Academician Ivan Kiguradze

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PERSONAL DATA

Birthdate: January 12, 1937
Birthplace: Village Khidistavi, Georgia
Marital status: Married, have two children
Nationality: Georgian

EDUCATION AND SCIENTIFIC DEGREES

1944-1955	Pupil of Khidistavi Secondary School (graduated in 1955 with a gold medal)
1955-1960	Student of Tbilisi State University, Faculty of Mechanics and Mathematics
June, 1960	Diploma in Mathematics (with honour), Tbilisi State University
1960-1963	Post-graduate student of Tbilisi State University
June, 1963	Ph. D. in Mathematics, Tbilisi State University
June, 1968	Certificate of Docent (Supreme Certification Commission under the USSR Higher Education Ministry)
September, 1972	Dr. Sci. (Phys. & Math.), Tbilisi State University
June, 1976	Certificate of Professor (Supreme Certification Commission under the USSR Council of Ministers)
November 7, 2016	Doctoris Honoris Causa, Universitatis Kyjoviensis Taras Shevchenko Accordat
June, 2017	Honorary Doctor of Odessa I.I. Mechnokov National University

RESEARCH INTERESTS

Differential equations (boundary value problems, qualitative theory of nonautonomous differential equations, oscillation theory)

POSITIONS HELD AND ACADEMIC EXPERIENCE

1963 - 1966	Lecturer at the Chair of Differential and Integral Equations of Tbilisi State University
1966 - 1973	Senior researcher of I. Vekua Institute of Applied Mathematics at Tbilisi State University and Docent of the Chair of Differential and Integral Equations of Tbilisi State University
1973 - 1989	Head of the Department of Ordinary Differential Equations of I. Vekua Institute of Applied Mathematics at Tbilisi State University
1973 - July, 2005	Full Professor of Tbilisi State University
September, 2005 - June, 2006	Visiting Professor of Tbilisi State University
1989 - May, 2006	Director of A. Razmadze Mathematical Institute of Georgian Academy of Sciences
2001 - up to now	Chief Researcher of A. Razmadze Mathematical Institute and Head of Department of Differential Equations

SUPERVISION OF POST-GRADUATE STUDENTS

I. Toroshelidze	- defended the Ph. D. in 1967 at Tbilisi State University
D. Izyumova	- defended the Ph. D. in 1968 at Tbilisi State University
T. Chanturia	- defended the Ph. D. in 1971 at Tbilisi State University
M. Kakabadze	- defended the Ph. D. in 1974 at Tbilisi State University
B. Shekhter	- defended the Ph. D. in 1977 at Tbilisi State University
J. Mirzov	- defended the Ph. D. in 1977 at Tbilisi State University
G. Tabidze	- defended the Ph. D. in 1980 at Tbilisi State University
G. Kvinikadze	- defended the Ph. D. in 1983 at Tbilisi State University
Ch. Skhalyakho	- defended the Ph. D. in 1983 at Tbilisi State University
G. Gaprindashvili	- defended the Ph. D. in 1984 at Tbilisi State University
M. Ashordia	- defended the Ph. D. in 1985 at A. Razmadze Mathematical Institute

G. Gegelia	- defended the Ph. D. in 1986 at A. Razmadze Mathematical Institute
D. Bitsadze	- defended the Ph. D. in 1986 at Tbilisi State University
A. Lomtatidze	- defended the Ph. D. in 1986 at Tbilisi State University
Sh. Gelashvili	- defended the Ph. D. in 1988 at N. Muskhelishvili Institute of Computational Mathematics
O. Tskhadaia	- defended the Ph. D. in 1989 at Tbilisi State University
G.Tskhovrebadze	- defended the Ph. D. in 1989 at A. Razmadze Mathematical Institute
R. Tsitskishvili	- defended the Ph. D. in 1994 at Tbilisi State University
D. Chichua	- defended the Ph. D. in 1994 at A. Razmadze Mathematical Institute
Z. Sokhadze	- defended the Ph. D. in 1996 at A. Razmadze Mathematical Institute
L. Kokilashvili	- defended the Ph. D. in 1999 at A. Razmadze Mathematical Institute
S. Mukhigulashvili	- defended the Ph. D. in 1999 at A. Razmadze Mathematical Institute
N. Partsvania	- defended the Ph. D. in 1999 at A. Razmadze Mathematical Institute

MEMBERSHIP IN SCIENTIFIC ACADEMIES AND COUNCILS

1979-1993	Corresponding Member of the Georgian Academy of Sciences
1993-up to now	Full Member (Academician) of the Georgian Academy of Sciences
June 1999-June 2002	Member of the INTAS Council of Scientists
2004-2015	Member of the International Advisory Board (IAB) of the Mathematical Institute of the Academy of Sciences of the Czech Republic

EDITORIAL ACTIVITIES

1976-1993	Member of Editorial Board of the journal "Differentsial'nye Uravneniya"

1993-2002	Member of Editorial Board of the journal "Archivum Mathematicum" (Brno)
1994-up to now	Member of Editorial Board of the journal "Fasciculi Mathematici"
1994-up to now	Member of Editorial Board of the journal "Functional Differential Equations"
1994-up to now	Editor-in-Chief of the "Georgian Mathematical Journal"
1994-up to now	Editor-in-Chief of the journal "Memoirs on Differential Equations and Mathematical Physics"
1998-2016	Associate Editor of the Electronic Journal "Qualitative Theory of Differential Equations"
2004-up to now	Member of Editorial Board of the journal "Nonlinear Oscillations"
2004-up to now	Associate Editor of the journal "Boundary Value Problems"
2008-up to now	Member of Editorial Board of the journal "Researches of Mathematics and Mechanics"

FELLOWSHIPS AND GRANTS

- Fellowship of Development Fund of Czech Universities - Masaryk University (Brno), October 1994-March 1995
- Soros Professor's Grant - 1995-1999
- Fellowship of Development Fund of Czech Universities - Masaryk University (Brno), November 1996-January 1997
- NATO Research Fellowship - University of Ioannina, November 1997-December 1997
- INTAS Grant # 96-1060, August 1997-August 1999
- Research Grant of the Greek Ministry of Development in the framework of Bilateral S&T Cooperation between the Hellenic Republic and the Republic of Georgia, 2001
- INTAS Grant # 00136, August 2001-August 2003
- CRDF-GEORGIA Grant # 3318, March 2003-October 2004
- INTAS Grant # 03-51-5007 - 2004-2007
- Grant of the Georgian National Science Foundation # GNSF/ST06/3-002 - 2006-2008

- Grant of the Georgian National Science Foundation # GNSF/ST09_175_3-101 - 2010-2012
- Grant of the Shota Rustaveli National Science Foundation # FR/317/5-101/12 – 2013-2016

PRIZES AND AWARDS

- A. Razmadze prize of the Georgian Academy of Sciences, 1976
- Silver medal of Purkyne University (Brno), 1978
- I. Javakhishvili medal of Tbilisi State University, 1987
- Gold medal of Faculty of Sciences of Purkyne University (Brno), 1988
- Medal of the Union of Czechoslovak Mathematicians and Physicists, 1990
- Order of Georgia - "Order of Honour", 1997
- **B. Bolzano Honorary Medal** of the Academy of Sciences of the Czech Republic, 2006

PARTICIPATION IN CONFERENCES AND OTHER SCIENTIFIC FORUMS

- Equadiff 2 – Czechoslovak Conference on Differential Equations and Their Applications (Bratislava, Slovakia, 1966).
- Fourth International Conference on Nonlinear Oscillations (Prague, Czech Republic, 1967).
- Fifth International Conference on Nonlinear Oscillations (Kiev, Ukraine, 1969).
- Second All-Union Conference on the Qualitative Theory of Differential Equations (Ryazan, Russia, 1970).
- Third Belarussian Mathematical Conference (Minsk, Belarus, 1971).
- Third All-Union Conference on the Qualitative Theory of Differential Equations (Samarkand, Uzbekistan, 1973).
- Difford 74 – Summer School on Ordinary Differential Equations (Stara Lesna, Slovakia, 1974) – invited lecturer.
- Fourth All-Union Conference on the Qualitative Theory of Differential Equations (Ryazan, Russia, 1976) – invited lecturer.
- Equadiff 4 – Czechoslovak Conference on Differential Equations and Their Applications (Prague, Czech Republic, 1977) – invited lecturer.
- Eighth Scientific Conference of Mathematicians of Georgia (Kutaisi, Georgia, 1979) – invited lecturer.
- Colloquium on the Qualitative Theory of Differential Equations (Szeged, Hungary, 1979) –invited lecturer.
- Equadiff 5 – Czechoslovak Conference on Differential Equations and Their Applications (Bratislava, Slovakia, 1981) – invited lecturer.
- Ninth International Conference on Nonlinear Oscillations (Kiev, Ukraine, 1981) – invited lecturer.
- All-Union Symposium on Partial Differential Equations (Tbilisi, Georgia, 1982) – invited lecturer.
- Joint Sessions of the Petrovski Seminar and of the Moscow Mathematical Society (Moscow, Russia, 1982, 1983, 1984, 1986, 1994).
- Sixth All-Union Conference on the Qualitative Theory of Differential Equations (Irkutsk, Russia, 1986) – member of the Organizing Committee and invited lecturer.

- All-Union Symposium on Current Problems of Mathematical Physics dedicated to the 80th anniversary of Academician I. Vekua (Tbilisi, Georgia, 1987) – deputy-chairman of the Organizing Committee and invited lecturer.
- Equadiff 7 – Czechoslovak Conference on Differential Equations and Their Applications (Prague, Czech Republic, 1989) – invited lecturer.
- Third Seminar on Differential Equations (Poznan, Poland, 1990) – invited lecturer.
- Seventh All-Union Conference on the Qualitative Theory of Differential Equations (Riga, Latvia, 1989) – member of the Organizing Committee and invited lecturer.
- International Congress of Mathematicians (Kyoto, Japan, 1990).
- School on Dynamical Systems and Their Applications (Samos, Greece, 1990) – invited lecturer.
- Belarussian Conference on Ordinary Differential Equations (Minsk, Belarus, 1990) – invited lecturer.
- International Symposium on continuum Mechanics of Related Problems of Analysis dedicated to the centenary of Academician N. Muskhelishvili (Tbilisi, Georgia, 1991) – chairman of the Organizing Committee.
- Equadiff 8 – Czechoslovak Conference on Differential Equations and Their Applications (Bratislava, Slovakia, 1993) – member of the Scientific Committee.
- First Congress of Mathematicians of Georgia (Tbilisi, Georgia, 1993) – invited lecturer.
- Enlarged Seminar on Differential Equations of Masaryk University (Šlapanice, Czech Republic, 1995) – invited lecturer.
- Belarussian Conference on Ordinary Differential Equations dedicated to the 75th anniversary of Professor Yu. S. Bogdanov (Minsk, Belarus, 1995) – member of the Organizing Committee and invited lecturer.
- The Second World Congress of Nonlinear Analysis (Athens, Greece, 1996) – invited lecturer.
- Second European Congress of Mathematicians (Budapest, Hungary, 1996).
- Fifth Colloquium on the Qualitative Theory of Differential Equations (Szeged, Hungary, 1996) – invited lecturer.
- DEMPh-97 – International Symposium on Differential Equations and Mathematical Physics dedicated to the 90th birthday anniversary of Academician I. Vekua (Tbilisi, Georgia, 1997) – chairman of the Organizing Committee and invited lecturer.
- Equadiff 9 – Czechoslovak Conference on Differential Equations and Their Applications (Brno, Czech Republic, 1997) – member of Honorary and Advisory Board and invited lecturer.
- International Conference "Differential Equations and Related Topics" (Moscow State University, Russia, 1998).
- Fourth International Conference on Difference Equations and Applications (Poznan, Poland, 1998) – member of the Scientific Committee and invited lecturer.
- Workshop on Qualitative Theory of Differential Equations (Brno, Czech Republic, 1998) – member of Honorary and Advisory Board and invited lecturer.
- International Congress of Mathematicians (Berlin, Germany, 1998).
- DEMPh-98 – Symposium on Differential Equations and Mathematical Physics dedicated to the 95th birthday anniversary of Academician V. Kupradze (Tbilisi, Georgia, 1998) – chairman of the Program Committee and invited lecturer.

- Borůvka Mathematical Symposium (Brno, Czech Republic, 1999) – member of Honorary and Advisory Board and invited lecturer.
- International Conference on Differential and Functional Differential Equations (Moscow, Russia, 1999) – invited lecturer.
- International Conference on Functional Differential Equations and Applications (Beer-Sheva, Israel, 2002) – invited lecturer.
- International Conference on Differential & Difference Equations and Applications (Melbourne, Florida, USA, 2005) – invited lecturer.
- CDDE-2006 - International Colloquium on Differential and Difference Equations dedicated to Professor Jaroslav Kurzweil on the occasion of his 80th birthday (Brno, Czech Republic, September 5-8, 2006) – invited lecturer.
- Workshop on Differential Equations "Boundary Value Problems and Related Topics" (Hejnice, Czech Republic, September 16-20, 2007) – invited lecturer.
- The Fifth World Congress of Nonlinear Analysts (Orlando, Florida, USA, July 2-9, 2008) - invited lecturer.
- International Scientific Conference "Differential Equations and their Applications (Kyiv, Ukraine, June 8-10, 2011) – member of Program Committee and invited lecturer.
- QUALITDE-2011 – International Workshop on the Qualitative Theory of Differential Equations dedicated to the 70th birthday anniversary of Professor T. Chanturia (Tbilisi, Georgia, November 4-6, 2011) - Chairman of Program Committee and invited lecturer.
- Czech-Georgian Workshop on Boundary Value Problems (Brno, Czech Republic, December 5-9, 2011) – invited lecturer.
- All-Ukrainean conference "Differential Equations and their Role in Applied Mathematics" (Chernovtsy, June 11-13, 2012) – invited lecturer.
- International Conference Dedicated to the 70th Anniversary of Birthday of Professor D. I. Martinyk (Kamenets-Podolsk, Ukraine, June 6-8, 2012) – invited lecturer.
- QUALITDE-2013 – International Workshop on the Qualitative Theory of Differential Equations dedicated to the 100th birthday anniversary of Professor Levan Magnaradze (Tbilisi, Georgia, December 20-22, 2013) – Chairman of Program Committee and invited lecturer.
- QUALITDE-2014 – International Workshop on the Qualitative Theory of Differential Equations (Tbilisi, Georgia, December 18-20, 2014) – Chairman of Program Committee and invited lecturer.
- Czech-Georgian Workshop on Boundary Value Problems – WBVP-2014 (Brno, Czech Republic, January 21-24, 2014) – invited lecturer.
- QUALITDE-2015 – International Workshop on the Qualitative Theory of Differential Equations (Tbilisi, Georgia, December 27-29, 2015) – Chairman of Program Committee and invited lecturer.
- Czech-Georgian Workshop on Boundary Value Problems – WBVP-2015 (Brno, Czech Republic, January 26-27, 2015) – invited lecturer.
- International Mathematical Conference "Sixth Bogdanov reading on ordinary differential equations" (Minsk, Belarus, December 7-10, 2015) – member of Program Committee and invited lecturer.
- Czech-Georgian Workshop on Boundary Value Problems – WBVP-2016 (Brno, Czech Republic, February 8-11, 2016) – invited lecturer.
- International Scientific Conference "Differential Equations and Their Applications" dedicated to the 70th anniversary of Academician of NAS of Ukraine Mykola Perestyuk (Uzhhorod, Ukraine, May 19-21, 2016) – member of Program Committee and invited lecturer.
- International Workshop "Nonlinear Analysis and Nonautonomous Ordinary Differential Equations" (Odessa, Ukraine, June 23-27, 2017) – invited speaker.

Monographs and Surveys

1. Some singular boundary value problems for ordinary differential equations. (Russian) *Tbilisi University Press, Tbilisi,* 1975.
2. Boundary value problems for systems of ordinary differential equations. (Russian) I*togi Nauki Tekh., Ser. Sovrem. Probl. Mat., Novejshie Dostizh.* **30** (1987), 3-103; English transl.: *J. Sov. Math.* **43** (1988), No. 2, 2259-2339. pdf
3. Singular boundary value problems for second order ordinary differential equations (with B. L. Shekhter). (Russian) *Itogi Nauki Tekh., Ser. Sovrem. Probl. Mat., Novejshie Dostizh.* **30** (1987), 105-201; English transl.: *J. Sov. Math.* **43** (1988), No. 2, 2340-2417. pdf
4. Asymptotic properties of solutions of nonautonomous ordinary differential equations (with T. Chanturia). (Russian) *Nauka, Moscow,* 1990.
5. Asymptotic properties of solutions of nonautonomous ordinary differential equations (with T. Chanturia). *Kluwer Academic Publishers, Dordrecht-Boston-London,* 1993.
6. On multi-point boundary value problems for systems of functional differential and difference equations (with Sh. Gelashvili). *Mem. Differential Equations Math. Phys.* **5** (1995), 1-113.
7. Initial and boundary value problems for systems of ordinary differential equations, I. (Russian) *Metsniereba, Tbilisi,* 1997.
8. Boundary value problems for systems of linear ordinary differential equations. (Czech) *Masaryk University, Brno*, 1997.
9. Boundary value problems for systems of linear functional differential equations (with B. Puza). *Masaryk University, Brno,* 2003.

Papers

10. On the oscillation of solutions of some ordinary differential equations. (Russian) *Dokl. Akad. Nauk SSSR* **144** (1962), No. 1, 33-36; English transl.: *Sov. Math., Dokl.* **3** (1962), 649-652.
11. On oscillation conditions for solutions of the equation $u'' + a(t)/u|^n \text{sign } u = 0$. (Russian) *Časop. Pěstov. Mat.* **87** (1962), No. 4, 492-495.
12. On the oscillation of solutions of the equation $d^m u/dt^m + a(t)/u|^n \text{sign } u = 0$. (Russian) *Mat. Sb*. **65** (1964), No. 2, 172-187.
13. On the Cauchy problem for singular systems of ordinary differential equations. (Russian) *Differentsial'nye Uravneniya* **1**(1965), No. 10, 1271-1291; English transl.: *Differ. Equations* **1** (1965), 995-1011.
14. Asymptotic properties of solutions of a nonlinear differential equation of Emden-Fowler type. (Russian) *Izv. Akad. Nauk SSSR. Ser. Mat*. **29**(1965), No. 5, 965-986.
15. On some singular boundary value problems for nonlinear second order ordinary differential equations. (Russian) *Differentsial'nye Uravneniya* **4** (1968), No. 10, 1753-1773; English transl.: *Differ. Equations* **4** (1968), 901-910.
16. On monotone solutions of nonlinear n-th order ordinary differential equations. (Russian) *Izv. Akad. Nauk SSSR. Ser. Mat*. **33** (1969), No. 6, 1373-1398; English transl.: *Math. USSR, Izv*. **3** (1969), 1293-1317.
17. On a singular multi-point boundary value problem. *Ann. Mat. Pura Appl*. **86** (1970), 367-399.

18. On a singular boundary value problem. *J. Math. Anal. Appl.* **30** (1970), No. 3, 475-489.

19. Oscillatory solutions for a generalized sublinear second order differential equation (with J. W. Heidel). *Proc. Amer. Math. Soc.* **38** (1973), No. 1, 80-82.

20. On a singular problem of Cauchy-Nicoletti. *Ann. Mat. Pura Appl.* **104** (1975), 151-175.

21. On the modified problem of Cauchy-Nicoletti. *Ann. Mat. Pura Appl.* **104** (1975), 177-186.

22. On oscillatory and monotone solutions of ordinary differential equations. *Arch. Math.* **14** (1978), No. 1, 21-44.

23. On asymptotic behaviour of solutions of nonlinear non-autonomous ordinary differential equations. *Qual. Theory Differ. Equations*, *V.* **1**, *Amsterdam e.a.*, 1981, 507-554.

24. On strongly increasing solutions of nonlinear ordinary differential equations (with G. G. Kvinikadze). *Ann. Math. Pura Appl.* **130** (1982), 67-87.

25. On vanishing at infinity solutions of ordinary differential equations. *Czechoslovak Math. J.* **33** (1983), No. 4, 613-646.

26. On certain boundary-value problems for second-order linear ordinary differential equations with singularities (with A. G. Lomtatidze). *J. Math. Anal. Appl.* **101** (1984), No. 2, 325-347.

27. On bounded and periodic solutions of linear higher order differential equations. (Russian) *Mat. Zametki* **37** (1985), No. 1, 48-62; English transl.: *Math. Notes* **37** (1985), 28-36.

28. On the solvability of the Vallée-Poussin problem. (Russian) *Differentsial'nye Uravneniya* **21** (1985), No. 3, 391-398; English transl.: *Differ. Equations* **21** (1985), 249-255.

29. On periodic solutions of systems of nonautonomous ordinary differential equations. (Russian) *Mat. Zametki* **39** (1986), No. 4, 562-575; English transl.: *Math. Notes* **39** (1986), 308-315.

30. On systems of ordinary differential equations and differential inequalities with multi-point boundary conditions. (Russian) *Differentsial'nye Uravneniya* **33** (1997), No. 5, 646-652; English transl.: *Differ. Equations* **33** (1997), No. 5, 649-655.

31. On vanishing at infinity solutions of second order linear differential equations with advanced arguments (with Z. Došla). *Funkcial. Ekvac.* **41** (1998), No.2, 189-205.

32. On the oscillation of solutions of higher order Emden-Fowler advanced differential equations (with I. P. Stavroulakis). *Appl. Anal.* **70** (1998), No. 1-2, 97-112.

33. On periodic solutions of nth order ordinary differential equations. *Nonlinear Anal.* **40** (2000), No. 1-8, 309-321.

34. On blow-up Kneser solutions of higher order nonlinear differential equations. (Russian) *Differentsial'nye Uravneniya* **37** (2001), No. 6, 735-743; English transl.: *Differ. Equations* **37** (2001), No. 6, 768-777.

35. On periodic solutions of even-order ordinary differential equations (with T. Kusano). *Ann. Mat. Pura Appl.* **180** (2001), No. 3, 285-301.

36. On periodic boundary value problem for the equation $u''=f(t,u,u')$ with one-sided growth restrictions on f (with S. Staněk). *Nonlinear Anal.* **48** (2002), No. 7, 1065-1075.

37. On the Kneser problem for two-dimensional differential systems with advanced arguments (with N. Partsvania). *J. Inequal. Appl.* **7** (2002), No. 4, 453-477.

38. On boundary value problems for linear differential systems with singularities. (Russian) *Differentsial'nye Uravneniya* **39** (2003), No. 2, 198-209; English. transl.: *Differ Equations* **39** (2003), No. 2, 212-225.
39. Some optimal conditions for the solvability of two-point singular boundary value problems. *Funct. Differ. Equ.* **10** (2003), No. 1-2, 259-281.
40. On periodic type solutions of systems of linear ordinary differential equations. *Abstr. Appl. Anal.* (2004), No. 5, 395-406.
41. On multi-point boundary value problems for linear ordinary differential equations with singularities (with R. Agarwal). *J. Math. Anal. Appl.* **297** (2004), 131-151.
42. On periodic solutions of two-dimensional nonautonomous differential systems (with S. Mukhigulashvili). *Nonlinear Anal.* **60** (2005), No. 2, 241-256.
43. Two-point boundary value problems for higher-order linear differential equations with strong singularities (with R. P. Agarwal). *Boundary Value Problems* 2006, 1-32; Article ID 83910.
44. On nonlinear boundary value problems for higher order ordinary differential equations. *Proceedings of the Conference on Differential & Difference Equations and Applications, Hindawi Publ. Corp.,* 2006, 529-540.
45. On nonnegative solutions of singular boundary value problems for Emden-Fowler-type differential systems (with M. Cecchi, Z. Dosla, and M. Marini). *Differential and Integral Equations* **20** (2007), No. 10, 1081-1106.
46. On solvability of boundary value problems for higher order nonlinear hyperbolic equations (with T. Kiguradze). *Nonlinear Analysis: Theory, Methods & Applications* **69** (2008), 1914-1933.
47. On a resonance periodic problem for non-autonomous high order differential equations. (Russian) *Differentsial'nye Uravneniya* **44** (2008), No. 8, 1022-1032; English transl.: *Differential Equations* **44** (2008), No. 8, 1053-1063.
48. On solvability conditions for nonlinear operator equations. *Mathematical and Computer Modelling* **48** (2008), No. 11-12, 1914-1924.
49. Second-order nonlinear differential equations with infinite set of periodic solutions. *Nonlinear Oscillations* **11** (2008), No. 4, 521-526.
50. The Neumann problem for the second order nonlinear ordinary differential equations at resonance. *Functional Differential Equations* **16** (2009), No. 2, 353-371.
51. Bounded and vanishing at infinity solutions of nonlinear differential systems. *Georgian Math. J.* **16** (2009), No. 4, 711-724.
52. On boundary value problems with conditions at infinity for nonlinear differential systems. *Nonlinear Analysis: Theory, Methods & Applications* **71** (2009), 1503-1512. pdf
53. Periodic solutions of nonautonomous ordinary differential equations (with A. Lomtatidze). *Monatsh. Math.* **159** (2010), No. 3, 235-252. pdf
54. Optimal conditions of solvability and unsolvability of nonlocal problems for essentially nonlinear differential systems. *Comm. Math. Anal.* **8** (2010), No. 3, 92-01. pdf
55. Optimal conditions of solvability of nonlocal problems for second-order ordinary differential equations (with T. Kiguradze). *Nonlinear Anal.* **74** (2011), No. 3, 757-767. pdf
56. Conditions for the well-posedness of nonlocal problems for second-order linear differential equations (with T. Kiguradze). (Russian) *Differentsial'nye Uravneniya* **47** (2011), No. 10, 1400-1411; English transl.: *Differ. Equ.* **47** (2011), No. 10, 1414-1425. pdf_russian, pdf_english

57. Conditions for well-posedness of nonlocal problems for higher order linear differential equations with singularities (with T. Kiguradze). *Georgian Math. J.* **18** (2011), No. 4, 735-760.

58. Solvability conditions for non-local boundary value problems for two-dimensional half-linear differential systems (with J. Šremr). *Nonlinear Anal.* **74** (2011), 6537-6552. pdf

59. The Dirichlet and focal boundary value problems for higher order quasi-half linear singular differential equations. *Mem. Differential Equations Math. Phys.* **54** (2011), 126-133. pdf

60. Some multi-point boundary value problems for second order singular differential equations (with A. Lomtatidze and N. Partsvania). *Mem. Differential Equations Math. Phys.* **56** (2012), 133-141. pdf

61. On nonlocal problems with nonlinear boundary conditions for singular ordinary differential equations. *Mem. Differential Equations Math. Phys.* **59** (2013), 113-119. pdf

62. The Cauchy problem for singular in phase variables nonlinear ordinary differential equations. *Georgian Math. J.* **20** (2013), No. 4, 707-720.

63. A priori estimates of solutions of nonlinear boundary value problems for singular in a phase variable second order differential inequalities. *Georgian Math. J.* **21** (2014), No. 2, 211-224.

64. Nonlinear nonlocal problems for second order singular in a phase variable differential equations. (Russian) *Differentsial'nye Uravneniya* **50** (2014), 1018-1034; English transl.: *Differ. Equ.* **50** (2014), No. 3, 1025-1041. pdf_russian, pdf_english

65. Positive solutions of periodic type boundary value problems for first order singular functional differential equations (with Z. Sokhadze). *Georgian Math. J.* **21** (2014), No. 3, 303-311.

66. A priori estimates of solutions of nonlinear boundary value problems for singular in phase variables higher order differential inequalities and systems of differential inequalities. *Mem. Differential Equations Math. Phys.* **63** (2014), 105-121. pdf

67. On nonlinear boundary value problems for higher order functional differential equations (with Z. Sokhadze). *Georgian Math. J.* **23** (2016), No. 4, 537-550.

68. On a boundary value problem on an infinite interval for nonlinear functional differential equations (with Z. Sokhadze). *Georgian Math. J.* **24** (2017), No. 2, 217-225.

69. On an analogue of Fredholm's theorem for nonlinear differential equations of higher order (with T. Kiguradze). (Russian) *Differ. Uravn.* **53** (2017), No. 8, 1024-1032; English transl.: *Differ. Equ.* **53** (2017), No. 8, 996-1004.