

**Roland Omanadze**

Professor, Head of Chair of Mathematical Logic and Discrete Structures

E-mail: roland.omanadze@tsu.ge

Education:

- University Diploma in Mathematics, Ivane Javakhishvili Tbilisi State University

Degrees:

- Candidate of Physical and Mathematical Sciences. Novosibirsk State University, 1981.
- Doctor of Physical and Mathematical Sciences. Novosibirsk, Sobolev Institute of Mathematics, Siberian Branch of the Russian Academy of Sciences. 1993.

Teaching Courses:

- Mathematical Logic and Discrete Mathematics
- Advances Courses of mathematical logic
- Computably Enumerable Sets and Degrees
- Algorithmical Reducibilities on Computably Enumerable Sets
- Computability (Recursion) Theory

Research Interests:

- Computability (Recursion) Theory
- Mathematical Logic
- Set Theory
- Discrete Mathematics
- Universal Algebra

Selected Publications:

- On completeness for recursively enumerable sets. Bull. Acad. Sci. Georgian SSR, 1976, V.81 , #3, p. 529-532 (Russian).
- On one kind of reducibility, Bull. Acad. Sci. Georgian SSR, 1976, V. 83, #2, p. 281-284 (Russian).
- On some generalizations of the notion of productive set. Sov. Math. 1978, V.196, p. 84-88. transl. 1978, V. 196, p. 65-68 (Russian).

- On reducibilities for the class of recursively enumerable sets. Bull.Acad. Sci.Georgian SSR, 1978, V.91, #3, p. 549-552 (Russian).
- On Q-reducibility. Bull. Acad. Sci. Georgian SSR, 1979, V.95, #1, p. 29-32 (Russian).
- On bounded Q-reducibility. Bull. Acad. Sci. Georgian SSR, 1980, V. 100, #1, p. 57-60 (Russian).
- On the upper semilattice of recursively enumerable Q-degrees. Algebra i Logica, 1984, V.23, #2, p. 175-184 (Russian). Algebra and Logic 1985, V.23, p. 124-129.
- Q-reducibility and nowhere simple sets. Bull. Acad. Sci. Georgian SSR, 1987, V.127, #1, p. 29-32 (Russian).
- Q-degrees of nonspeedable sets. Proceedings of I.Vekua Institute of Applied Mathematics 1987, V. 20, p. 21-32 (Russian).
- Relation between recursively enumerable Q- and T-degrees. VIII Intern. Congress of Logic, Meth. and Phil. of Science, Moscow, August, 1987. Abstract. V.1, p. 157-158.
- On the density of nonspeedable Q-degrees. Bull. Acad.Sci.Georgian SSR, 1988, V.131, #3, p. 485-488 (Russian).
- Classes of recursively enumerable sets and Q-reducibility. Math. Notes, 1989, V.45, #2, p. 141-143. translation from Mat. Zametki 1989, V. 45, #2, p. 79-82.
- On upper semilattices of recursively enumerable sQ-degrees. Algebra I Logica, 1991, V. 30, #4, p. 405-413, translation in Algebra and Logic 1991, V. 30, #4, p. 265-271.
- On sQ-completeness of recursively enumerable sets. Mat. Zametki, 1992, V. 52, #3, p. 948-952 (Russian).
- Relation between some reducibilities. Algebra i Logica, 1994, V. 33, #6, p. 681-688. translation in Algebra and Logic, 1994, V. 33, #6.
- 16. On one strengthening of Q-reducibility. Algebra i Logica, 1995, V. 34, #1, p.79-87, translation in Algebra and Logic, 1995, V.34, #1.
- Complexity properties of recursively enumerable sets and sQ-completeness. Mat. Zametki, 1977, V. 62, #3, p. 425-429, translation in Math. Notes, 1997, V. 62, #3, p.3 56-359.
- Some reducibilities and splittings of recursively enumerable sets. Math. Notes, V.66, N2, 1999, p. 174-180.
- Complexity properties of recursively enumerable sets and bsQ-completeness. Mat. Zametki, 2000, V. 68. #4, p. 554-559, translation in Math. Notes, 2000, V. 68, #4, p. 476-480.
- Major sets, classes of simple sets and Q-complete sets. Mat.Zametki, 2002, V.71, #1 p.101-10, translation in Math. Notes, 2003, V.71, #1, p90-97.
- On some properties of r-maximal sets and Q 1-N-reducibility. Georgian Mathematical Journal, 2002, V.9, #1, p. 161-166.
- Quasi-degrees of recursively enumerable sets. In S.B.Cooper and S. Goncharov, editors. Computability and Models. Perspectives East and West. Kluwer Academic/Plenum Publishers. New York, Boston, Dordrecht, London, Moskow, 2003, p. 289-319.

- Splittings of effectively speedable sets and effectively levelable sets. *J. Symbolic Logic*, 2004, V.69, #1, p. 143-158.
- (with A.Sorbi) Strong enumeration reducibilities. *Archive for Mathematical Logic*, 45, 7, 2006, p. 869-912.
- (with M.M.Arslanov) Q-degrees of n-c.e. sets. *Illinois Journal of Mathematics*. 51, 4, 2007, 1189-1206.
- (with M.M.Arslanov, I.I.Batyrshin) Structural properties of Q-degrees of n-c.e. sets. *Annals of Pure and Applied Logic*, 150, 2008, 13-20.
- (with A.Sorbi) One characterization of the Delta 0-2 hyperhyperimmune sets. *J.Symbolic Logic*, 73, 4, 2008, 1407-1415.
- Nonbounding n-c.e. Q-degrees. *Georgian Mathematical Journal*, 16, 4, 2009, 779-786.
- (with A.Sorbi) Immunity properties of the s-degrees. *Georgian Mathematical Journal*, 17, 3, 2010.
- (with I.O.Chitaia and A.Sorbi) Immunity properties and strong positive reducibilities. *Archive for Mathematical Logic*, 50, 2011, 341-352.
- (with I.O.Chitaia) Q1-degrees of c.e. sets. *Archive for Mathematical Logic*, 51, 2012, 503-515.
- On the bounded Q-degrees of c.e. sets. *Mathematical logic Quarterly*, 59, 3, 2013, 238-246.
- (with I.Chitaia) Some properties of maximal sets. *Logic J. IGPL*, 23, 4, 2015, 628-639.
- Some properties of r- maximal sets and Q1,N-reducibility. *Arch. Math. Logic*, 54, 2015, 941-959.