

# CURRICULUM VITAE

## George Giorgobiani

### 1. Personal data:

- First name: George
- Family name: Giorgobiani
- Date of birth: January 1, 1962
- Marital status: Married; One daughter

### 2. Current Job:

- Deputy Director at N. Muskhelishvili Institute of Computational Mathematics of the Georgian Technical University (since July 2014).
- Associate Professor at the Georgian Technical University, Faculty of Informatics and Control Systems, 2013 - 2017.

### 3. Mailing Addresses: 4, Grigol Peradze str., 0131, Tbilisi, Georgia, N. Muskhelishvili Institute of Computational Mathematics of the Georgian Technical University.

### 4. Tel.: Mobile phone (+995 593) 129107.

### 5. e-mail: giorgobiani.g@gtu.ge , compmathge@gmail.com

### 6. Education: 1978-83, Tbilisi State University, Faculty of Mechanics and Mathematics, Department of Probability Theory and Mathematical Statistics.

### 7. Academic degree: Candidate Degree of Phys. Math. Sciences (Ph.D.), 1990. Thesis: “Some Problems on the Rearrangements of Series in Infinite Dimensional Spaces”. Tbilisi State University; (Scientific Supervisor Prof. S.A. Chobanyan).

### 8. Job experience:

- Since July 2014. Deputy Director at N. Muskhelishvili Institute of Computational Mathematics of Georgian Technical University.
- Since 2013. Associate Professor at the Georgian Technical University, Faculty of Informatics and Control Systems, Department of Computational Mathematics.
- 2008 – 2014. Scientific Secretary at N. Muskhelishvili Institute of Computational Mathematics of Georgian Technical University.
- 1983 – 2014. Researcher at N. Muskhelishvili Institute of Computational Mathematics of Georgian Technical University, department of Probabilistic and Statistical Methods.
- 1990-1991. Invited Lecturer at the Tbilisi State University; the faculty of Cybernetics. Lectures on “Mathematical Models of Economics”.
- 2009-2010. Invited Lecturer at the Georgian Institute of Public Affairs (GIPA). Lectures on “The Elements of Applied Statistics”.
- 2009-2010. Invited Lecturer at Batumi Shota Rustaveli State University. Lectures on

“Financial Mathematics”.

**9. Main Research Field:** Functional Analysis, Probability Theory.

**10. Languages:** Georgian (native), English (fluent), Russian (fluent)

**Research Grants:**

1. 2016 – 2017. “STI International Cooperation Network for Eastern Partnership Countries – PLUS”. Acronym - “EaP PLUS”. Horizon 2020. Call: H2020-INT-INCO-2015;Topic: INT-02-2015. Proposal number: 692471. *Position – Participant*
2. 2014 - 2016. SRNSF, FR/539/5-100/13. ”Interrelation between signs and permutations in compact vector summation: theory and applications”. *Position – Researcher.*
3. 2013 - 2016. TEMPUS IV-6. “Modernization of Mathematics curricula for Engineering and Natural Sciences studies in South Caucasian Universities by introducing modern educational technologies (MathGeAr)”. Position - Participant Contact.
4. 2013 - 2016. FP7. FP7-INCO-2013-9. Project N° 609531. “Knowledge Transfer Community to bridge the gap between research, innovation and business creation (NoGAP)”. *Position – Participant Contact.*
5. 2010 - 2012. FP7 - INCO. 2010-6.1: Eastern Europe and South Caucasus. Project N° 266155. “Re-creation and building of capacities in Georgian ICT Research Institutes” (GEO-RECAP). <http://www.georecap.eu>. *Position – Primary Coordinator.*
6. 2009 - 2011, Grant # GNSF/ST08/3-384 “Maximum Inequalities for Rearrangements with Applications to Functional Analysis and Scheduling Theory”. *Position – Researcher.*
7. 2006 - 2008, Georgian National Science Foundation, Grant # GNSF/ST06/3-009 “Sign-permutation duality in linear analysis. Applications to scheduling theory”. *Position – Researcher.*
8. 2005 - 2006, (GRDF) Grant # GEM1-3328-TB-03 “Rearrangement of vectors, Theory and application in Probability, Statistics and Computer Networks. *Position – Researcher.*

**Publications:**

1. G. Giorgobiani. An Iterative Algorithm for the Solution of a Rectangular Game. Vichislitelnaia Matematika i Programirovanie. Trudi Inst. Vychislitel'noj Matematiki im. Muskhelishvili Ak. Nauk Gruzinskoj SSR (Proc. Inst. Comp. Math. (Tbilisi). XXIV: 2, 1984, 31-35. (in Russian)
2. G. Giorgobiani. Some remarks about the set of sums of a conditionally convergent series in a Banach Space. Proc. Inst. Comp. Math. (Tbilisi). XXXIII: I, 1988, 38-44. (in Russian)
3. G. Giorgobiani. The structure of the set of sums of a conditionally convergent series in a p-normed space. Bulletin of the Academy of Sciences of Georgia. 1988. v.130, N3. p. 481- 484. (Russian)

4. S.A. Chobanyan, G. Giorgobiani. A problem on rearrangements of summands in normed spaces and Rademacher sums. Lecture Notes in Math. Springer-Verlag. 1989. v. 1391. p. 33-46.
5. S.A. Chobanyan, G. Giorgobiani. Almost sure permutational convergence of vector random series and Kolmogorov's problem. New Trends in Probability and Statistics, 1 (Proceedings of Bakuriani Colloquium in Honour of Yu .V. Prokhorov, 1990), 93-105, Mokslas, Vilnius, VSP, Utrecht, 1991).
6. G. Giorgobiani. Almost everywhere convergent rearrangements of expansions with respect to orthogonal systems. Bulletin of the Academy of Sciences of Georgia. 1990. v.138, N2. p.257-260.
7. G. Giorgobiani. Convergent rearrangements of series of vector-valued functions. Georgian Mathematical Journal. v.7, (2000), N1. 43-51.
8. M. Nachkebia, J. Giorgobiani, G. Giorgobiani. Mathematical model of one process of environmental pollution. Georgian Engineering News. N1, 2009, 90 – 92.
9. G. Chelidze, S. Chobanyan, G. Giorgobiani, V. Kvaratskhelia. Greedy Algorithm Fails in Compact Vector Summation. Bulletin of Georgian National Academy of Sciences, v. 4, no. 2, 2010. pp. 5-7.
10. M. Nachkebia, J. Giorgobiani, G. Giorgobiani. Mathematical models of ecological pollution processes. GESJ, Computer Sciences and Telecom, No 1(30), 2011, 78-86.  
<http://gesj.internet-academy.org.ge>
11. L. Chobanyan, S. Chobanyan G. Giorgobiani. A maximum inequality for rearrangements of summands and its applications to orthogonal series and scheduling theory processes Bulletin of Georgian National Academy of Sciences, v.5. no.1, 2011. 16-20.
12. S. Chobanyan, G. Giorgobiani, V. Kvaratskhelia, V. Tarieladze. A note on the rearrangement theorem in a Banach space. Information and Computer Technologies – Theory and Practice: Proc. Int. Sc. Conference ICTMC-2010 Devoted to the 80th Anniversary of I.V. Prangishvili. Nova Science Publishers; Computer Science, Technology and Applications. 2012. pp. 531-535  
[https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=25352](https://www.novapublishers.com/catalog/product_info.php?products_id=25352)
13. J. Giorgobiani, M. Nachkebia, G. Giorgobiani. Game-Theoretic Models of Dynamic Duopoly. GESJ: Computer Sciences and Telecom. No. 2(34), 2012. pp. 34-38.  
<http://gesj.internet-academy.org.ge/download.php?id=1937.pdf>
14. J. Giorgobiani, M. Nachkebia, G. Giorgobiani. Markovian Decision Process for one Flow Control Problem. (Марковский процесс решения в одной многоканальной системе регулирования потоков). Georgian Engineering News. N 1, 2012 (Russian)
15. J. Giorgobiani, M. Nachkebia, G. Giorgobiani. Markov decision process for the long-term control of hydro station with reservoir. Int. Conf. Dedic. 90-th Anniv. of Georgian Technical University. Transactions, Basic Paradigms in Science and Technology Development for the 21<sup>st</sup> Century, p. 444 - 447, Tbilisi, Georgia, September 19-21, 2012  
[http://gesj.internet-academy.org.ge/conf\\_gtu90/ge/index\\_ge.php](http://gesj.internet-academy.org.ge/conf_gtu90/ge/index_ge.php)
16. Z. Tabagari, Z. Sanikidze, G. Giorgobiani. Elections Management Information Communication System VoterBallot. World Academy of Science, Engineering and Technology. 69, 2012, 1119-1121. <http://www.waset.org/journals/waset/v69/v69-213.pdf>
17. G. Giorgobiani, V. Tarieladze. On Complex Universal Series. Proceedings of A. Razmadze Mathematical Institute. 160 (2012), 53-63. <http://www.rmi.ge/proceedings/>

18. S. Chobanyan, G. Giorgobiani, V. Tarieladze. Signs and Permutations: Two Problems of the Function Theory. Proceedings of A. Razmadze Mathematical Institute. 160 (2012), 24-34. <http://www.rmi.ge/proceedings>.
19. G. Giorgobiani, V. Tarieladze. Special universal series. Several Problems of Applied Mathematics and Mechanics. Nova Science Publishers; Mathematics Research Developments, Editors: I. Gorgidze et al., 2013, p. 125-130.  
[https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=33373](https://www.novapublishers.com/catalog/product_info.php?products_id=33373)
20. J. Giorgobiani, M. Nachkebia, G. Giorgobiani. One Approach to the Regime Optimization of Water-Power System. GESJ: Computer Science and Telecommunications. 2013|No.2(38). p. 120- 124.  
[http://gesj.internet-academy.org.ge/ge/list\\_artic\\_ge.php?b\\_sec=comp](http://gesj.internet-academy.org.ge/ge/list_artic_ge.php?b_sec=comp)
21. S. Chobanyan, G. Giorgobiani, S. Levental, V. Kvaratskhelia, V. Tarieladze. On rearrangement theorem in Banach spaces. Georgian Mathematical Journal, 2014, Volume 21, Issue 2, p. 157 – 163.
22. G. Giorgobiani, V. Kvaratskhelia, M. Menteshashvili. Some Properties of Hadamard Matrices. Comp. Sci. Inf. Tech. (CSIT), 2015, 64 – 65 (*IEEE Conference Publications*).
23. G. Chelidze, G. Giorgobiani, V. Tarieladze. Sum Range of Quaternion Series. J. Math. Sci., v. 216, 4, 2016, p. 519-521.
24. G. Giorgobiani, V. Kvaratskhelia, M. Menteshashvili. Maximum Inequalities and their Applications to Hadamard Matrices. Proceedings of 11th Int. Conf. Comp. Sc. Inf. Tech. (CSIT 2017). Yerevan, Armenia, September 25 – 29, 2017, p. 198 – 199.  
<https://csit.am/2017/>

### **Monograph:**

1. G. Giorgobiani. Rearrangements of Series. J. Math. Sci., Springer, 123 p. Submitted in 2017.

### **Scientific Conferences:**

1. G. Giorgobiani. Sum ranges and universal series in topological vector spaces. Seminario, Dep. Geometría y Topología, Instituto de Matemática Interdisciplinar, Facultad de CC Matemáticas. Complutense University of Madrid. Madrid, Spain, November 21 – 24, 2017.
2. G. Giorgobiani, V. Kvaratskhelia, M. Menteshashvili. Maximum Inequalities and their Applications to Hadamard Matrices. 11th Int. Conf. Comp. Sc. Inf. Tech. (CSIT 2017). Yerevan, Armenia, September 25 - 29, 2017. <https://csit.am/2017/>
3. J. Giorgobiani, M. Nachkebia, G. Giorgobiani. Energy control issues. VIII Annual Int. Conf. of the Georgian Mathematical Union. Batumi, 4 – 8 September, 2017. <http://www.gmu.ge/Batumi2017/>
4. G. Chelidze, G. Giorgobiani, V. Tarieladze. Rearrangement theorem for the weak topology. XXXI International Enlarged Sessions of the Seminar of Ilia Vekua Institute of Applied Mathematics (VIAM) of Ivane Javakhisvili Tbilisi State University (TSU) Dedicated to the 110th Birthday Anniversary of Academician Ilia Vekua, Tbilisi, April 19–21, 2017. <http://www.viam.science.tsu.ge/eng/enlrg>

5. G. Giorgobiani. Some Problems on the Rearrangements of Series. 4th Int. Conf. "Lie Groups, Differential Equations and Geometry". 8 – 15 June, 2016, Modica, Italy
6. G. Giorgobiani, V. Kvaratskhelia, M. Menteshashvili. On Some Applications of Hadamard Matrices. South Caucasus Grid&Cloud Computing Workshop (SCCTW 2016). Tbilisi, Georgian Technical University, 3 – 7 October, 2016. <https://indico.cern.ch/event/572800/>
7. G. Giorgobiani, V. Kvaratskhelia, M. Menteshashvili. Some Properties of Hadamard Matrices. Proc. Int. Conf. CSIT. pg. 71 – 72. Yerevan, Armenia, September 28 – October 2, 2015. <https://csit.am/2015/index.php>
8. G. Chelidze, S. Chobanyan, **G. Giorgobiani**, V. Kvaratskhelia. Greedy Algorithm Fails in Compact Vector Summation. South Caucasus Grid&Cloud Computing Workshop. Tbilisi, Georgian Technical University, 20 – 24 October, 2014. <http://cadcam.ge/2014/index.php?do=pro>
9. **S. Chobanyan**, G. Giorgobiani, V. Tarieladze. A version of Transference Lemma. V Annual Int. Conf. of Georgian Mathematical Union, Batumi, 2014
10. S. Chobanyan, G. Giorgobiani, V. Tarieladze. Signs and permutations in Ulyanov's conjecture. IV International Conference of the Georgian Mathematical Union. The Book of Abstracts, p. 113. September 11-15, 2013, Batumi, Georgia. <http://www.gmu.ge/Files/Old%20conference/IV%20conference/index.html>
11. G. Chelidze, G. Giorgobiani, V. Tarieladze. Complex and Quaternion Universal Series. International Conference and Workshop Lie Groups, Differential Equations and Geometry; Supported by Marie Curie's International Research Staff Exchange Scheme Grants FP7-PEOPLE-2012-IRSES, 317721 and Shota Rustaveli National Science Foundation Grant CF/19/5-113/3. June 10-22, 2013, Batumi, Georgia.
12. Z. Tabagari, Z. Sanikidze, G. Giorgobiani. Elections Management Information Communication System VoterBallot. ICECECE 2012 : International Conference on Electrical, Computer, Electronics, Communication Engineering. Rome, Italy, September 26-27, 2012 <http://www.waset.org/conferences/2012/rome/icecece/>  
Paper at <http://www.waset.org/journals/waset/v69/v69-213.pdf>
13. G. Giorgobiani, V. Tarieladze. A version of the rearrangement theorem. III International conference of the Georgian mathematical union. 2-9 September, 2012, Batumi, Georgia.
14. J. Giorgobiani, M. Nachkebia, G. Giorgobiani. Markov decision process for the long-term control of hydro station with reservoir. International Scientific Conference dedicated to the 90-th anniversary of Georgian Technical University. Tbilisi, Georgia, September 19-21, 2012 [http://gesj.internet-academy.org.ge/conf\\_gtu90/ge/index\\_ge.php](http://gesj.internet-academy.org.ge/conf_gtu90/ge/index_ge.php)
15. L. Chobanyan, S. Chobanyan, G. Giorgobiani. Compact Vector Summation and its Applications to Problems of Scheduling Theory. International Conference dedicated to the 80-th anniversary of academician I.Prangishvili - "Information and Computer Technologies, Modeling, Control", Georgian Technical University, Tbilisi, November, 2010 [https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=25352](https://www.novapublishers.com/catalog/product_info.php?products_id=25352)
16. S. Chobanyan, G. Giorgobiani, A. Shangua, V. Tarieladze. Some notes on convergent rearrangements of series of random variables. XXIV Enlarged Sessions of the Seminar of VIAM, 21 April, 2010 <http://www.viam.science.tsu.ge/enlrg.htm>, <http://www.viam.science.tsu.ge/others/GS-2010.doc>
17. L. Chobanyan, S. Chobanyan, G. Giorgobiani. Compact Vector Summation and its Applications to Problems of Scheduling Theory. International Conference «Information

and Computational Technologies» (Dedicated to commemoration of Professors E. Dekanosidze and M. Tsuladze). N. Muskhelishvili Institute of Computational Mathematics & St. Andrew the First Called Georgian University of the Patriarchy of Georgia, Book of Abstracts, p. 150 -151, Tbilisi, 2-6 May, 2010 [http://www.compmath.ge/pdf/konferenciis-tezisebi-18\\_maisi.pdf](http://www.compmath.ge/pdf/konferenciis-tezisebi-18_maisi.pdf)

18. G. Giorgobiani, V. Kvaratskhelia. Some Properties of Hadamard Matrices. Proc. Int. Sci. Conf. dedicated to the 85-th anniversary of academician I. V. Prangishvili- "Information and Computer Technologies, Modeling, Control". pg. 377 – 379. Georgian Technical University, Tbilisi, November 3 – 5, 2010.
19. L. Chobanyan, S. Chobanyan, G. Giorgobiani. A maximum inequality for rearrangements of summands and its applications to orthogonal series and scheduling theory. Abstracts of contributed talks, p. 32. Fifth Congress of Mathematicians of Georgia, Batumi - Kutaisi, 9-11 October, 2009 [http://www.rmi.ge/~gmu/GMU\\_Conference/V\\_Kril\\_Tez.pdf](http://www.rmi.ge/~gmu/GMU_Conference/V_Kril_Tez.pdf)

### Organization of Events:

1. Organization of the Training Event of EC, FP7-INCO-2013-9, Project N° 609531, NoGAP, 17-18 November, 2014, GTU, Tbilisi, Georgia.
2. Organization of the Project Steering Meeting and the Trainings of EC, FP7-INCO-2013-9, Project N° 609531, NoGAP, 24-27 March, 2014, GTU, Tbilisi, Georgia.
3. Organization of the Training Event & Final Meeting of EC, FP7 Project #266155, GEO-RECAP, 15-16 September, 2012, GTU, Tbilisi, Georgia.
4. Organization of the Networking Event of EC, FP7 Project #266155, GEO-RECAP, 27-28 June, 2012, GTU, Tbilisi, Georgia.
5. Organization of the Training Event of EC, FP7 Project #266155, GEO-RECAP, 18-20 June, 2011, GTU, Tbilisi, Georgia.
6. The European Future Technologies Conference and Exhibition 2011 (FET 11); Organization of the Networking (satellite) Event of EC, FP7 Project #266155, GEO-RECAP, 4-6 May, 2011, Budapest, Hungary <http://www.fet11.eu/> <http://georecap.eu/index.php>
7. Organization of the Kick Off Meeting of EC, FP7 Project #266155, GEO-RECAP, 22-23 November, 2010, GTU, Tbilisi, Georgia.

### Dissertation Committees

1. 2017.10.27: Member of the PhD thesis defense committee of Archil Surmava. Georgian Technical University. Program code – 0401.
2. 2017.07.03: Member of the PhD thesis defense committee of Levan Labadze. Georgian Technical University. Program code – 0501.

### Higher Education Programme Accreditation Expert Group membership

1. Ivane Javakhishvili Tbilisi State University. Doctoral Program – “International Doctoral Program in Mathematics”. Expert Group member. Tbilisi, 2017.
2. Batumi Shota Rustaveli State University. Bachelors Program – „Financial Mathematics”. Expert Group Leader. Batumi 2017.