

CURRICULUM VITAE of Dr. AMIRAN GOGATISHVILI Csc

Born: July 17, 1961, Sachkhere, Georgia

Marital status: married to Ia Giorgobiani

Children: Two sons, Giorgi (born 1997) and Nodari (born 1999)

Citizenship: Georgia

Employer: Institute of Mathematics of the Academy of Sciences of the Czech Republic

Education and scientific degrees:

- 1978 - 1983, undergraduate study at the Faculty of Mechanics and Mathematics at the Tbilisi State University, Tbilisi, Georgia;
- 1983 Honours diploma of Mathematician (M.S.), Speciality- Mathematical Analysis;
- 1983 - 1987, post-graduate student of A. Razmadze Mathematical Institute of the Georgian Academy of Sciences, Tbilisi, Georgia;
- 1988, the academic degree of Candidate of Physical and Mathematical Sciences (Ph.D. equivalent), awarded by the decision of the Board under Tbilisi State University supreme certification commission under council of Ministers of the USSR by the decision of the Board under Tbilisi State University;

Thesis title: Fractional maximal functions and potentials in weighted spaces (Russian). Tbilisi State University 1988.

Awards:

1987, The Prize of the A. Razmadze Mathematical Institute of Georgian Academy of Sciences for the young mathematician.

Professional experiences:

- October 2000 - present Research Fellow in the Department of Qualitative Methods of Mathematical Analysis Mathematical Institute of the Academy of Sciences of the Czech Republic;

- October 1998 - September 2000, Visiting Professor at the Mathematical Institute of the Academy of Sciences of the Czech Republic;
- June 1997 - May 1998, NATO and The Royal Society Postdoctoral Fellowship at the School of Mathematics of the University of Wales, Cardiff, UK;
- February 1997 - June 1997, External lecturer at the Department of Applied Mathematics, Georgian Technical University, Tbilisi;
- May 1992 - October 2006 Senior scientific researcher of the Department of Mathematical Analysis of the A. Razmadze Mathematical Institute of Georgian Academy of Sciences, Tbilisi;
- September 1987 - April 1992, Scientific researcher at the Department of Mathematical Analysis of the A. Razmadze Mathematical Institute of Georgian Academy of Sciences, Tbilisi.

Research interest: real analysis and functional analysis, function spaces, interpolation, weighted inequalities, integral operators, Sobolev embeddings, application to PDE's.

Publishing activity: 110 publications including: 1 monograph, 89 original research papers in academic journal, 15 papers in the conference proceedings, and 5 preprints.

Citations: 378 citations by 201 authors (MathSciNet, February 2015).

Participation in the Conferences and contributed talks:

- 2014 (9 - 15 June), School on Nonlinear Analysis, Function Spaces and Applications 10, June 9 - 15, Trest Castle, Czech Republic 2014, (Speaker),

Title of talk: Maximal multiplier operators in $L^{p(\cdot)}(R^n)$ spaces;

- 2013 (23-28 October) International Conference on Fourier Analysis and Approximation Theory, dedicated to the 80th birthday of Academician Levan Zhizhiashvili, Bazaleti (Georgia) October 23-28, 2013,(member of the organizing committee and Speaker),

Title of talk: Boundedness of Stein's spherical maximal function in variable Lebesgue space and application to the wave equation;

- 2013 (24-31 August) Second international conference, Mathematics in Armenia: Advances and Perspectives, 24-31 August, 2013, Tsaghkadzor, Armenia, Dedicated to the 70th Anniversary of Foundation of Armenian National Academy of Sciences, (Invited Speaker),

Title of talk: Boundedness of Stein's spherical maximal function in variable Lebesgue space and application to the wave equation;

- 2012 (2-5 October), International Scientific Conference on Functional Analysis and its Application, 2-5 October, Astana, Kazakhstan 2012, (Invited Speaker),

Title of talk: Reduction theorems for operators on the cones of monotone function;

- 2012 (9-13 July) Calculus of Variations and PDEs, satellite conference of the 6th European Congress of Mathematics, Szczawnica, Poland, 9-13 July, 2012,(Speaker),

Title of talk: Reduction theorems for operators on the cones of monotone functions;

- 2011 (26-30 September), International Conference on Function Spaces and Variable Exponent Analysis September 26 to 30, 2011, Centre de Recerca Matemàtica (CRM), Bellaterra, Barcelona, Spain, (Invited Speaker),

Title of talk: Embeddings and the growth envelope of Besov spaces involving only slowly varying smoothness;

- 2011 (18-24 September), 8th International Conference on Function Spaces, Differential Operators, Nonlinear Analysis (FSDONA-2011) 18-24 September, 2011, in Tabarz/Thür. (Germany) <http://fsdona2011.uni-jena.de/>, (Speaker),

Title of talk: Embeddings of Besov spaces with generalized smoothness into Lorenz spaces;

- 2011 (17 June), Seminar in Analysis and PDE, Universidade de Coimbra, Coimbra, Portugal,

Title of talk: The weighted Stieltjes inequality and applications;

- 2011 (20-27 May), The International Workshop on Operators in Morrey Type Space and Applications - OMTSA 2011, Kirsehir, Turkey, (Invited Speaker),

Title of talk: Characterization of the dual and pre-dual spaces of the local and global Morrey-type spaces;

- 2010 (22-25 September), Workshop in Inequalities and PDEs, Male Ciche, Poland, (Invited Speaker),

Title of talk: Recent development in the theory of the weighted Hardy inequalities;

- 2010 (11-17 September), Nonlinear Analysis, Function Spaces and Applications (NAFSA 9) September 11 - 17, 2010, Trest Castle, Czech Republic member of the organizing committee;

- 2010 (June 28-July 2) The Jozef Marcinkiewicz Central conference, Poznan, Poland, (Speaker),

Title of talk: Calderón-type interpolation theorem for operators with nonstandard endpoint behaviour and applications to sharp sobolev embeddings;

- 2010 (June 17, 2010), Seminar in functional analysis and application, Universidade de Aveiro, Aveiro, Portugal;

Title of talk: Calderón-type interpolation theorem for operators with nonstandard endpoint behaviour and applications to sharp sobolev embeddings;

- 2010 (May 19) Analysis seminar, University of Jyväskylä, Finland,

Title of talk: Calderón-type interpolation theorem for operators with nonstandard endpoint behaviour and applications to sharp sobolev embeddings;

- 2010 (April 14), Seminar at the Department of Mathematics, Lulea University of Technology, Lulea, Sweden,
Title of talk: Some open problems in the weighted Hardy inequality;
- 2010 (March 30), Seminar in the Department of Mathematics and Art, Ahi Evra University, Kirsehir, Turkey,
Title of talk: Reverse Hardy inequality;
- 2010 (January 22-27), The Joint Mathematical Conference CSASC 2010, (XIth Conference of Czech Mathematicians), Prague, Czech Republic, (Invited Speaker)
Title of talk: Calderón-type interpolation theorems and applications to sharp Sobolev embeddings;
- 2009(March 4-8) 4th World Conference on 21st Century Mathematics 2009, Abdus Salam School of Mathematical Sciences, GC University Lahore, Pakistan, (Invited Speaker),
Title of talk: Optimal embeddings of Bessel-Potential-type spaces into generalized Hölder spaces involving k -modulus of smoothness;
- 2008(July 6-12) Workshop on Function Spaces and Applications, Freiburg/Unstrut (Germany), (Speaker),
Title of talk: Interpolation orbits and optimal Sobolev's embeddings;
- 2007(August 13-18) 6th International ISAAC (International Society for Analysis, its Applications and Computation) congress, Ankara, Turkey, (Speaker),
Title of talk: Optimal Sobolev's embeddings;
- 2007(May 21), Analysis seminar, University of Helsinki, Finland,
Title of talk: Sobolev's embeddings and interpolation in the Lorentz spaces;
- 2007 (May 17) Analysis seminar, University of Jyväskylä, Finland,
Title of talk: Interpolation Orbits and optimal Sobolev's embeddings;

- 2007(May 15), Analysis seminar, University of Oulu, Finland,
Title of talk: The optimal embedding for the Calderón type spaces and the J-method spaces;
- 2006 (September 14), Seminar in functional analysis and application, Universidade de Aveiro, Portugal,
Title of talk: " A reduction theorem for supremum operators " ;
- 2005 (September 11-17), Workshop on Fractal Analysis, Eisenach, Germany, (Speaker),
Title of talk: Integral operators on metric spaces;
- 2005 (May 26), University of Helsinki, Finland,
Guest lecture: A non- doubling Trudinger inequality;
- 2005 (May 6), University of Jyväskylä , Finland,
Visitor lecture: Optimal embeddings of Bessel-potential-type spaces into Lorentz- Karamata spaces;
- 2004 (December 8), Seminar at the Department of Mathematics, Lulea University of Technology, Lulea, Sweden,
Title of talk: Embeddings and Duality theorems for weak classical Lorentz spaces;
- 2004 (October 21), Seminar in functional analysis and application, Universidade de Aveiro, Portugal,
Title of talk: An equivalence theorems for some scales of integral conditions related to Hardy's inequality;
- 2004 (April 25), Seminar in Problems of Modern Analysis, Technion, Haifa (Israel),
Title of talk: Functional properties of the space $S_p(w)$;
- 2004 (April 19), Analysis seminar, Bar-Ilan University Ramat Gan, Israel,

Title of talk: A new type of symmetric spaces;

- 2003 (July 21-25), The Wladyslaw Orlicz Centenary Conference and function spaces VII, Poznan (Poland), (Speaker),

Title of talk: Boundedness of Classical operators on Lorentz spaces;

- 2003 (April 14), Seminar in Problems of Modern Analysis, Technion, Haifa (Israel),

Title of talk: Stability of the real interpolation method;

- 2002 (November 7-9), Real analysis symposium, Kagoshima University, Kagoshima (Japan), (Invited Speaker),

Title of talk : Integral operators defined on metric spaces;

- 2002 (September 25-28), Autumn Conference Mathematical Society of Japan, Shimane University, Matsue,(Japan), (Invited Speaker),

Title of talk: Discretization and anti-discretization of function spaces;

- 2002 (May 22-30), International Conference in Analysis in honor of Y.Brudnyi, Technion, Haifa (Israel),(Speaker),

Title of talk: Duality principles in Lorentz spaces and embeddings;

- 2001 (June, 28 - July, 4), International Conference on Function Spaces, Differential Operators, and Nonlinear Analysis in honor of Hans Triebel on his 65th birthday, Teistungen (Germany)(Speaker),

Title of talk: A new characterization of the associate space to $\Gamma^p(v)$;

- 2000 (August 17-22), Conference on Function Spaces, Interpolation Theory, and related topics, in honor of Jaak Peetre on his 65th birthday, Lund University, Sweden, (Speaker),

Title of talk: Duality principles and reduction theorems;

- 1998 (May 31 -June 6), Spring School "Nonlinear analysis, Function Spaces, and Applications 6", Prague, Czech Republic, (Speaker),

Title of talk: Certain Volterra integral operators in weighted rearrangement invariant Banach function spaces;

- 1996 (June 17-20), 5th International Conference on Harmonic Analysis and Partial differential equations, El Escorial, Spain, (Speaker),

Title of talk: Two-weighted mixed inequalities in Orlicz classes for fractional maximal functions defined on homogeneous type spaces;

- 1995 (September 3-9), International conference of Function Spaces, Differential Operators and Nonlinear Analysis, Paseky nad Jizerou, Czech Republic, (Speaker),

Title of talk: Weighted inequalities for one-sided maximal functions in Orlicz classes;

- 1994 (May), Mathematical Institute, Academy of Sciences of the Czech Republic, Prague, (Speaker),

Title of talk: Criteria of weight inequalities for integral transforms defined on homogeneous type spaces;

- 1994 (May 23-28), Spring School " Nonlinear analysis, Function Spaces, and Applications 5", Prague, Czech Republic,(Speaker),

Title of talk: Criteria of weighted inequalities in Orlicz classes for maximal functions defined on homogeneous type;

- 1994 (May 2-6), International conference of Topological Vector Spaces, Algebras and Related Areas, McMaster University, Hamilton, Canada, (Speaker),

Title of talk: Criteria of weight inequalities for integral transforms defined on homogeneous type spaces;

- 1991 (June 6-11), International symposium in Continuum Mechanics and Related Problems of Analysis. Tbilisi, Georgia, (Speaker),

Title of talk: Weak type weighted inequalities for maximal functions with respect to the general basis;

- 1990 (May 21-25), Spring School "Nonlinear analysis, Function Spaces, and Applications 4", Roudnice nad Labem, Czechoslovakia,(Speaker),

Title of talk: Hilbert transform in Zygmund classes, Maximal functions in Morrey-Campanato spaces.

Short stays and invited research visits:

- Tbilisi State University, Tbilisi, Georgia, four weeks in 2014, (Supported by Shota Rustaveli National Science Foundation);
- Akdeniz University, Antalya, Turkey 6 days in 2014, (invited research visit);
- Beijing Normal University, Beijing, China, 24 days in 2014, (exchange programme);
- Karlstad University, Karlstad, Sweden, 6 days in 2014, (invited research visit);
- Ankara university(Ankara), Kirikkale university (Kirikkale) and Ahi Evra University (Kirsehir), Turkey, 9 days in 2014, (exchange programme);
- Lulea University of Technology, Sweden. 9 days in 2014, (invited research visit);
- Universidad Complutense de Madrid, 8 days in 2013, (invited research visit);
- Tbilisi State University, Tbilisi, Georgia, three weeks in 2013, (Supported by Shota Rustaveli National Science Foundation);
- Tbilisi State University, Tbilisi, Georgia, four weeks in 2013, (Supported by Shota Rustaveli National Science Foundation);
- Universidade de Coimbra, Portugal, two weeks in 2013, (invited research visit);
- Tbilisi State University, Tbilisi, Georgia, three visits all together nine weeks in 2013, (Supported by Shota Rustaveli National Science Foundation);
- Ankara university(Ankara) , Kirikkale university (Kirikkale) and Ahi Evra University (Kirsehir), Turkey, 10 days in 2013, (exchange programme);

- Lulea University of Technology, Sweden. two weeks in 2013, (invited research visit);
- Istituto per le Applicazioni del Calcolo "Mauro Picone" - UOS di Napoli, Italy, 8 days in 2012, (invited research visit);
- L.N. Gumilyov Eurasian National University, Astana, Kazakhstan, two weeks in 2012, (invited research visit);
- Tbilisi State University, Tbilisi, Georgia, four weeks in 2012, (Supported by Shota Rustaveli National Science Foundation);
- Universidade de Coimbra, Portugal, two weeks in 2012, (invited research visit);
- Ankara university(Ankara), Kirikkale university (Kirikkale) and Ahi Evra University (Kirsehir), Turkey, 10 days in 2012, (exchange programme);
- Tbilisi State University, Tbilisi, Georgia, three weeks in 2012, (Supported by Shota Rustaveli National Science Foundation);
- Lulea University of Technology, Sweden. 8 days in 2012, (invited research visit);
- Cardiff University, Cardiff, UK, one week in 2012, (invited research visit);
- Lulea University of Technology, Sweden. 10 days in 2011, (invited research visit);
- Centre de Recerca Matemàtica (CRM), Bellaterra, Barcelona, Spain, one month in 2011, (invited research visit);
- Universidade de Coimbra, Portugal, two weeks in 2011, (exchange programme);
- Universidade de Coimbra, Portugal, two weeks in 2010, (exchange programme);
- Jyväskylä University, 10 days in 2010, (invited research visit);

- Lulea University of Technology, Sweden. four weeks in 2010, (invited research visit);
- Ahi Evra University, Kirsehir, Turkey, one week in 2010, (invited research visit);
- Universidad Complutense de Madrid, 10 days in 2010, (invited research visit);
- Universidade de Coimbra, Portugal, two weeks in 2009, (exchange programme);
- Universidade de Aveiro, Portugal, one week in 2008, (exchange programme);
- Universidade de Coimbra, Portugal, one week in 2008, (exchange programme);
- Brock University, St.Catharines, Canada, two months in 2008 (invited research visit);
- Cardiff University , Wales, UK, one week in 2007, (research visit supported by INTAS gran);
- Universidade de Coimbra, Portugal, one week in 2007, (exchange programme);
- Universidade de Aveiro, Portugal, one week in 2007, (exchange programme);
- University of Helsinki, Finland, one week in 2007, (exchange programme);
- University of Jyväskylä, Jyväskylä, Finland, four weeks in 2007 (exchange programme);
- Universidade de Coimbra, Portugal, one week in 2006, (exchange programme);
- Universidade de Aveiro, Portugal, one week in 2006, (exchange programme);
- University of Barcelona, Spain, one week in 2006, (invited research visit);

- University of Helsinki, Finland, one week in 2005, (invited research visit);
- University of Jyväskylä, Jyväskylä, Finland, four weeks in 2005 (exchange programme);
- Friedrich-Schiller-University Jena, Jena, Germany, one week in 2005 (invited research visit);
- Lulea University of Technology, Sweden, two weeks in 2004, (invited research visit);
- Universidade de Coimbra, Portugal, two weeks in 2004, (invited research visit);
- Universidade de Aveiro, Portugal, two weeks in 2004, (invited research visit);
- Cardiff University , Wales, UK, one week in 2004, (research visit supported by Leverhulme Trust Grant);
- Technion, Haifa, Israel, three weeks in 2004, (exchange programme);
- Weizmann Institute of Science, Rehovot, Israel, one week in 2004, (exchange programme);
- University of Jyväskylä, Jyväskylä, Finland, three weeks in 2003 (exchange programme);
- Cardiff University, Cardiff, UK, two weeks in 2003 (research visit supported by Leverhulme Trust Grant);
- Weizmann Institute of Science, Rehovot, Israel, three weeks in 2003 (exchange programme);
- Okayama University, Okayama, Japan, tree weeks in 2002 (exchange programme);
- Osaka Kyoiku University, Osaka, Japan, one week in 2002 (exchange programme);
- Hokkaido University, Sapporo, Japan, one week in 2002 (exchange programme);

- Waseda University, Tokyo, Japan, one week in 2002 (exchange programme);
- Nara Women's University, Nara, Japan, one week in 2002 (exchange programme);
- Weizmann Institute of Science, Rehovot, Israel, one week in 2002 (research visit supported by NATO);
- Cardiff University, Cardiff, UK, two weeks in 2002 (research visit supported by Leverhulme Trust Grant);
- Cardiff University, Cardiff, UK, tree weeks in 2001 (research visit supported by Leverhulme Trust Grant);
- Brock University, St.Catharines, Canada, two months in 2001(invited research visit);
- McMaster University, Hamilton, Canada, one week in 2001 (invited research visit);
- Sussex University, Brighton, UK, one week in 1998 (invited research visit);
- Sussex University, Brighton, UK, one week in 1997 (invited research visit);
- McMaster University, Hamilton, Canada, one week in 1994 (invited research visit);
- University, St.Catharines, Canada, two months in 1994(invited research visit).

Grants:

1. Project Title: Weighted inequalities for integral operators. project period of time: 1997-1999 , awarded by the Georgian Academy of Sciences, grant no. 1.7;
2. Project Title Function spaces, weighted inequalities and approximation numbers for integral operators, project period of time 2001-2003, awarded by the Leverhulme Trust, Grant No. F/00407/E, UK;

3. Project Title: Weighted inequalities, function spaces, interpolation, extrapolation, approximation and entropy numbers, project period of time 2002-2003, awarded by the NATO-grant reg. No PST. CLG. 978694;
4. Project Title Function spaces and weighted inequalities for integral operators, project period of time 2001-2003, awarded by the Grant Agency of the Czech Republic, research grant no. 201/01/0333;
5. Project Title Function spaces and weighted inequalities for integral operators, project period of time 2005-2007, awarded by the Grant Agency of the Czech Republic, research grant no. 201/05/2033;
6. Project Title Functional spaces and applications to partial differential equations, project period of time, 2006-2008, awarded by the INTAS project 8157;
7. Project Title: Interpolation approach to embedding involving Sobolev, Besov and Hölder spaces, project period of time 2006 - 2008, awarded by the GRICES (Portugal)/ASCR, collaboration grant;
8. Project Title: Function spaces and interpolations, project period of time 2007-2008, awarded by the AV CR and VŠ ČR/DAAD SRN, PPP Project No. D 15 - CZ 2/07-08;
9. Project Title Function spaces and weighted inequalities and interpolation , 2008 -2012, awarded by the Grant Agency of the Czech Republic, research grant no. 201/08/0383;
10. Project Title Interpolation approach to embedding involving Sobolev, Besov and Hölder type spaces, project period of time 2009 - 2010, awarded by the FCT(Portugal)/ASCR collaboration grant;
11. Project Title: Inequalities for moduli of smoothness and their applications to the study of the embeddings between Sobolev and Besov type spaces, project period of time 2011, awarded by the FCT(Portugal)/ASCR collaboration grant;
12. Project Title: Geometry of function spaces, interpolation and embedding theorems, project period of time 2012-2014, awarded by Shota Rustaveli National Science Foundation, research grant no. 13/06;

13. Project Title Function spaces and weighted inequalities and interpolation II, 2013 -2017, awarded by the Grant Agency of the Czech Republic, research grant no. P201/13/14743S;
14. Project Title: Operators in some function spaces and their applications in Fourier Analysis, project period of time 2013-2016, awarded by Shota Rustaveli National Science Foundation, research grant no. 31/48;
15. Project Title: Function spaces, weighted inequalities for integral operators and problems of summability of Fourier seriesShota Rustaveli National Science Foundation grant no. project period of time 2014-2017, awarded by Shota Rustaveli National Science Foundation, research grant no. DI/9/5-100/13.

Publication activity

Monographs

1. I. Genebashvili, A. Gogatishvili, V. Kokilashvili and M. Krbec
Weight theory for integral transforms on spaces of homogeneous type.
Pitman Monographs and Survey in Pure and Applied Mathematics 92,
Longman, Harlow, 1998. MR1791462 (2003b:42002)

Research papers in academic journal

2. A. Gogatishvili
Fractional maximal functions with respect to the basis of the convex comperable sets in weighted Lebesgue spaces, (Russian. English and Georgian Summaries), Soobshch. Akad. Nauk Grusin. SSR, 129(1988), no. 2, 273 – 275. MR0953054 (89g:42033)
3. A. Gogatishvili
Weighted inequalities for potentials in spaces of homogeneous type, (Russian. English and Georgian Summaries), Soobshch. Akad. Nauk Grusin. SSR, 129(1988), no. 3, 493 – 495. MR0953066 (89i:42033)
4. A. Gogatishvili
Riesz transforms and maximal functions in $\varphi(L)$ classes, (Russian and Georgian Summaries), Soobshch. Akad. Nauk Grusin. SSR, 137(1990), no. 3, 489 - 492. MR1087544 (91j:42009)
5. A. Gogatishvili, V.Kokilashvili and M.Krbec
Maximal functions in the classes $\varphi(L)$, (English, Russian original), Soviet Math. Dokl., 42(1991), no. 2, 488 – 490; translation from Dokl. Akad. Nauk SSSR, 314(1990), no. 3, 534 – 536. MR1094013 (92c:42018)

6. A. Gogatishvili
Maximal functions with respect to the basis of the comperable convex sets in weighted Lebesgue spaces, (Russian. English Summary), Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Grusin. SSR, 95(1990), 20 – 38. MR1119755 (92h:42034)
7. A. Gogatishvili
Weighted inequalities for vector-valued fractional maximal functions, (Russian. English Summary), Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Grusin. SSR, 98(1991), 9 – 18. MR1221298 (94e:26037)
8. A. Gogatishvili
Weak type weighted inequalities for maximal functions with respect to the general basis, (Russian and Georgian Summaries), Soobshch. Akad. Nauk Grusin. SSR, 145(1992), no. 2, 249 – 252. MR1248367 (94m:42040)
9. A. Gogatishvili
General weak-type inequalities for maximal operator and Riesz transforms, (Russian and Georgian Summaries), Soobshch. Akad. Nauk Grusin. SSR, 146(1992), no. 3, 497 – 500. MR1247940 (94m:42041)
10. A. Gogatishvili
General weak type inequalities for maximal operators and singular integrals, (Georgian Summary), Proc. A.Razmadze Math. Inst., 101(1992), 47 – 63. MR1251273 (95e:42015)
11. A. Gogatishvili
Riesz transforms and maximal functions in $\varphi(L)$ classes, (Georgian Summary), Proc. A.Razmadze Math. Inst., 102(1993), 59 – 70. MR1268817 (95d:42024)
12. A. Gogatishvili
Hilbert transform in Zygmund classes, (Georgian Summary), Proc. A.Razmadze Math. Inst., 102(1993), 71 – 84. MR1268818 (95d:47065)

13. A. Gogatishvili, V. Kokilashvili and M. Krbec
Maximal functions, $\varphi(L)$ classes and Carleson measures, (Georgian Summary), Proc. A.Razmadze Math. Inst., 102(1993), 85 – 97.
MR1268819 (95e:42016)
14. A. Gogatishvili, L.Pick
Weighted inequalities of weak and extra-weak type for the maximal operator and Hilbert transform, Czechoslovak Math. J., 43(118) (1993), no.3, 547 – 566. MR1249621 (95i:42013)
15. I. Genebashvili, A. Gogatishvili and V. Kokilashvili
Criteria of general weak type inequalities for integral transforms with positive kernels, (English and Georgian Summaries), Proc. Georgian Acad. Sci., Math., 1 (1993), no. 1, 11 – 35; Georgian Math. J., 1(1994), no. 1, 9 – 29. MR1251491 (94j:42030)
16. A. Gogatishvili, V. Kokilashvili
Criteria of weighted inequalities in Orlicz classes for maximal functions defined on homogeneous type spaces, (English and Georgian Summaries), Proc. Georgian Acad. Sci., Math., 1(1993), no. 6, 721 – 755; (English Summary), Georgian Math. J., 1(1994), no. 6, 641 – 673. MR1296573 (96b:42021)
17. A. Gogatishvili, V. Kokilashvili
Necessary and sufficient conditions for weighted Orlicz class inequalities for maximal functions and singular integrals I, (English Summary), Georgian Math. J., 2(1995), no. 4, 361 – 384. MR1344301 (96g:42010)
18. A. Gogatishvili, V. Kokilashvili
Necessary and sufficient conditions for weighted Orlicz class inequalities for maximal functions and singular integrals II, (English Summary), Georgian Math. J., 2(1995), no. 5, 445 – 468. MR1351334 (96m:42031)
19. I. Genebashvili, A. Gogatishvili and V. Kokilashvili
Solution of two-weight problems for integral transforms with positive kernel, (English Summary), Georgian Math. J., 3(1996), no. 4, 319 – 342. MR1397815 (97k:42029)

20. I. Genebashvili, A. Gogatishvili and V. Kokilashvili
Criteria of two-weighted inequalities for integral transforms with positive kernel and maximal functions, (English, Russian original) Dokl. Math., 54(1996), no. 3, 895 – 898, translation from Dokl. Akad. Nauk RAN, 351(1996), no.4, 448 – 451. MR1469056 (99c:42030)
21. A. Gogatishvili and V. Kokilashvili
Criteria of strong type two-weighted inequalities for fractional maximal functions, (English Summary), Georgian Math. J., 3(1996), no. 5, 423 – 446. MR1407384 (98m:42020)
22. A. Gogatishvili
Two-weighted mixed inequalities in Orlicz classes for fractional maximal functions defined on homogeneous type spaces, (English and Georgian Summaries), Proc. A.Razmadze Math. Inst., 112(1997), 23 – 56. MR1468961 (98m:42021)
23. A. Gogatishvili
Maximal functions and singular integrals on $L^{p,\varphi}$ spaces, Proc. A.Razmadze Math. Inst., 114(1997), 112 – 115. MR1638706 (99i:46017)
24. A.Gogatishvili and J.Lang
The generalized Hardy operator with kernel and variable integral limits in Banach function spaces, J. Inequal. Appl., 4(1999), no. 1, 1 – 16. MR1733113 (2001f:47085)
25. A. Gogatishvili
Fractional maximal functions in weighted Banach function spaces, Real Analysis and Exchange, 25(1999/2000), no.1, 291 – 316. MR1758007 (2001g:42029)
26. A.Gogatishvili and L.Pick
Duality principles and reduction theorems, Math. Inequal. Appl., 3(2000), no. 4, 539 – 558. MR1786395 (2002c:46056)
27. A.Gogatishvili and T.Sobukawa
On the extrapolation estimates, Math. Inequal. Appl., 6(2003), no. 1, 97 – 104. MR1950654 (2003k:46030)

28. A.Gogatishvili and L.Pick
Discretization and antidiscretization of rearrangement–invariant norms, *Publ. Mat.*, 47(2003), no. 2, 311 – 358. MR2006487 (2005f:46053)
29. A. Gogatishvili, A. Kufner, L.-E. Persson and A. Wedestig
An equivalence theorems for some scales of integral conditions related to Hardy’s inequality with applications, *Real Analysis and Exchange*, 29(2003/04), no. 2, 867 – 880. MR2083821 (2005f:26043)
30. A. Gogatishvili, J. S. Neves and B. Opic
Optimality of embeddings of Bessel-potential-type spaces into Lorentz-Karamata spaces, *Proc. Roy. Soc. Edinburgh Sec. A*, 134(2004), no. 6, 1127 – 1147. MR2107486 (2005h:46044)
31. A. Gogatishvili, B. Opic and W. Trebels
Limiting reiteration for real interpolation with slowly varying functions, *Math. Nachr.*, 278(2005), no. 1-2, 86 – 107. MR2111802 (2005k:46048)
32. A. Gogatishvili, J. S. Neves and B. Opic
Optimality of embeddings of Bessel-potential-type spaces into generalized Hlder spaces, *Publ. Mat.*, 49(2005), no. 2, 297 – 327. MR2177070 (2006f:26002)
33. M. J. Carro, A. Gogatishvili, J. Martin and L. Pick
Function properties of rearrangement invariant spaces defined in term of oscillations, *J. Funct. Anal.*, 229(2005), no. 2, 375 – 404. MR2182593 (2006g:46051)
34. A. Gogatishvili and P. Koskela
A non-doubling Trudinger inequality, *Studia Math.*, 170(2005), no. 2, 113 – 119. MR2184101 (2007b:26041)
35. A. Gogatishvili and L. Pick
Embeddings and duality theorems for weak classical Lorentz spaces, *Canad. Math. Bull.*, 49(2006), no. 1, 82 – 95. MR2198721 (2006k:26024)

36. A. Gogatishvili, A. Kufner, L.-E. Persson and A. Wedestig
Compactness of the Hardy operator and its limiting case, *Soochow J. Math.*, 32(2006), no. 1, 21 – 35. MR2218524 (2006m:26031)
37. A. Gogatishvili, B. Opic and L. Pick
Weighted inequalities for Hardy-type operators involving suprema, *Collect. Math.*, 57(2006), no.3, 227 – 255. MR2264321 (2007g:26019)
38. A. Gogatishvili and V.I. Ovchinnikov
The optimal embedding for the Calderon type spaces and the J-method spaces, *Vestnik VGU, Ser. Phys. Math.*, 2006. no. 1, p.145 – 151.
39. A. Gogatishvili, J. S. Neves and B. Opic
Sharpness and non-compactness of embeddings of Bessel-potential-type spaces, *Math. Nachr.*, 280(2007), no. 9-10, 1083 – 1093. MR2334661 (2008f:46044)
40. A. Gogatishvili, M. Johansson, C. A. Okpoti and L.-E. Persson
Characterization of embeddings in Lorentz spaces, *Bull. Austral. Math. Soc.*, 76 (2007), no. 1, 69 – 92. MR2343440 (2008j:46017)
41. A. Gogatishvili and L. Pick
A reduction theorem for supremum operators, *J. Comput. Appl. Math.*, 208(2007), no.1, 270 – 279. MR2347749 (2009a:26013)
42. A.Gogatishvili and V.I.Ovchinnikov
Interpolation orbits and optimal Sobolev's embeddings, *J. Funct. Anal.*, 253(2007) no. 1, 1 – 17. MR2362416 (2008k:46096)
43. W. D. Evans, A. Gogatishvili and B. Opic
The reverse Hardy inequality with measures, *Math. Inequal. Appl.*, 11(2008), no. 1, 43 – 74. MR2376257 (2008m:26029)
44. A. Gogatishvili, K. Kuliev and G. Kulieva
Some conditions characterizing the "Reverse" Hardy inequality, *Real Anal. Exchange*, 33(2007/2008), no. 1, 249 – 258.
MR2402877 (2009b:26030)

45. M. Carro, A. Gogatishvili, J. Martin and L. Pick
Weighted inequalities involving two Hardy operators with applications to embeddings of function spaces, *J. operator Theory*, 59(2008), no. 2, 309 – 332. MR2411048 (2009f:26024)
46. A. M. Caetano, A. Gogatishvili and B. Opic
Sharp embeddings of Besov spaces involving only logarithmic smoothness, *J. Approx. Theory*, 152(2008), no. 2, 188 – 214. MR2422148 (2010c:46079)
47. A.Gogatishvili, J.S.Neves and B.Opic
Optimal embeddings and Compact embeddings of Bessel-potential-type spaces, *Math. Zeitschrift*, 262(2009), no. 3, 645 – 682. MR2506313 (2010c:46074)
48. A. Gogatishvili, A. Kufner and L.E. Persson
Some new scales of weight characterizations of the class B_p , *Acta Math. Hungar.*, 123(2009), no.4, 365 – 377. MR2506756 (2010b:42021)
49. A.Gogatishvili and L.Pick
Calderon-type theorems for operators of non-standard endpoint behavior, *Indiana Univ. Math. J.*, 58(2009), no.4, 1831 – 1852. MR2542981 (2010i:46117)
50. A.Gogatishvili, P. Koskela and N. Shanmugalinam
Interpolation properties of Besov spaces on metric spaces, *Math. Nachr.*, 283(2010), no. 2, 215 – 231. MR2542981 (2010i:46117)
51. A.Gogatishvili, J.Neves and B.Opic
Optimal embeddings of Bessel-potential-type spaces into generalized Holder spaces involving k -modulus of smoothness, *Potential Anal.*, 32(2010), no 3, 201 – 228. MR2595366 (2011d:46061)
52. A. Gogatishvili, A. Kufner and L.E. Persson
Some new scales of characterization of Hardy's inequality, *Proc. Est. Acad. Sci.*, 59(2010), no. 1, 7 – 18. MR2647852 (2011d:26038)

53. A. Gogatishvili, J. Neves and B. Opic
 Sharp estimates of the k -modulus of smoothness of Bessel potentials, *J. London Math. Soc.*, 81(2010), no.3, 608 – 624. MR2650787 (2011k:46040)
54. V. Burenkov, A. Gogatishvili, V. Guliyev and R. Mustafayev
 Boundedness of the fractional maximal operator in local Morrey-type spaces, *Complex Var. Elliptic Equ.*, 55(2010), no. 8-10, 739 – 758. MR2674862 (2011f:42015)
55. A. Gogatishvili, J. Neves and B. Opic
 Compact embeddings of Bessel-potential-type spaces into generalized Hölder spaces involving k -modulus of smoothness, *Z. Anal. Anwend.*, 30(2011), no.1, 1 – 27. MR2764931 (2012c:46052)
56. V. Burenkov, A. Gogatishvili, V. Guliyev and R. Mustafayev
 Sufficient conditions for boundedness of the Riesz potential in local Morrey-type spaces, *Potential Anal.*, 35(2011), no. 1, 67 – 87. MR2804553 (2012d:42027)
57. A. Gogatishvili, R. Mustafayev.
 On a theorem of Muchenhaupt-Wheeden in generalized Morrey spaces, *Eurasian Math. J.*, 2(2011), no. 2, 134 – 138. MR2910836
58. A. Caetano, A. Gogatishvili and B. Opic
 Embeddings and the growth envelope of Besov spaces involving only slowly varying smoothness, *J. Approx. Theory*, 163(2011), no. 10, 1373 – 1399. MR2832731 (2012h:46060)
59. A. Gogatishvili and R. Mustafayev
 Dual spaces of local Morrey-type spaces, *Czechoslovak Math. J.*, 61(2011), no. 3, 609 – 622. MR2853078
60. A. Caetano, A. Gogatishvili and B. Opic
 Compact embeddings of Besov spaces involving only slowly varying smoothness, *Czechoslovak Math. J.*, 61(136)(2011), no. 4, 923 – 940. MR2886248

61. A.Gogatishvili and R. Mustafayev
The multidimensional reverse Hardy inequalities, *Math. Inequal. Appl.*, 15 (2012), no. 1, 1 – 14. MR2919426
62. A. Gogatishvili and R.Mustafayev
Equivalence of norms of Riesz potential and fractional maximal function in generalized Morrey spaces, *Collectanea Mathematica*, 63(2012), no. 1, 11 – 28. MR2887108
63. A.Gogatishvili, L.Pick and J.Schneider
Interpolation characterization of the rearrangement-invariant hull of a Besov space, *Revista Matemática Complutense*, 25(2012), no. 1, 267 – 283. MR2876928 (2012m:46041)
64. A.L. Bernardis, A. Gogatishvili, F.-J. Martín-Reyes, P. Ortega Salvador and L. Pick
The one-sided A_p conditions and local maximal operator, *Proceedings of the Edinburgh Mathematical Society*, 55(2012), no. 1, 79 – 104. MR2888442
65. A.Gogatishvili and V. D. Stepanov.
Operators on cones of monoton functions, *Doklady Mathematics*, 86(2012), no. 1, 562 – 565, translation from *Dokl. Akad. Nauk.*, 445 (2012), no. 6, 618 – 621. MR3050526
66. A.Gogatishvili and V. D. Stepanov
On integral operators on the cones of monotone functions, *Doklady Mathematics*, 86(2012), no. 2, 650-653, translation from *Doklady Akademii Nauk*, 446(2012), no. 4, 367 – 370. MR3053208
67. A. Gogatishvili, L.-E. Persson, V. D. Stepanov and P. Wall
On scales of equivalent conditions characterizing weighted Stieltjes inequality, *Doklady Mathematics*, 86(2012), no. 3, 738 – 739, translation from *Dokl. Akad. Nauk.* 447(2012), no. 1, 13 – 14. MR3075082
68. A. Gogatishvili, R. Mustafayev and L.-E. Persson,
Some new iterated Hardy-type inequalities, *Journal of Function Spaces and Applications*, vol. 2012, Article ID 734194, 30 pages, 2012. MR3000818

69. A.Gogatishvili and R.Mustafayev
New pre-dual space of Morrey Space, *J. Math. Anal. Appl.*, 397(2013), no. 2, 678 – 692. MR2979604
70. F.Cobos, A.Gogatishvili, B.Opic and L.Pick
Interpolation of uniformly absolutely continuous operators, *Math. Nachr.*, 286(2013), no. 5-6, 579 – 599. MR3048133
71. A.Gogatishvili, A. Kufner and L.-E. Persson
The weighted Stieltjes inequality and applications, *Math. Nachr.*, 286(2013), no. 7, 659 – 668. MR3060837
72. A. Fiorenza, A. Gogatishvili, and T. Kopaliani
Boundedness of Stein’s spherical maximal function in variable Lebesgue space and application to the wave equation, *Arch. Math.*, 100(2013), no. 5, 465 – 472. MR3057132
73. . A. Gogatishvili and V.D. Stepanov
Reduction theorems for operators on the cones of monotone functions, *J. Math. Anal. Appl.*, 405 (2013), no. 1, 156 – 172. MR3053495
74. A. Gogatishvili, P. Koskela and Y. Zhou
Characterizations of Besov and Triebel-Lizorkin Spaces on Metric Measure Spaces, *Forum Math.*, 25(2013), no. 4, 787 – 819. MR3089750
75. A. Gogatishvili and R. Mustafayev
New characterization of Morrey Space, *Eurasian Math. J.*, 4(2013), no.1, 54 – 64. MR3118891
76. A. Gogatishvili and V. D. Stepanov
Reduction theorems for weighted integral inequalities for the cones of monotone functions, *Russian Math. Surveys*, 68(2013), no. 4, 597 – 664, translation from *Uspekhi Mat. Nauk* 68(2013), no. 4, 3 – 68. MR3154814
77. A. Gogatishvili, R. Mustafayev and L.-E. Persson
Some new iterated Hardy-type inequalities: the case $\theta = 1$, *J. Inequal. Appl.*, 2013(2013), no 515.

78. A. Gogatishvili, L.-E. Persson, V. D. Stepanov and P. Wall
Some scales of equivalent conditions to characterize the Stieltjes inequality: the case $q < p$, *Math. Nachr.*, 287(2014), no. 2-3, 242 – 253. MR3163577
79. A.Gogatishvili, A. Danelia and T. Kopaliani
Local Hardy-Littlewood maximal operator variable Lebesgue spaces, *Banach Journal of Mathematical Analysis*, 8(2014), no.2, 229 – 244. MR3189553
80. A. Gogatishvili and R. Kerman
The Rearrangement-Invariant space, *Positivity*, 18 (2014), no. 2, 319 – 345. MR3215181
81. A.Gogatishvili, B.Opic, S.Tikhonov, and W.Trebels.
Ulyanov-type inequalities between Lorentz-Zygmund spaces, *J. Fourier Anal. Appl.*, 20(2014), no. 5, 1020 – 1049. MR3254611
82. A.Gogatishvili and T.Kopaliani.
On the Rubio De Francia's theorem in variable Lebesgue spaces, *Bulletin of TICMI*, 18(2014), no. 1, 3 – 10.
83. A. Fiorenza, A. Gogatishvili and T. Kopaliani,
Some estimates for imaginary powers of Laplace operators in variable Lebesgue spaces and applications, *J. of Contemporary Mathematical Analysis*, 49 (2014), no. 5, 232 – 240.
84. A.Gogatishvili, L.Pick and F. Soudský
Characterization of associate spaces of weighted Lorentz spaces with applications. *Studia Mathematica* 224 (2014), no. 1, 1 – 23.
85. A. Gogatishvili, U. Goginava and G. Tephnadze.
Relations between some classes of functions of generalized Bounded Variation, *Banach Center Publications* 102(2014), 89 – 98.
86. A.Gogatishvili and F. Soudský.
Normability of Lorenz spaces-an alternative approach, *Czechoslovak Math. J.* 64(139) 2014, no. 3, 581 - 597.

87. M. Agcayazi, A. Gogatishvili, K. Koca and R. Ch. Mustafayev
Commutators of maximal function, J. Math. Soc. Japan, 67 (2015),
no. 2, 581 – 593.

Papers accepted for publication

88. A. Gogatishvili, S. D. Moura, J. S. Neves and B. Opic
Embeddings of Sobolev-type spaces into generalized Hlder spaces in-
volving k-modulus of smoothness, Annali di Matematica Pura ed Ap-
plicata November 2013 DOI 10.1007/s10231-013-0383-1
<http://link.springer.com/article/10.1007/s10231-013-0383-1/fulltext.html>
89. A. Gogatishvili, and T. Kopaliani,
Maximal multiplier operators in $L_p(\cdot)(\mathbb{R}_n)$ spaces. arXiv:1312.7232
90. A. Caetano, A. Gogatishvili and B. Opic
Compactness in quasi-Banach function spaces, arXiv:1307.5466

Preprints and papers submitted for publication

91. A. Gogatishvili and R. Kerman
A new gauge functional characterizing a given Orlicz class, Preprint
241, Institute of Mathematics, AS CR, Prague. 2011-3-23 , pp. 8.
<http://www.math.cas.cz/preprint/pre-241.pdf>
92. C. Aykol, A.Gogatishvili and V.S. Guliyev
Associated Spaces of Generalized Classical Lorentz Spaces $\Gamma_{p,\psi,\phi}$. arXiv:1310.1169
93. A.Gogatishvili and T.Kopaliani
Extensions of Rubio De Francia’s extrapolation theorem in variable
Lebesgue spaces.and application Preprint arXiv:1407.5216v1

94. A.Gogatishvil and R.Ch. Mustafayev
 A note on boundedness of the Hardy-Littlewood maximal operator on Morrey spaces, Preprint IM-2015-1
http://www.math.cas.cz/fichier/preprints/IM_20150112105707_24.pdf
95. F. Dai, A. Gogatishvili, D. Yang and W. Yuan
 Characterizations of Sobolev Spaces via Averages on Balls

Papers in conference proceedings

96. A. Gogatishvili
 Fractional maximal functions with respect to the basis of the convex comperable sets in weighted Lebesgue spaces (Russian). In the book of collected works: Extremal problems, functional analyses and their applications, Moscow State University press 1988, pp.38 – 40.
97. A. Gogatishvili
 Potentials in weighted Lorentz spaces for critical exponent (Russian). In: Reports of Enlarged Sessions of the Seminar of I. N. Vekua Institute of Applied Mathematics vol. 3, no 2, Tbilisi University press 1988, pp.25 – 28.
98. A. Gogatishvili
 Riesz transforms and maximal functions in Morrey-Campanato type spaces and in weighted Zygmund spaces. In: Reports of Enlarged Session of the Seminar of I.N. Vekua institute of Applied mathematics, vol. 5, no 2, Tbilisi University press 1990, pp. 41 – 43.
99. A. Gogatishvili.
 Riesz transforms in weighted $L \log L$ classes (Russian). In: Union School on Operator Theory in Function Spaces, Abstracts of Lectures, Ulyanovsk 5.-12.9. 1990, p. 68.
100. A. Gogatishvili
 Weighted weak type inequalies for a strong maximal function. In: Abstracts of Symposium on continuum mechanics and related problems analysis, Tbilisi, 1991, p.52.

101. A. Gogatishvili
 General weak-type inequalities for the maximal operators defined in spaces of the homogeneous type. In: Reports of Enlarged Sessions of the Seminar of I.N. Vekua Institute of Applied Mathematics, vol. 7, no. 2, Tbilisi University press 1992, pp. 14 – 16.
102. I. Genebashvili, A. Gogatishvili and V. Kokilashvili
 Solutions of Some Weight Problems. Function spaces, differential operators and nonlinear analysis, (Friedrichroda, 1992), 264 – 273. Teubner-
 Texte Math., 133. Teubner, Stuttgart, 1993. MR1242588 (95a:42028)
103. A. Gogatishvili and V. Kokilashvili
 Criteria of weight inequalities for integral transforms defined on homogeneous type spaces. Topological vector spaces, algebras and related areas, (Hamilton, ON, 1994), 251 – 262. Pitman Res. Notes Math. ser., 316, Longman Sci. Tech., Harlow, 1994. MR1319388 (96a:42021)
104. A. Gogatishvili
 Weighted inequalities for one-sided maximal functions in Orlicz classes. Function spaces, differential operators and nonlinear analysis. Proceedings of the conference held in Paseky nad Jizerou, Czech Republic, September 3 – 9, 1995, Prague: Prometheus Publishing House, 201 – 205, 1996. MR1480940
105. A. Gogatishvili.
 Discretization and anti-discretization of function spaces, In the proceedings of the The Autumn Conference Mathematical Society of Japan, September 25-28, 2002, Shimane University, Matsue, 63-72.
106. A. Gogatishvili, S. Moritoh, M. Niwa and T. Sobukawa
 Interpolation theorems for block-Lorentz spaces. In the Proceedings of the International Symposium on Banach and Function Spaces, Kitakyushu, Japan, October 2-4, 2003, 215-223, Yokohama Publishers, 2004. MR2147608 (2006b:46023)
107. A. Gogatishvili, J. S. Neves and B. Opic
 Optimality of embeddings of Bessel-potential-type spaces, "Function spaces, differential operators and and nonlinear analysis" Proceedings

of the conference held in Milovy, Czech Republic, May 28- June2, 2004, Mathematical Institute of the Academy of Sciences of the Czech Republic, Praha, 97-112, 2005.

108. A. Gogatishvili Integral operators on metric spaces, Lecture Notes, Workshop on Fractal Analysis, September, 11-17, 2005, in Stockhausen/Eisenach (Germany).
http://users.minet.uni-jena.de/~cfa/notes/goga_ln.pdf
109. A. Gogatishvili, A. Kufner and L.E. Persson
An equivalence theorems with application to Hardy's inequality. In the book "Function Spaces, Differential Operators, General Topology, Problems of Mathematical Educations", Proceedings of the 3th International Conference dedicated to Lev Dmitrievich Kudryavtsev on the occasion of his eighty-fifth birthday, 278-298. M. 2008
110. W. D. Evans, A. Gogatishvili and B. Opic
The ρ -quasiconcave functions and weighted inequalities, Inequalities and Applications, Conference on Inequalities and Applications, Noszvaj (Hungary), September 2007. International Series of Numerical Mathematics, 157, Bandle, C., Gilnyi, A., Losonczi, L., Ples, Z. and Plum, M.(eds.), Birkhäuser Verlag, Basel, 2009. 121 – 132.