Name of Publication	Name of impact-factor or other scientific journal
1	1984	Calculation of the compressed prismatic shell	Works of all-Union meeting-seminar in Tbilisi, the theory and numerical methods of calculation of plates and shells,v.I, 262-278 (coavtor T.Tskhadaia, in Russian)
2	1990	The numerical decision of a high order concerning a step of a boundary-value problems for rectangular area	Works of all-Union meeting-seminar in Tbilisi, the theory and numerical methods of calculation of plates and shells,v.II, 150-154(in Russian)
3	1990	Elastic Equilibrium of a Plane Deformed Elliptic Cilinder with a Hole when Displacements Are Given on the Boundary	Proceedings of I.Vekua Institute of Applied Mathematics of Tbilisi State University, Vol.39, pp.92-96 (in Russian, Georgian and English summaries) http://www.viam.science.tsu.ge/publish/proceedings/tom39.htm
4	1990	Solution of Basic Two-Dimensional	Proceedings of I.Vekua Institute of Applied Mathematics of Tbilisi

		Problems of Elasticity for an Elliptic Cilinder with a Hole and its Parte,	State University, Vol.39, pp.255-261 (coauthor N. Khomasuridze, in Russian, Georgian and English summaries). http://www.viam.science.tsu.ge/publish/proceedings/tom39.htm
5	1991	Elastic Equilibrium of a Plane Deformed Elliptic Cilinder with a Hole and its Parts	Reports of Enlarged Session of the Seminar of I.Vekua Institute of Applied Mathematics of Tbilisi State University, Vol.6, 2, pp.157-160 (coauthor N. Khomasuridze, in Russian) http://www.viam.science.tsu.ge/enl_ses/vol6_2.htm
6	1992	Investigation and Solution of the Continuous System Obtained in the Case of the Solution of Some Boundary Value Problems	Proceedings of I.Vekua Institute of Applied Mathematics of Tbilisi State University, Vol.46, pp.119-123 (in Russian, Georgian and English summaries). http://www.viam.science.tsu.ge/publish/proceedings/tom46.htm
7	1992	The Silution of Boundary Value Problems Elliptic Plate Beoding	Proceedings of I.Vekua Institute of Applied Mathematics of Tbilisi State University, Vol.46, pp.236-239 (coauthor N. Khomasuridze, in Russian, Georgian and English summaries). http://www.viam.science.tsu.ge/publish/proceedings/tom46.htm
8	1995	Solution of Sertain Two-Dimensional Boundary-Value Problems of Elasticity Theory in Elliptic Coordinates	Reports of Enlarged Session of the Seminar of I.Vekua Institute of Applied Mathematics of Tbilisi State University, Vol.10, 2, pp.19-23 (coauthor N. Khomasuridze) http://www.viam.science.tsu.ge/enl_ses/vol10_2.htm
9	1999	Torsion of a Hallow Elliptic Shaft	Reports of Enlarged Session of the Seminar of I.Vekua Institute of Applied Mathematics of Tbilisi State University, Vol.14, 2, pp.58-61 http://www.viam.science.tsu.ge/enl_ses/vol14_2.htm
10	1999	Some Two-Dimensional Elastic equilibrium problems of elliptic bodies.	Proceding of I. Vekua Institute of Applied Mathematics of Tbilisi State University , Vol. 49, pp. 39 - 48 (coauthor N. Khomasuridze) http://www.viam.science.tsu.ge/publish/proceedings/vol49/tom49.htm
11	2001	The Elliptic Semi-ring Stress Condition	Reports of Enlarged Session of the Seminar of I. Vekua Institute of Applied Mathematics of Tbilisi State University, Vol. 16, 1-3, pp. 70-73, http://www.viam.science.tsu.ge/enl_ses/vol16_1-3/vol16.htm
12	2002	Some Boundary Value Problems of Elasticity for Semi-Ellipses	Proceeding of I. Vekua Institute of Applied Mathematics, Vol. 52, pp. 49 – 55, http://www.viam.science.tsu.ge/publish/proceedings/vol52/tom52.htm
13	2005	An Application of the BEM in Numerical Analysis of Stress Concentration for Elastic Body.	Report of Enlarged Session of the Seminar of I.Vekua Institute of Applied Mathematics of Tbilisi State University, V. 20, N2, pp. 68-71, http://www.viam.science.tsu.ge/enl_ses/vol20_1-3/vol20.htm
14	2005	Solution of Outside Problem of Plane Elasticity Theory by Boundary Element Method.	Report of Enlarged Session of the Seminar of I.Vekua Institute of Applied Mathematics of Tbilisi State University, V. 20, N2, pp. 72-76, http://www.viam.science.tsu.ge/enl_ses/vol20_1-3/vol20.htm
15	2006	The Numerical Solutions of some Boundary-Value Problems of Binary Mixture Plane Theory by BEM	Bull. Georg. Acad. scien. 173, N1, Tbilisi, 2006, pp. 53-55 (with R.Janjgava, M. Narmania, M. Mosia) http://www.science.org.ge
16	2006	The Application of the Boundary Element Method to the Solution of Boundary Value Problems for Elastic Body Containing Circular Hole and Radial Cracks.	Bull. Georg. Nat. Acad. Sci. 173, N3, Tbilisi, pp. 466-468. http://www.science.org.ge
17	2006	Application of the boundary element method to the solution of the problem of distribution of stresses in an elastic body with a circular hole whose interior surface contains radial cracks	Proceedings of A.Razmadze Mathematical Institute. Vol. 141, pp. 139-147. http://www.rmi.acnet.ge/proceedings/volumes/141.htm
18	2006-2007.	Numerical Solutions of Some Boundary Value Problems of Theory of Elasticity by BEM.	Reports of Enlarged Sessions of the seminar of I.Vekua Institute of Appled Mathematics v.21, N1, pp. 64-67, http://www.viam.science.tsu.ge/enl_ses/vol21/vol21.htm
19	2006-2007	An application of the boundary element method for solving of the boundary-value problems for binary mixtures.	Reports of Enlarged Sessions of the seminar of I.Vekua Institute of Appled Mathematics v.21, N1, pp. 68-71, (R.Janjgava, M.Mosia, M.Narmania), http://www.viam.science.tsu.ge/enl_ses/vol21/vol21.htm
20	2007	Solution of a Class of Boundary Value Problems of Vekua Plate Theory (Russian).	Proceedings of International Conference “Non-Classic Problems of Mechanics”, Kutaisi, pp. 254-259, (N.Khomasuridze, R.Janjgava)
21	2007	Numerical Analisis of the Stress Distribution by the Boundary Elements Method in Continuous Body with a Hole.	Bull. Georg. Nat. Acad. Sci. 175, N3, Tbilisi, pp. 22-25. http://www.science.org.ge
22	2007	Solution of Some Boundary Value Problems of Vekua Shell Theory With	AMIM 2007, v.12, N 2, pp.15-26 (N.Khomasuridze, R.Janjgava). http://springerlink.com/content/3103724u67760140/?p=3d2d23293f40460f9d603fe2934a9980&pi=0

		Symmetry And Anti-Symmetry Conditions At The Boundaries.	
23	2008	The elastic equilibrium of infinite plate containing radial cracks originating of the boundary of internal circular hole.	Reports of Enlarged Sessions of the seminar of I.Vekua Institute of Applied Mathematics v.23, pp. 12-17. http://www.viam.science.tsu.ge/enl_ses/vol22/vol22.htm.
24	2008	On the Construction of Analytic and Numerical Solutions of Some Plane Boundary Value Problems of the Elastic Mixture Theory.	AMIM 2008, v.13, N 1, pp.66-78,. (R.Janjgava), http://www.viam.science.tsu.ge/Ami/2008_1/2008_1.htm
25	2008	On the Numerical Solution of a Problem on a Crack under Internal Pressure Filled with a Binary Mixture (Russian)	Proccedings of International Conference"Architecture and Construction – Contemporary Problems", 13-18 October, 2008, Yerevan – Jermuk, pp.145-149 (with R.Janjgava)
26	2009	Numerical Solution of Some Plane Boundary Value Problems of the Theory of Binary Mixture s by the Boundary Element Method	AMIM 2009, v.14, N 1, pp.79-95,. (R.Janjgava), http://www.viam.science.tsu.ge/Ami/2009_1/2009_1.htm
27	2009	Solution of some two-dimensional problems of elasticity	Springer New York, Journal of Mathematical Sciences, 2009, v.157, N1, pp.79-84 (Translated from Sovremennaya Matematika i Ee Prilozheniya, Contemporary Mathematics and Its Applications), Vol. 51, Differential Equations and Their Applications, 2008)
28	2009	The numerical solution of boundary-value problems for an elastic body with an elliptic hole and linear cracks	Springer Netherlands, Journal of Engineering Mathematics , Volume 65, Number 2 / October, 2009, DOI 10.1007/s10665-009-9269-z
29	2009	Study of stress-strain state of a two-layer elliptic cylinder. ,	Reports of the seminar of I.Vekua Institute of Applied Mathematics v.35 http://www.viam.science.tsu.ge/report/vol35/sem35.htm
30	2010	Determining the elastic equilibrium of a cylindrical shell by Vekua's theory based on the classical elasticity theory and the theory of binary mixtures.	Archive of Applied Mechanics, Springer Berlin / Heidelberg, Archive of Applied Mechanics, Volume 81, Number 4, 531-542,Springer Berlin / Heidelberg, April 15, 2010, DOI: 10.1007/s00419-010-0426-7, Volume 81, Number 4, 531-542 (whit N.Khomasuridze, R.Janjgava)
31	2010	Strain control of cracked elasic bodies means of boundary condition variation	Proccedings of International Conference"Architecture and Construction – Contemporary Problems", 30 September-3 October, 2010, Yerevan – Jermuk, pp.158-163 (with N. Khomasuridze)

Participation in Scientific Grant Projects

	Years	Role in the Project	Name of the Project	Donor Organization
1	1998-2000	Senior scientist	The boundary and contact problems for the elastic shells with the variable thickness and effective, approximate and numerical solutions some of the problems of 2-D of elasticity	Department of Sciances and Technologies of Georgia
2	2005	Senior scientist	Calculation of Nonlinear and Non-Shallow Shells by Vekua's Method and Solution of Three-Dimensional Prob-lems of Localization-Delocalization	Georgian Nathional Science Foundation

Participation in scientific forums

	Year	Name of the event	Title of Presentation	Place of Event
1	1998	International Symposium on the Mechanics of Solid Deformable Bodies	Solve of two-dimensional boundary-contact problem for a hollow elliptical cilinder and his parts, which consists of multiple layers. Theses of reports of Intern. Symposium in mechanics of solids	Georgian Technical University
2	1999	International School in Physics and Mathematics	Solution of Sertain Two-Dimensional Boundary-Value Problems of Elasticity Theory in Elliptic Coordinates	I.Vekua Institute of Applied Mathematics of TSU
3	11-13 October 2001	III Congress of Georgian Mathematical Union	Strained condition of an ellipse with a cuts	Tbilisi, Georgia
4	26.04.2005	Enlarged Session of the Seminar of I. Vekua Institute of Applied Mathematics	An application of the boundary element method in numerical analysis of stress concentration for elastic body	Tbilisi, Georgia
5	26.04.2005	Enlarged Session of the Seminar of I. Vekua Institute of Applied Mathematics	Solution of outside problem of plane elasticity theory by boundary element method	Tbilisi, Georgia
6	14 – 16	IV Congress of Georgian Mathematical	The numerical solutions of some problem	Tbilisi, Georgia

	November, 2005	Union	for bynary mixture by mains of boundary element method	
7	26 April 2006	Enlarged Session of the Seminar of I. Vekua Institute of Applied Mathematics	Numerical solutions of some boundary value problem by boundary element method	Tbilisi, Georgia
8	26 April 2006	Enlarged Session of the Seminar of I. Vekua Institute of Applied Mathematics	An application of the boundary element method for solving of the boundari value problems for binary mixtures	Tbilisi, Georgia
9	2007	**ISAAC Conference on "Analysis, Applications, and Computations"**	Effective solution of some boundary value problems of I.N.Vekua's shell theory	I.Vekua Institute of Applied Mathematics
10	2007, 25 – 27, October	**International Conference** "Non-Classic Problems of Mechanics"	Solution of a Class of Boundary Value Problems of Vekua Plate Theory	Kutaisi, Georgia
11	2008	Enlarged Session of the Seminar of I. Vekua Institute of Applied Mathematics	The elastic equilibrium of infinite plate containing radial cracks originating of the boundary of internal circular hole	Tbilisi, Georgia
12	7-9 October, 2008	International Conference on "Modern Problems in Applied Mathematics" Dedicated to the 90-th anniversary of Iv. Javakhishvili Tbilisi State University (TSU) and 40-th anniversary of I. Vekua Institute of Applied Mathematics (VIAM) of TSU	On the construction of analytic and numerical solutions of some plane boundary value problems of the elastic mixture theory	Tbilisi, Georgia
13	13-18 October, 2008	International Conference "Architecture and construction – Contemporary Prob-lems",	On the Numerical Solution of a Problem on a Crack under Internal Pressure Filled with a Binary Mixture	Yerevan – Jermuk, Armenia
14	2009	Enlarged Session of the Seminar of I. Vekua Institute of Applied Mathematics	Dependence of deformation of multilayer body from boundary conditions	Tbilisi, Georgia
15	Monday 29 June 2009 to Sunday 05 July 2009	Int. Conference "Analytic methods of mechanics and complex analysis"	Stationary Multi-Layer Fluxes of a Viscous Incomperssible Liquid and Prospects of Their Practical Application.	Kiev, Ukraine
16	21.04.2010	XXIV Enlarged Session of the Seminar of I.Vekua Institute of Applied Mathema-tics	Study of stress-strain state of the piecewise homogeneous elastic body	Tbilisi, Georgia
17	2010, 12-19 September	I Conference of Georgian Mathematical union	Regulation of the stress state of elastic infinite body with an elliptic hole and cracks by means of boundary condition variation	Batumi, Georgia
18	From 30 of September to 3 of October of 2010	International Conference "Architecture and Construction – Contemporary Problems"	Strain control of cracked elastic bodies by means of boundary condition variation	Yerevan – Jermuk, Armenia
19	2011	XXV Enlarged Session of the Seminar of I. Vekua Ins¬titute of Applied Mathe¬ma¬tics	Statement and Solution of Some Nonclassical Two-Dimensional Problems of Thermoelasticity.	Tbilisi, Georgia
20	2011	International conference "Continuum mechanics and related problems of analysis" dedicated to the 70-th anniversary of the Georgian National Academy of Sciences and the 120-th birthday anniversary of i	SOME THERMOELASTICITY PROBLEMS FOR CYLINDRICAL BODIES WITH NON-CLASSICAL CONDITIONS ON THE SURFACE.	Tbilisi, Georgia
21	2011	II Conference of Georgian Mathematical union	On some problems of termoelasticity for the rectangular parallelepiped with non-classical conditions on the surfase.	Batumi. Georgia

LANGUAGES SPOKEN

Mother tongue	Georgian			
Foreign language	**Russian**	**English**	**German**	**French**
Read	Satisfactory	Elementary		Pre-elementary
Write	Satisfactory	Elementary		Pre-elementary
Speech	Satisfactory			Pre-elementary

Computer Skills

Name of software	**Good**	**average**	**Poor**
Ms-Windows	+		
Ms-Word	+		
Ms- Excel	+		
Ms-PowerPoint	+		
Internet explorer	+		
FrontPage	+		
Scientific Work Place	+		
Win Edit	+		
Latex	+		
MatLab	+		
MatCat		+	
Mathematika	+		
Maple		+	
Programming languages			
Name of languages	**Good**	**average**	**Poor**
Fortran	+		
Pascal	+		
C&C++		+	
Delphi			+

FIELD OF RESEARCH

Solids Mechanics , Numerical Methods, Computer Science.