CURRICULUM VITAE

TinatinDavitashvili

Iv. Javakhishvili Tbilisi State University (**TSU**)

Assistant Professor, Faculty of Exact and Natural Sciences, interdisciplinary direction (Mathematics, Computer Sciences), ChairofNumerical Analysis and Computational Technologies

ADDRESS

Office: 3, Chavchavdze Ave., TSU Block/Building II, 0179, Tbilisi, Georgia, www.tsu.ge

E-mail: tinatin.davitashvili@tsu.ge , tdavitashvili@sdsu.edu

1. Education

- Candidate of Physical and Mathematical Sciences, Dipl. # 003496, Computational Mathematics, Iv. Javakhishvili Tbilisi State University , 2002
- Postgraduate student, Computational Mathematics, Iv. Javakhishvili Tbilisi State University, 1982-1985
- M.S.,Honors dipl. # Γ-I 174554, Iv. Javakhishvili Tbilisi State University, Faculty of Cybernetics and Applied Mathematics, 1978-1982.

2. Professional Appointments/Employment

FT

- Assistant Professor, TSU, Faculty of Exact and Natural Sciences, interdisciplinary direction (mathematics, computer sciences), Chair of NumericalAnalysis and Computational Technologies, 2010 –Present
- Assistant Professor, TSU, Faculty of Exact and Natural Sciences, Department of Computer Sciences, 2006 – 2010
- Senior researcher, I.Vekua Institute of Applied Mathematics of TSU, Department of Numerical Analysis, 2004-2006
- Junior researcher, I.Vekua Institute of Applied Mathematics of TSU, Department of Numerical Analysis, 1987-2003
- Senior laboratory assistant, I.Vekua Institute of Applied Mathematics of TSU, Department of Numerical Analysis, 1982 – 1986

PT

- Lecturer, TSU, Faculty of Applied Mathematics and Computer Sciences, Faculty of Physics, 1983 – 1987, 1988 - 1994
- Docent,TSU, Faculty of Applied Mathematics and Computer Sciences, Chair of Mathematical modeling, 2002 – 2006
- Invited Associated Professor (PT), St. Andrews the First Called Georgian University, 2008-2010
- Invited Associated Professor (PT), Caucasus University, 2008–2009
- Invited Associated Professor (PT), Sokhumi state University, 2004 _ 2008
- Assistant of administrator of examination centre, National examinations center, 2011, 2012, 2013 (June 25- July 25)
- Adjunct Faculty of San Diego State University, 2016 - present.

3. Publications / Text-books / Translation

See the list below

4. Grants

- Higher Education Project "San Diego State University and Georgia 2020", US Millennium ChallengeCorporation , 2014, Fall semester (short-term scholar, San Diego State University).
- "Developing tools for lifelong learning in Transcaucasus region: e-Learning" (ARMAZEG), 544605-TEMPUS-1-2013-1-BE-TEMPUS-JPHES, 2013-2016, Participant
- "Assessment of riskfactors of emergency cases at oil and gas pipelines and possible pollution of environment by means of mathematical modeling",Project N:09-614_5-210, Shota Rustaveli national science foundation, researcher ,2011
- "Creation of High-Performance Computation Cluster and Databases in Armenia", Project ISTC A-823, researcher, 2003-2006.

5. Conference Activity/Participation

During the last 10 years – 35 conferences, among them:

1. XXXI Enlarged Sessions of the Seminar of Ilia Vekua Institute of Applied Mathematics of IvaneJavakhisvili Tbilisi State University, April 19-21, 2017.
2. FENS Conferences, TSU, 2013, 2014, 2015, 2016, 2017.
3. South Caucasus Computing and Technology Workshop,SCCTW'2016, October 4-7.
4. 14th International Conference on Integral Methods in Science and Engineering (IMSE 2016), Padova, Italy
5. International Conference on Computer Science and Information Technologies (CSIT), Yerevan, Armenia, 2005, 2011, 2013, 2015.
6. International Conferences of Georgian Mathematical Union, Batumi, 2010, 2011, 2012, 2013, 2014, 2015, 2016, Batumi, Georgia.
7. Second Tbilisi-Salerno Workshop on Modeling in Mathematics, Tbilisi, March 16-18, 2015.
8. Ninth International Scientific-Practical Conference INTERNET-EDUCATION-SCIENCE (IES-2014), 14 - 17 October, 2014, Vinnytsia,Ukraine.
9. XXVI Enlarged Sessions of the Seminar of I.Vekua Institute of Applied Mathematics of Iv.Javakhisvili Tbilisi State University, April 23–25, 2012.
10. XII International Conference on Science and Technology "System Analysis and Information Technologies", Kyiv, Ukraine, May 25–29, 2010.
11. UKRAINIAN MATHEMATICAL CONGRESS − 2009 (Kyiv, August 27−29, 2009), section "Numerical Mathematics and Mathematical Problems of Mechanics".
12. 2nd WSEAS International Conference on FINITE DIFFERENCES, FINITE ELEMENTS, FINITE VOLUMES, BOUNDARY ELEMENTS (F-and-B '09) -- Tbilisi, Georgia, June 26-28, 2009.

6. Teaching Experience/Courses taught for the last years

25-year long teaching career

- Numerical Methods: Design, Analysis, and Computer Implementation of Algorithms (for Computer Sciences)
- Numerical Analysis, Part 1(for Mathematics)
- Group project: Modeling with Partial Differential Equations
- Basics of Programing - Language C
- Computer Organization
- Programing- Pascal, Fortran
- Computer skills and MS Office programs
- Numerical Methods of Algebra
- Mathematical Modeling in Geomorphology
- Mathematical Modeling of Continuum
- Dimensional Analysis and Similarity
- Self-Similar Solutions
- Technologies of Parallel Computations

- Basics of Algorithms.

7. Departmental/University Service
- Member of faculty council, 2006 - Present
- Secretary of faculty council, 2012 - Present
- Member of editorial board of the journal "Mathematics", published by the Faculty of Exact and Natural Sciences, 2013 - Present
- Member of faculty publishing board, 2012 - 2014
- Member of department publishing board (Computer Sciences), 2007 - Present

8. Non-Academic Work
- Member of Editorial Board of electronic scientific journal "Computer Sciences and Telecommunications", Editor, 2009 - Present
  (http://gesj.internet-academy.org.ge/ge/editboard_ge.php?b_sec=comp)
- Journal "Applied Mathematics, Informatics and Mechanics (AMIM)", Managing Editor, 2016 – Present, http://www.viam.science.tsu.ge/Ami/Main.htm
- Editor of Proceedings of 2nd WSEAS International Conference on FINITE DIFFERENCES, FINITE ELEMENTS, FINITE VOLUMES, BOUNDARY ELEMENTS (F-and-B '09), Tbilisi, Georgia, June 26-28, 2009, (http://www.wseas.us/books/2009/georgia/FB.pdf).

9. Professional Memberships/Affiliations
- Member of Georgian Mathematical Union, www.gmu.ge
- Vice-President of Georgian Mathematical Union (GMU, www.gmu.ge), 2013 - Present
- Member of Council of Georgian Mathematical Union, 2009 – Present
- Vice Chairman of National Committee of Georgian Mathematical Union, 2011-2013.

10. Service to Profession
- Vice-Chair of the Organizing Committee, VII International Conference of Georgian Mathematical Union & Georgian Mechanical Union: Continuum Mechanics and Related Problems of Analysis, Dedicated to 125-th Birthday Anniversary of Academician N. Muskhelishvili, Batumi, Georgia, September 5-9, 2016.
- Scientific secretary & member of the Organizing Committee, VI International Conference of Georgian Mathematical Union, Batumi, Batumi, July 12-16, 2015.
- Scientific secretary & member of local Organizing Committee, 26th International Workshop on Operator Theory and its Applications (IWOTA), July 6 to 10, 2015, http://www.gmu.ge/iwota2015/
- Member of the Organizing Committee, Humboldt Kolleg "Science in Georgia: Perspectives of Development and the Role of Humboldt Foundation", July 4-6, 2015, Tbilisi, Georgia, http://www.gmu.ge/HK2015/ .
- Scientific secretary & member of local Organizing Committee, First Caucasian Mathematics Conference (CMC I) , Tbilisi, Georgia, September 5-6, 2014, organized under the auspices of the European Mathematical Society and the cooperation of the Armenian, Azerbaijan, Georgian, Iranian, Russian and Turkish Mathematical Societies
- Scientific secretary & member of the Organizing Committee, V International Conference of Georgian Mathematical Union, Batumi, September, 8-12, 2014
- Scientific secretary & member of the Organizing Committee, IV International Conference of Georgian Mathematical Union, Tbilisi, Batumi, September, 9-15, 2013
- Scientific secretary & member of the Organizing Committee, III International Conference of Georgian Mathematical Union, Batumi, September, 2-9, 2012
- Scientific secretary & member of the Program Committee, II International Conference of Georgian Mathematical Union, Batumi, September, 15-19, 2011

- 2nd WSEAS International Conference on FINITE DIFFERENCES, FINITE ELEMENTS, FINITE VOLUMES, BOUNDARY ELEMENTS (F-and-B '09), Tbilisi, Georgia, June 26-28, 2009, Member of local organizing committee.

11. Trainings
- E-Learning - LIMEL (Leuvens Instituut voor Media en Leren), KU Leuven, Belgium, 2014, 2015
- E-Learning - Department of Engineering, UNIFI, Florence, Italy, 2014, 2015
- E-Learning – CEVUG, UGR, Granada, Spain, 2014, 2015.

Languages
- Georgian – native
- Russian – fluent
- English – good
- French - can read with dictionary.

Publications

Text-books:
1. R.Botchorishvili, T.Davitashvili. Fundamentals of Numerical analysis (Manual). Publishing house of Tbilisi State University - 2013 - 219 p.
2. R.Botchorishvili, T.Davitashvili. Fundamentals of Numerical analysis, Book of problems. Publishing house of Tbilisi State University - 2013 - 175 p.
3. H.Meladze, T.Davitashvili, V.Kvaratskhelia, M.Menteshashvili, Z.Tsveraidze. Basics of the Theory of Algorithms. Manual, Publishing house "Technical University" – 2013 – 326 p.
4. I.Khutsishvili, T.Davitashvili, N.Archvadze, A.Chitaladze, K.Gelashvili. Programming Language C (Manual). Publishing house of Tbilisi state University – 2009 - 219 p.
5. **(Translation)**A.A.Samarskii. Introduction to Numerical Methods. Publishing House of Tbilisi State University - 2001 - 346 p. (from Russian to Georgian).

Conference theses (26)

Articles (38), among them:
1. F.Criado-Aldeanueva, T.Davitashvili, H.Meladze, P.Tsereteli, J.M.Sanchez. Three-Layer Factorized Difference Schemes and Parallel Algorithms for Solving the System of Linear Parabolic Equations with Mixed Derivatives and Variable Coefficients // Applied and Computational Mathematics, 2016, V.15, #1, pp.51-66,http://acmij.az/view.php?lang=az&menu=6 .
2. D.Gordeziani, T.Davitashvili, H.Meladze, Numerical Solution of Nonlocal Contact Problems for Elliptic Equations. Proceedings of 10th International Conference on Computer Science and Information Technologies (CSIT'2015), September 28 – October 2, 2015, Yerevan, Armenia, pp.273-276; see also IEEE Conference Publications, Pages: 143 - 147, DOI: 10.1109/CSITechnol.2015.7358269, IEEE's Xplore electronic library, IEEE . http://ieeexplore.ieee.org/document/7358269/authors.
3. T.Davitashvili, J.Peradze, Z.Tsiklauri. An iteration method of solution of a non-linear equation of a static beam. AMIM,I.VekuaInst.Appl.Math. Tbil.State Univ., v.19, no.1, 9-16, 2014.
4. H.Meladze, T.Davitashvili, R.Kakubava, P.Tsereteli. Parallel Algorithms of Numerical Solution of One dynamic Problem for Quasilinear System of Equations of Elasticity Theory, Proceedings of 9-th International Conference on Computer Science and Information Technologies (CSIT'2013), September 23-27, 2013, Yerevan, Armenia, pp. 236-239.

5. Francisco Criado, TinatinDavitashvili, Hamlet Meladze. On Tree Layer Difference Schemes for Solving the Systems of Multidimensional Equations of Parabolic Type with Mixed Derivatives – Several Problems of Applied Mathematics and Mechanics, Mathematics Research Developments, Published by Nova Science Publishers, New York - 2013, pp.57-74.

6. Criado F., Davitashvili T., Meladze H. On Tree Layer Difference Schemes for Solving the Systems of Multidimensional Equations of Parabolic Type with Mixed Derivatives // Georgian Technical University, Applied Mathematics and Mechanics, Transactions - 2012, pp.30-45.

7. T.Davitashvili. An Iteration Method for a String Nonlinear Ordinary Differential Equation // Reports ofXXVI Enlarged Sessions of the Seminar of Ilia Vekua Institute of Applied Mathematics of IvaneJavakhisvili Tbilisi State University, April 23–25, 2012, V.26, pp.10-13.

8. H.Meladze, T.Davitashvili, Parallel Algorithms for Solution of One Mathematical Model of Electropower Systems, Proceedings of 8th International Conference on Computer Science and Information Technologies (CSIT'2011), September 26 - 30, 2011, Yerevan, Armenia, pp.259-263.

9. D. Gordeziani, TinatinDavitashvili. On one mathematical model of the Black Sea pollution by oil // Reports ofXXV Enlarged Sessions of the Seminar of I.Vekua Institute of Applied Mathematics, V.25, April21-23,2011.

10. Д.Гордезиани,Е.Гордезиани,Т.Давиташвили,Г.Меладзе. О решении некоторых нелокальных краевых и начально-краевых задач // Electronic Scientific Journal: "Computer Sciences and Telecommunications"(ISSN 1512-1232), 2010, #3(26), pp. 161-169.

11. D. G. Gordeziani, H. V. Meladze, T. D. Davitashvili. On One Generalization of Boundary Value Problem for Ordinary Differential Equations on Graphs in the Three-dimensional Space // WSEAS TRANSACTIONS on MATHEMATICS (ISSN: 1109-2769) , Issue 8,Volume 8, August 2009, pp.457-466 .

12. D.G. Gordeziani, H.V.Meladze, T.D.Davitashvili. The Boundary Value Problem for Poisson Equation on Some Two Dimensional Structures in Three Dimensional Space. Proceedings of the 2nd WSEAS International Conference on FINITE DIFFERENCES, FINITE ELEMENTS, FINITE VOLUMES, BOUNDARY ELEMENTS (F-and-B '09) -- Tbilisi, Georgia, June 26-28, 2009 – pp.139-145 . (ISSN: 1790-2769, ISBN: 978-960-474-089-5).

13. D.Gorgeziani, T.Davitashvili, M.Kuprashvili, H.Meladze. On the Solution of Boundary Value Problem for Differential Equations Given in Graphs // Applied Mathematics and Informatics – Tbilisi – 2008 – v.13, №.2 – pp.75-86.

14. Т.Д.Давиташвили, Г.В.Меладзе, В.Г.Саакян, П.А.Церетели. Итерационные методы решения граничной задачи для системы ОДУ первого порядка с параметром для кластерных систем // Вычислительные методы и программирование, Москва, 2005, т.6, номер 2, с.116-125.

15. Т.Д.Давиташвили, Т.Г.Елизарова, Ф.Криадо, Г.В.Меладзе, Н.М.Схиртладзе. О сходимости кинетически-согласованных разностных схем для одномерных уравнений газовой динамики // Математическое моделирование - 2001 - т.13, №4 - с.71-83.

16. F.Criado, T.D.Davitashvili, H.V.Meladze, N.M.Skhirtladze. On One Numerical Method for Solving Some Self-Similarity Problems of Gas Dynamics on a Multiprocessor //Intern.J.Computer Math. - 2000 - vol.74, issue 1 - pp.63-85.

17. Т.Д.Давиташвили, Т.Г.Елизарова, Ф.Криадо, Г.В.Меладзе, Н.М.Схиртладзе. О сходимости кинетически-согласованных разностных схем газовой динамики. Препринт - Москва, Диалог-МГУ - 1999 - с.1-35.

18. F.Criado, T.D.Davitashvili. On Asynchronous Iterative Methods for the Solution of Non-linear Equations and Systems of Equations for Multiprocessors // Parallel Algorithms and Applications (2005 wlidan _ International Journal of Parallel, Emergent and Distributed Systems) - 1997 - vol.12 , №4 - pp.253-263.