

Teimuraz Chanturia

This year Teimuraz Chanturia, a well-known Georgian mathematician, doctor of physical and mathematical sciences, professor, would have been 60.

T. Chanturia was born on February 3, 1941 in the Georgian city of Poti, in the family of schoolteacher of mathematics. In 1948-1958 he studied in Tbilisi secondary school No.1, and in 1958-1963 on Faculty of Mechanics and Mathematics of Tbilisi State University. After graduating the university he continued his studies there as a post-graduated student. In 1970 he defended his candidate thesis, and in 1981 his doctoral dissertation. In 1984 he was given the rank of professor.

From 1966 to his dying day he worked in I. Vekua Institute of Applied Mathematics of Tbilisi State University, where he passed this way from junior research fellow to head of department. Simultaneously he was teaching on Faculty of Mechanics and Mathematics of Tbilisi State University where gave special courses in qualitative theory of differential equations. From 1982 he also worked as a professor of the chair of higher mathematics of Georgian Technical University. He was a member of specialized councils awarding scientific degrees in A. Razmadze Mathematical Institute and Tbilisi State University.

T. Chanturia suddenly died on May 6, 1990 at the age of 49.

Professor T. Chanturia wrote more than 50 scientific papers in which he: established subtle existence criteria for the so called proper and singular solutions of essentially nonlinear equations and systems and found their asymptotics; solved the nonlinear Kneser problem for differential systems; developed a comparison method on the basis of which he established nonimprovable in a sense oscillation criteria for solutions of nonautonomous differential equations and systems (both linear and nonlinear), as well as for differential equations with deviated arguments. Fundamental results obtained by the scientist (integral oscillation criteria, a theorem on existence of at least one oscillatory solution, Sturm type theorems etc.) gave an accomplished form to the oscillation theory of higher order linear differential equations.

T. Chanturia devoted much of his time to his pupils and aspirants. Shortly before his death three of them successfully defended their candidate theses.

T. Chanturia was on of the organizers of the Enlarged Sessions of the Seminar of I. Vekua Institute of Applied Mathematics which used to collect specialists in ordinary differential equations from various scientific centers of USSR. He delivered a very interesting report on optimal integral oscillation criteria before the participants of the Session held at the end of April, 1990. This report turned out to be his last one. He did not live to see his joint with I. Kiguradze monograph *Asymptotic Properties of Solutions of Nonautonomous Ordinary Differential Equations* [49], [54] wherein most of his results are presented.

The blessed image of T. Chanturia, a talented mathematician, a prominent specialist of the qualitative theory of differential equations, a person of an extraordinary purity of soul, will be remembered forever by his friends and colleagues.

N. V. Azbelev, N. A. Izobov,
I. Kiguradze, V. A. Kondrat'ev, T. Kusano,
V. M. Millionshchikov, N. Kh. Rozov, V. Šeda

LIST OF MAIN PUBLICATIONS

1. Some remarks on one-dimensional singular differential operators. (Russian) *Soobshch. Akad. Nauk Gruzin. SSR* **52**(1968), No. 3, 571–576.
2. Nonoscillatory solutions of nonlinear second order differential equations. (Russian) *Soobshch. Akad. Nauk Gruzin. SSR* **55**(1969), No. 1, 17–20.
3. The asymptotic representation of solutions of nonlinear second-order differential equations. *Differentsial'nye Uravneniya* **6**(1970), No. 6, 948–961.
4. Asymptotic behaviour of the solutions of certain second-order nonlinear differential equations. (Russian) *Soobshch. Akad. Nauk Gruzin. SSR* **57**(1970), No. 2, 289–292.
5. A remarks on the asymptotic behavior of solutions of the equation $u'' + a(t)u = 0$ (with I. T. Kiguradze). (Russian) *Differentsial'nye Uravneniya* **6**(1970), No. 6, 1115–1117.
6. The asymptotic behavior of the solutions of certain nonlinear second order differential equations. (Russian) *Sem. Inst. Prikl. Mat. Tbiliss. Gos. Univ. Annot. Dokl.* **3**(1970), 59–61.
7. On the asymptotic properties of solutions of perturbed linear systems of differential equations. *Ann. Mat. Pura Appl.* (4) **94**(1972), 41–62.
8. The asymptotic representation of the solutions of the equation $u' = a(t)|u|^n \text{sign } u$. (Russian) *Differentsial'nye Uravneniya* **8**(1972), 1195–1206.
9. The asymptotic representation of the oscillatory solutions of a perturbed equation of Emden-Fowler type. (Russian) *Studies of certain equations of mathematical physics*, No. 1 (Russian), 5–15. *Izdat. Tbilis. Univ., Tbilisi*, 1972.
10. A problem of Kneser type for a system of ordinary differential equations. (Russian) *Mat. Zametki* **15**(1974), No. 6, 897–906.
11. Certain boundary value problems for strongly nonlinear second-order ordinary differential equations. (with C. V. Tabukasvili). (Russian) *Differentsial'nye Uravneniya* **10**(1974), No. 5, 943–946.
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13. A remark on the asymptotic behavior of the solutions of perturbed linear systems of differential equations. (Russian) *Tbiliss. Gos. Univ. Inst. Prikl. Mat. Trudy* **4**(1975), 29–34.
14. A comparison theorem for linear differential equations. (Russian) *Izv. Akad. Nauk SSSR, Ser. Mat.* **40**(1976), No. 5, 1128–1142.
15. On singular solutions of strongly nonlinear systems of ordinary differential equations. *Function theoretic methods in differential equations*, 196–204. *Res. Notes in Math.*, No. 8, Pitman, London, 1976.
16. Some comparison theorems for higher order ordinary differential equations. (Russian) *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* **25**(1977), No. 8, 749–756.
17. Some asymptotic properties of the solutions of linear ordinary differential equations. (Russian) *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* **25**(1977), No. 8, 757–762.
18. Some asymptotic properties of the solutions of ordinary differential equations. (Russian) *Dokl. Akad. Nauk SSSR* **235**(1977), No. 5, 1049–1055.
19. Oscillation properties of differential equations with deviating argument (with R. G. Koplatazde). (Russian) *Tbilisi University Press, Tbilisi*, 1977.
20. On singular solutions of nonlinear systems of ordinary differential equations. *Differential equations (Colloq., Keszthely, 1974)*, 107–119. *Colloq. Math. Soc. Janos Bolyai* **15**, North-Holland, Amsterdam, 1977.
21. Oscillation property of solutions of ordinary differential equations with time lag. *Differential Equations* **16**(1980), 168–175.

22. Comparison theorems of Sturm type for higher-order differential equations. (Russian) *Soobshch. Akad. Nauk Gruz. SSR* **99**(1980), No. 2, 289–291.
23. Variability of all solutions of odd-order linear differential equations. (Russian) *Mat. Zametki* **28**(1980), No. 4, 565–570.
24. Monotone solutions of a system of nonlinear differential equations. (Russian) *Ann. Polon. Math.* **37**(1980), No. 1, 59–70.
25. Monotone and oscillatory solutions of higher-order ordinary differential equations. (Russian) *Ann. Polon. Math.* **37**(1980), 93–111.
26. Integral tests for oscillation of the solutions of higher-order linear differential equations. I. (Russian) *Differentsial'nye Uravneniya* **16**(1980), No. 3, 470–482, 573.
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29. Comparison theorems for systems of ordinary differential equations. (Russian) *Sem. Inst. Prikl. Mat. Dokl.* **14**(1980), 13–17.
30. On an asymptotic representation of oscillating solutions of an Emden–Fowler type equation. (Russian) *Differentsial'nye Uravneniya* **17**(1981), No. 6, 1035–1040, 1148.
31. On the oscillation of solutions of higher-order linear differential equations. (Russian) *Sem. Inst. Prikl. Mat. Dokl.* **16**(1982), 3–72.
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36. Unbounded solutions of linear ordinary differential equations. (Russian) *Mat. Zametki* **35**(1984), No. 2, 231–242.
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42. A remark on the oscillation of solutions of linear ordinary differential equations. (Russian) *Trudy Tbiliss. Univ.* 259, *Mat. Mekh. Astronom.* **19/20**(1986), 330–342.
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49. Asymptotic properties of solutions of nonautonomous ordinary differential equations (with I. T. Kiguradze). (Russian) *Nauka, Moscow*, 1990.
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51. Oscillation of solutions of third-order linear ordinary differential equations, II (with N. N. Khvedelidze). (Russian) *Differentsial'nye Uravneniya* **27**(1991), No. 4, 611–618; English transl.: *Differential Equations* **27**(1991), No. 4, 428–434.
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