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## Phridon Dvalishvili

### Experience

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2016-Present Associate Professor of TSU  
2013-Present Associate Professor of GIPA  
2006-2016 Assistant Professor of TSU  
2009-2010 Associate Professor of Free University  
2002-2006 Docent of TSU  
1998-2010 *Associative professor ESM- Tbilisi business school*  
1991-2006 Senior Scientific Worker at Institute of Applied  
Mathematics  
Tbilisi State University, Differential Equations and Control Theory  
1988-1991 Research worker at Institute of Applied Mathematics of  
Tbilisi State University, Differential Equations and Control Theory  
1983-1988 Scientific Worker at Institute of Applied Mathematics of  
Tbilisi State University, Differential Equations and Control Theory

### Education

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Iv. Javakhishvili Tbilisi State University, Faculty of Cybernetics and A

Applied Mathematics. Specialty: Applied Mathematics 1978-1983  
Postgraduate courses at Iv. Javakhishvili Tbilisi State University  
1983 - 1987  
Candidate of Physical-mathematical Sciences, 1991

## Research Interests

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1. Systems science and engineering;
2. Mathematical modeling in engineering;
3. Operations research;
4. Computational Intelligence Systems(Genetic Algorithms, Neural Networks, Fuzzy Systems);
5. Differential Equations and Applications;
6. Optimal Control and Optimization Problems;
7. Simulation Modeling and Analysis;

## Teaching Courses

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Applied Statistics, Modeling and Simulation, Computational Intelligent Systems, Operations Research, Genetic Algorithms, Neural Networks.

## Publications and Presentations

1.Dvalishvili P, Alkhazishvili L, Iordanishvili M ON THE WELL-POSEDNESS OF THE CAUCHY PROBLEM FOR NONLINEAR FUNCTIONAL DIFFERENTIAL EQUATIONS WITH CONCENTRED AND DISTRIBUTED VARIABLES DELAYS Seminar of I.Vekua Institute of Applied Mathematics REPORTS, Vol. 43, 2017

2. P.Dvalishvili On the Well-Posedness of the optimal control problem with concentrated and distributed variable delays, 6<sup>th</sup> International conference Functional Differential Equations and Applications Ariel Israel 21-27 August 2017

P.Dvalishvili *On the Well-Posedness of the Cauchy problem for Some Classes of Functional Differential Equations (join with T. Tadumadze)* 8<sup>th</sup> Israeli-Czech Workshop on Functional Differential Equations Ariel Israel 21-27 August 2017

3. P.Dvalishvili T.Tadumadze Some Questions of The Qualitative Theory of Delay Differential Equations, Variation Formulas of Solutions, Optimization, Sensitivity Analysis International conference Theoretical and Applied Problems of Mathematics Sumqayit, Baky Azerbaijan 25-27 May 2017

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4. PH. DVALISHVILI, A. NACHAOUI, M. NACHAOUI, AND T. TADUMADZE ON THE WELL-POSEDNESS OF THE CAUCHY PROBLEM FOR A CLASS OF DIFFERENTIAL EQUATIONS WITH DISTRIBUTED DELAY AND THE CONTINUOUS INITIAL CONDITION Proceedings of the Institute of Mathematics and Mechanics, National Academy of Sciences of Azerbaijan, Volume 43, Number 1, 2017, Pages 146–160

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5. P.Dvalishvili T.Tadumadze Continuous Dependence of the Minimum of a Functional on Perturbation in Optimal Control Problems with Distributed and Concentrated Delays Springer Proceedings in Mathematics & Statistics Selected Contributions Volume 164(2016), 339-348

6. P.Dvalishvili T.Tadumadze On the well-posedness of the Cauchy problem for differential equations with distributed prehistory considering delay function perturbations *Transactions of A. Razmadze Mathematical Institute* 170 ELSEVIER (2016), 7-18.

7. P.Dvalishvili On the Well-Posedness of One Class Optimization Problem with the Distributed Prehistory 11<sup>th</sup> International conference Numerical Analysis and Optimization Days JANO11 Beni-Mellal, Morocco 27-29 April, 2016

8.P.Dvalishvili N.Gorgodze T.Tadumadze Variation formulas of solution for neutral functional-differential equations with regard for the delay function perturbation and the continuous initial condition Mem.Differential Equations Math. Phys.64(2015),163-168

9.P.Dvalishvili Continuous dependence of the minimum of the Bolza type functional on the parameters in the optimal control problem with distributed delay International conference on differential and difference equation & application Abstract Book, Amadora, Portugal May 18-22 2015

10.P.Dvalishvili A.Mosidze Optimal control of one economical problem using a principle of maximum Abstract Book, 20<sup>th</sup> International conference IFORS Barcelona Spain 13-18 July 2014([www.ifors2014.org](http://www.ifors2014.org))

11. P.Dvalishvili Continuous Dependence of the Minimum of the Bolza Type Functional on the Initial Data in Nonlinear Optimal Control Problems With Distributed Delay

[www.rmi.ge/eng/GUALITDE-2014/workshop.htm](http://www.rmi.ge/eng/GUALITDE-2014/workshop.htm)

12. P.Dvalishvili N.Gorgodze Variation formulas of solution for a for neutral functional-differential equations considering delay function perturbation and the continuous initial condition Abstract Book, V Annual International conference of the Georgian Mathematical Union Batumi, September 8-12 2014

13.P.Dvalishvili Modeling and optimal control of one commodity production and supply system

[www.rmi.ge/eng/GUALITDE-2013/workshop.htm](http://www.rmi.ge/eng/GUALITDE-2013/workshop.htm)

14. P.Dvalishvili A theorem on the continuity of the minimum of an integral functional for one class of optimal problems with distributed delay in controls Proceedings of A.Razmadze Mathematical Institute Vol .163(2013) 55-64 2013
15. P.Dvalishvili On the fuzzy matrix games and their solution in mixed strategies. 26<sup>th</sup> European Conference on Operational Research Book of Abstracts, Rome, Italy 1-4 July, 2013 www.euro2013
16. P.Dvalishvili On one method of constructing optimal mixed strategies in fuzzy antagonistic matrix games. Second International Conference "Modern Problems in Applied Mathematics" 4.09.2013-7.09.2013 Tbilisi
- 17.P.Dvalishvili On the well-posedness of a class of the optimal control problem with distributed delay. Seminar of I.Vekua Institute of Applied Mathematics, Reports, vol.39, 2013
18. P.Dvalishvili, B.Midodashvili Genetic algorithm approach in the minimization of the risk of financial portfolio. Proceedings The 6th International Conference on Application of Information and Communication Technologies(AICT2012), Tbilisi (<http://www.aict.info/2012/>) 344- 346
19. P.Dvalishvili On Well-Posedness with Respect to Functional for an Optimal Control Problem with Distributed Delays. International Workshop on the Qualitative Theory of Differential Equations QUALITDE-2011 Tbilisi 2011 ([www.rmi.ge/eng/QUALITDE-2011/workshop-2011.htm](http://www.rmi.ge/eng/QUALITDE-2011/workshop-2011.htm)).
- 20.G.Sirbiladze,I.Khutsishvili,P.Dvalishvili Decision Processing Fuzzy Technology to evaluate the Credit Risks of Investment Projects. 10th International Conference on Intelligent Systems Design and Applications, Cairo, Egypt, 103-108, <http://cig.iet.unipi.it/isda> 2010
21. G.Sirbiladze, B.Ghvaberidze, P.Dvalishvili On the decreasing of information measures in the information precision process. The Third International Conference „Problems of Cybernetics and informatics” Baku, Azerbaijan, pp 201-204, 2010. [www.pci.2010.science.az/6/08](http://www.pci.2010.science.az/6/08).
22. G.Sirbiladze, B.Ghvaberidze, P.Dvalishvili Modeling Decisions in the Dumpster-Shafer Belief Structure Uncertainty. Proceedings of the 11th WSEAS International Conference on Automatic Control Modeling and Simulation, Istanbul, Turkey, May 30 – June 1, 2009. 297-302. [www.wseas.org](http://www.wseas.org).
23. P.Dvalishvili Optimal strategy for one probability model of inventory control. On behalf of 90 years anniversary of Iv. Javakhishvili Tbilisi state university science conference computing 2008
- 24.T.Tadumadze,P.Dvalishvili Continuous Dependence of the Solution Differential Equation with Distributed Delay on the Initial data and the Right-

hand Side. Report, Seminar of Ilia vekua Institute of Applied mathematics, vol. 26-27, 2000-2001.

25. P. Dvalishvili Some problems in the quantitative theory of optimal control with distributed delay. (Russian). Tbiliss. Gos. Univ. Inst. Prikl. Mat., Trudy 41 (1991), 83-113

26. P. Dvalishvili On the continuity of the minimum of a functional in a nonlinear optimal control problem with distributed delay. (Russian). Soobshch. Akad. Nauk Gruzin. SSR 136 (1989), no. 2, 285-288