Curriculum Vitae (CV)

Name and surname: Jemal Rogava (Other transcriptions: Rogava, J./Rogava, Dzh. L./

Rogava, J. L./ Rogava, D. L./ Rogava Dž. L.)

Date and place of birth: May 16, 1946, Zugdidi, Georgia

Citizenship: Georgia

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Academic degree: Dr. Hab. (Doctor of Sci.) in Physics and Mathematics

Fields of research: Computational Mathematics, Mathematical Modeling, Differential Equation, Mathematical Physics

Education

№	Years	Name of the University/Institute, Country	Academic degree	Major / Specialty
1	1977-1982	Ilia Vekua Institute of Applied Mathematics (VIAM) of Ivane Javakhishvili Tbilisi State University (TSU), Georgia	Aspirant	Computational Mathematics
2	1963-1968	Ivane Javakhishvili Tbilisi State University, Georgia	Bachelor and Master of Science in Mathematics	Computational Mathematics

Work Experience

№	Years	Position	Department / Unit	Organization
1	2006-up to now	Associate Professor	Faculty of exact and natural sciences	Iv. Javakhishvili Tbilisi State University
2	2006-up to now	Senior Researcher	Department of Mathematical Modeling and Numerical Mathematics	TSU I. Vekua Institute of Applied Mathematics
3	2000-2006	Senior Researcher	Department of Numerical Analysis	TSU I. Vekua Institute of Applied Mathematics
4	1997-2006	Professor	Department of Informatics and	Iv. Javakhishvili Tbilisi State

		Computational Mathematics	University
5	1990-2000	Head of the laboratory	Applied Mathematics Scientific Research Laboratory	Georgian Technical University
6	1990-2000	Senior Researcher	Department of Shell Theory	TSU I. Vekua Institute of Applied Mathematics
7	1984-1990	Lecturer	Department of Informatics and Computational Mathematics	Iv. Javakhishvili Tbilisi State University

Participation in Research Projects (over the last 5years)

№	Years	Position / Responsibility	Project Title	Donor Organization
1	2012-2014	Main Executor	Development of analytical and numerical methods for calculating of cusped prismatic shells and beams #D-13/18	Georgian National Science Foundation
2	25.04.2013-24.04.2015	Main Executor	Modeling and calculating in practice widely-distributed structures with complicated geometry # 30/28	Georgian National Science Foundation

Membership of professional and scientific organizations and editorial board:

№	Membership of editorial board of collected articles/scientific journal
1	Seminar of I. Vekua Institute of Applied Mathematics (Member of editorial board)
2	Applied Mathematics, Informatics, and Mechanics (Deputy editor)
3	Reports of Enlarged Sessions of the Seminar of I. Vekua Institute of Applied Mathematics (Member of editorial board)
4	Proceedings of I. Vekua Institute of Applied Mathematics (Member of editorial board)

The total number of publications: 95

Selected Publications

1. Gulua, D. V.; Rogava, J. L. On the perturbation algorithm for the semidiscrete scheme for the evolution equation and estimation of the approximate solution error using semigroups. *Comput. Math. Math. Phys.* 56 (2016), no. 7, 1269–1292.
2. Rogava, Dzh. L.; Gulua, D. V. A perturbation algorithm for realizing finite-difference approximation of an abstract evolution problem, and an explicit error estimate of the approximate solution. (Russian) *Dokl. Akad. Nauk* 456 (2014), no. 4, 405--407; *translation in Dokl. Math.* 89 (2014), no. 3, 335–337.

3. Dikhaminjia, N.; Rogava, J.; Tsiklauri, M. Construction and investigation of a fourth order of accuracy decomposition scheme for nonhomogeneous multidimensional hyperbolic equation. *Numer. Funct. Anal. Optim.* 35 (2014), no. 3, 275–293.

4. Rogava, J.; Tsiklauri, M. Convergence of a semi-discrete scheme for an abstract nonlinear second order evolution equation. *Appl. Numer. Math.* 75 (2014), 22–36.

5. Rogava, J.; Tsiklauri, M. On local convergence of a symmetric semi-discrete scheme for an abstract analogue of the Kirchhoff equation. *J. Comput. Appl. Math.* 236 (2012), no. 15, 3654–3664.

6. Aburjania, G. D.; Rogava D. L.; Kharshiladze, O. A. Nonlinear dynamics of drift structures in a magnetized dissipative plasma. *Plasma Physics Reports*, 37 (2011), no. 6, 477-497.

7. Rogava, J.; Tsiklauri, M. Semi-discrete scheme and uniqueness theorem for Charney-Obukhov nonlinear equation. *Proc. I. Vekua Inst. Appl. Math.* 59/60 (2009/10), 43–59.

8. Rogava, Jemal; Tsiklauri, Mikheil. The fourth order of accuracy decomposition scheme for abstract hyperbolic equation. *Georgian Math. J.* 15 (2008), no.1, 165–175.

9. Kaladze, T.; Rogava, J.; Tsamalashvili, L.; Tsiklauri, M. First-and second-order accurate implicit difference schemes for the numerical resolution of the generalized Charney-Obukhov and Hasegawa-Mima equations. *Journal of Plasma Physics, Cambridge University Press*, 72 (2006), Part 6, 1045-1048.

10. Rogava, J.; Tsiklauri, M. High order accuracy decomposition schemes for evolution problem. *Lect. Notes TICMI* , 7 (2006), 164 pp.

11. Kaladze, T.; Rogava, J.; Tsamalashvili, L.; Tsiklauri, M. Investigation and Numerical Resolution of Initial-Boundary Value Problem for the Generalized Charney-Obukhov and Hasageva-Mima Equations. *Physics Letters A*, 343 (2005), 199-215.

12. Lomtadze, T.; Rogava, J.; Tsiklauri, M. Approximate solution of Cauchy problem for abstract hyperbolic equation using unitary group approximation method. *Proc. I. Vekua Inst. Appl. Math.* 54/55 (2004/05), 55–64.

13. Gegechkori, Zurab; Rogava, Jemal; Tsiklauri, Mikheil. The fourth order accuracy decomposition scheme for an evolution problem. *M2AN Math. Model. Numer. Anal.* 38 (2004), no. 4, 707–722.

14. Kaladze, T.; Rogava, J.; Tsamalashvili, L.; Tsiklauri, M. First- and second-order accurate implicit difference schemes for the Charney-Obukhov equation. *Phys. Lett. A*, 328 (2004), no. 1, 51–64.

15. Gegechkori, Zurab; Rogava, Jemal; Tsiklauri, Mikheil High degree precision decomposition method for the evolution problem with an operator under a split form. *M2AN Math. Model. Numer. Anal.* 36 (2002), no. 4, 693–704.

16. Gegechkori, Z.; Rogava, J.; Tsiklauri, M. High-degree precision decomposition method for an evolution problem. *Comput. Methods Appl. Math.* 1 (2001), no. 2, 173–187.

17. Gegechkori, Z.; Rogava, J.; Tsiklauri, M. Sequential-parallel method of high degree precision of Cauchy abstract problem solution. *Rep. Enlarged Sess. Semin. I. Vekua Appl. Math.* 14 (1999), no. 3, 45–48.

18. Rogava, Dzh. L. {\cyr Poludiskretnye skhemy dlya operatornykh differential'nykh uravneniĭ}. (Russian) [Semidiscrete schemes for operator-differential equations] *Izdatel'stvo "Tekhnicheskogo Universitet'', Tbilisi,* 1995. 288 pp.

19. Rogava, Dzh. L. On the error of Trotter-type formulas in the case of selfadjoint operators. (Russian) *Funktsional. Anal. i Prilozhen.* **27** (1993), no. 3, 84--86; *translation in Funct. Anal. Appl.* **27** (1993), no. 3, 217–219

20. Rogava, Dzh. L. Estimation of approximation error for the Trotter formula in the case of selfadjoint operators. (Russian) *Tbiliss. Gos. Univ. Inst. Prikl. Mat. Trudy* 42 (1991), 44–58

21. Rogava, Dzh. L. Convergence of an averaged scheme of summary approximation for an abstract parabolic equation. (Russian) *Soobshch. Akad. Nauk Gruzin. SSR* 136(1989), no. 1, 25–28.

22. Rogava, Dzh. L. A system of three-point operator equations and semidiscrete schemes for solving boundary value problems for an abstract elliptic equation with a monotone operator. (Russian) *Tbiliss. Gos. Univ. Inst. Prikl. Mat. Trudy* 25 (1988), 226–244, 279–280.

23. Rogava, D. L. An averaged semidiscrete scheme of summary approximation for an abstract hyperbolic equation. (Russian) *Current problems in mathematical physics, Vol. I (Russian) (Tbilisi, 1987),* 338–348, 491–492, *Tbilis. Gos. Univ., Tbilisi,* 1987.

24. Rogava, Dzh. L. An approximate solution of boundary value problems for an abstract elliptic equation with a constant operator by means of Chebyshev operator polynomials. (Russian) *Tbiliss. Gos. Univ. Inst. Prikl. Mat. Trudy* 18 (1986), 95–109.

25. Rogava, Dzh. L. Stability and convergence of the semidiscretization method for a hyperbolic equation. (Russian) *Soobshch. Akad. Nauk Gruzin. SSR*, 116 (1984), no. 2, 273–276.

26. Rogava, Dzh. L. Stability and convergence of certain three-layer semidiscrete schemes for evolution problems. (Russian) *Soobshch. Akad. Nauk Gruzin. SSR*, 114 (1984), no. 1, 57–60.

27. Rogava, Dž. L. Stability of the semidiscretization method for second-order hyperbolic differential-operator equations. (Russian) *Sem. Inst. Prikl. Mat. Dokl.* No. 12-13 (1978), 41–47.

28. Rogava, D. L. The study of the stability of semidiscrete schemes by means of Čebyšev orthogonal polynomials. (Russian) *Sakharth. SSR Mecn. Akad. Moambe* **83** (1976), no. 3, 545–548.