

PUBLICATIONS:

Books, booklet, dissertations and volume edited:

1. Coleman, D., Ediev, D.M. 2010. (Editors). *Vienna Yearbook of Population Research 2009*. Verlag der Österreichischen Akademie der Wissenschaften. 233 pp.
2. Ediev, D., A. Goujon, W. Lutz & M.A. Springer. 2009. *From Vienna to Marrakech: 50 years of independent IUSSP conferences. 1959-2009*. Vienna, Vienna Institute of Demography. 16 pp.
3. Ediev, D.M. 2008. *Theory and applications of demographic potentials*. Dissertation for seeking the degree of Doctor of physical-mathematical sciences. Cherkessk. 356 pp.
4. Ediev, D.M. 2007. *Demographic potentials: theory and applications*. Moscow: Max-PRESS. 348 pp. In Russian.
5. Ediev, D.M. 2003. *Demographic losses of deported soviet peoples*. Stavropol: AGRUS, Stavropolservisshkola, 2003. 336 pp. In Russian
6. Ediev, D.M. 1999. *Optimization: Convex and Linear Programming*. Cherkessk: Karachay-Cherkessian State Technological Institute. 84 pp.
7. Ediev, D.M. 1999. *Demographic and Economic-Demographic Potentials*. Dissertation for seeking the degree of Candidate (PhD thesis) of physical-mathematical sciences. Moscow: Moscow Institute of Physics and Technology. 206 pp.
8. Ediev, D.M. 1998. *Methods of Investments Analysis, Strategic Analysis, and Forecasting*. Cherkessk: Center for Economic-Demographic Research. 128 pp.

Peer-reviewed papers and review:

1. Ediev, D.M. 2011. Life Expectancy in Developed Countries Is Higher Than Conventionally Estimated. Implications from Improved Measurement of Human Longevity. *Journal of Population Ageing*. 4(1-2): 5-32. <http://www.springerlink.com/content/lu61j0v1k1951253/>
2. Ediev, D.M. 2011. Robust Backward Population Projections Made Possible. *International Journal of Forecasting*. Published online prior to the print: <http://dx.doi.org/10.1016/j.ijforecast.2010.09.008>
3. Scherbov, S. and Ediev, D.M. 2011. Significance of life table estimates for small populations: Simulation-based study of standard errors. *Demographic research*, 24(22): 527-550. <http://www.demographic-research.org/volumes/vol24/22/>
4. Ediev, D.M. 2010. On the reproductive value and the spectrum of a population projection matrix with implications for dynamic population models. *Theoretical Population Biology*, 78(2): 67-70. <http://dx.doi.org/10.1016/j.tpb.2010.06.006>
5. Ediev, D.M. 2009. On the definition of the reproductive value: response to the discussion by Bacaër and Abdurahman. *Journal of Mathematical Biology*, 59(5): 651-657. – doi: 10.1007/s00285-008-0246-3.
6. Ediev, D.M. 2008. Book review: Robert Schoen (ed.): *Dynamic Population Models*. *European Journal of Population*, 24(1): 119-124. – doi: 10.1007/s10680-007-9140-8.
7. Ediev, D.M. 2007. On an extension of R.A. Fisher's result on the dynamics of the reproductive value. *Theoretical Population Biology*, 72(4): 480-484. – <http://doi:10.1016/j.tpb.2007.03.001>.
8. Ediev, D.M. 2006. On the role of mean age of the parent at childbearing in long-term demographic dynamics. *Voprosy Statistiki*, No.11 (2006). P. 23-31. In Russian.
9. Ediev D. M. 2006. On spectral and asymptotic properties of general discrete population models // *Izvestia VUZov. Severokavkazsky region (Natural Sciences series)*, No. 4 (2006): 7-16. In Russian
10. Tebuev Dj. B., Ediev, D.M. 2006. On modeling the survival processes under incompleteness of data and small population size. *Izvestia TRTU*. No. 3 (58): 296-299. In Russian
11. Ediev, D.M. 2005. On a Model of Estimating the Optimal Strategies of Recovering the Demographic Losses of Russia. *Mathematical Modeling*, Vol. 17, №10 (2005): 113-126. In Russian
12. Ediev, D.M. 2005. On Non-Extendibility of the Class of Monotonic Measures of the Population's Age Structure Convergence to the Structure of Asymptotically Equivalent Stable Population. *Izvestia VUZov. Severo-Kavkazsky Region (Natural Sciences series)*, No. 1 (2005): 32-33. In Russian

13. Ediev, D.M. and Tebuev Dj. B. 2005. On the combined method of estimating the life table for a small population. *Izvestia VUZov. Severo-Kavkazsky Region (Natural Sciences series)*, No. 2 (2005): 27-31. In Russian
14. Ediev, D.M. 2004. On Comparing the Age Structures of Real Populations. *Voprosy Statistiki*, No.10 (2004). P. 16-27. In Russian (Review article)
15. Ediev, D.M. 2004. On Monotonic Measures of the Population's Age Structure Convergence to the Structure of Asymptotically Equivalent Population. *Izvestia TRTU*. No. 8 (2004). P. 302-303. In Russian
16. Ediev, D.M. 2003. On Monotonic Convergence to Stability. *Demographic Research*, Vol.8, Article 2. P. 31-60. <http://www.demographic-research.org/volumes/vol8/2/8-2.pdf>
17. Ediev, D. M. 2003. The Concept of Demographic Potential and Its Applications. *Mathematical Modeling*. Vol. 15, No. 12 (Dec., 2003): 37-74. In Russian (Review article)
18. Ediev, D.M. 2002. On Conditions of Monotonic Convergence of Population Structure to the Structure of Stable Equivalent Population in Quadratic Distance within the Model of Reproduction of Demographic Potential. *Izvestia VUZov. Severo-Kavkazsky Region (Natural Sciences series)*, No. 4 (2002): 3-6. In Russian
19. Ediev, D.M. 2001. Application of the Demographic Potential Concept To Understanding the Russian Population History and Prospects: 1897-2100. *Demographic Research*, Vol.4, Article 9: 289-336. <http://www.demographic-research.org/volumes/vol4/9/4-9.pdf>

TV broadcast, news-paper article and selected interviews:

1. Ediev D. M. 2010. *Population arithmetic*. Scientific-popular TV lecture at Russian State TV Channel 'Culture' (Russia-K). All-Russian broadcasts: June 4, August, 2010; <http://www.tvkultura.ru/theme.html?id=31484&cid=11846>
2. Ediev D. M. 2009. *Demography, usually, attracts a live interest*. Interview to the Internet Portal of Russian Union of Young Scientists. February 23, 2009. <http://rosmu.ru/activity/opinions/74.html>
3. Ediev D. M. 2007. *Interview to Russian Internet-Portal of Intellectual Youth*. June 4, 2007. <http://ipim.ru/persons/22.html>
4. Ediev D.M. 2006. Better more and earlier. *Rossiiskaja Gazeta. (South-Russian Edition)*. № 93 (4059), 4.05.06. P. 10. http://www.pressmon.com/cgi-bin/press_view.cgi?id=1323764
5. Ediev D.M. 2006. Pogontseva E. *Mathematician got a formula of population*. Interview to the Russian news-paper *Rossiiskaja Gazeta (Federal Edition)*. April 18, 2006. <http://www.ras.ru/digest/showdnews.aspx?id=0dc7cfed-3701-4874-988c-17a1dbe33149>

Other publications:

1. Ediev, D.M. 2011. At Modal Age at Death, the Hazard Rate is Determined by its Derivative. Vienna, Vienna Institute of Demography of Austrian Academy of Sciences. Working paper WP 08/2011. 11 pp. http://www.oeaw.ac.at/vid/download/WP2011_08.pdf
2. Scherbov, S. and Ediev, D. 2010. Significance of Life Table Estimates for Small Populations: Simulation-Based Study of Estimation Errors. // IIASA Interim Reports / International Institute for Applied Systems Analysis. – Laxenburg, Austria. – IR-10-009. – 28 pp. – <http://www.iiasa.ac.at/Admin/PUB/Documents/IR-10-009.pdf>.
3. Ediev, D.M. 2010. Life Expectancy in Developed Countries Is Higher Than Conventionally Estimated. Implications from Improved Measurement of Human Longevity. Vienna Institute of Demography European Demographic Research Paper 1/2010. 35 pp.
4. Ediev, D.M. 2009. Demographic problems and prospects of Russian Far East. In: Scientific-Expert Board at the Head of the Council of Federation of Federal Assembly of Russia. *Far Easter region in socio-political space of Russia: problems and ways to their solution*. Moscow: 2009. P. 44-52.
5. Ediev, D.M. 2008. On the Theory of Distortions of Period Estimates of the Quantum Caused by the Tempo Changes. Vienna Institute of Demography, European Demographic Research Paper 3/2008. 84 pp. http://www.oeaw.ac.at/vid/download/edrp_3_08.pdf.
6. Ediev, D.M. 2008. Extrapolative Projections of Mortality: Towards a More Consistent Method. Part I: The Central Scenario. Vienna, Vienna Institute of Demography of Austrian Academy of Sciences. Working paper WP 03/2008. 50 pp. http://www.oeaw.ac.at/vid/download/WP2008_03.pdf

7. Scherbov, S. and Ediev, D.M. 2008. Probabilistic Household Projections based on an Extension of the Headship Rates Method with an Application to the Case of Russia // IIASA Interim Reports / International Institute for Applied Systems Analysis. – Laxenburg, Austria. – IR-08-002. – 28 pp. – <http://www.iiasa.ac.at/Admin/PUB/Documents/IR-08-002.pdf>.
8. Ediev, D., D. Coleman, and S. Scherbov. 2007. Migration as a Factor of Population Reproduction. Vienna Institute of Demography European Demographic Research Papers 1/2007. 57 pp. http://www.oeaw.ac.at/vid/download/edrp_1_07.pdf
9. Ediev D. M. 2007. On Projecting the Distribution of Private Households by Size. Vienna, Vienna Institute of Demography of Austrian Academy of Sciences. Working paper WP 04/2007. 54 pp. http://www.oeaw.ac.at/vid/download/WP2007_04.pdf
10. Ediev, D. and R. Gisser. 2007. Reconstruction of the historical series of life tables and of age-sex structures for the Austrian population in 19th-first half of 20th centuries // *Vienna Yearbook of Population Research*. 2007: 327-355. (Non-refereed section.)
11. Ediev, D.M. 2007. An approach to improve the consistency of mortality projections obtained by the Lee-Carter method // Eurostat methodologies and working papers. Work session on demographic projections. Bucharest, 10-12 October 2007. Luxembourg: Office for Official Publications of the European Communities. P. 101-115.
12. Scherbov, S. and Ediev, D.M. 2007. Probabilistic household projections based on an extension of headship rates method with application to the case of Russia // Eurostat methodologies and working papers. Work session on demographic projections. Bucharest, 10-12 October 2007. Luxembourg: Office for Official Publications of the European Communities. P. 277-291.
13. Tebuev Dj. B., Ediev D. M. 2007. Application of simulation modelling to estimating efficiency of life table constructing methodology. Demographic studies. No. 13. Mortality. Tendencies, methods, forecasts. Moscow: Max-Press. P. 175-191.
14. Ediev D. M. 2006. Age structure of Russian Mortality: Continuity of Change? Reflection of the crisis mortality structure in the average demographic potential dynamics. *Mortality in countries of the former USSR. Fifteen years after break-up: change or continuity?* Kiev, 2006. P. 55-66.
15. Ediev D. M. 2006. Method of monitoring the demographic processes using the results from the theory of demographic potential. *Demographic crisis as a threat to regional development in Russia: ways to overcome. Proceedings of Russian scholar conference*. Moscow: Social Development Foundation. P. 280-283.
16. Ediev D. M. 2005. Long-Term Effects of Childbearing Postponement. Vienna, Vienna Institute of Demography of Austrian Academy of Sciences. Working paper WP 09/2005. 18 pp. http://www.oeaw.ac.at/vid/download/WP2005_9.pdf
17. Ediev D. M. 2005. Extension of Fisher's Result on Exponential Dynamics of the Reproductive Value to a Wide Class of Populations. Vienna, Vienna Institute of Demography of Austrian Academy of Sciences. Working paper WP 10/2005. 10 pp. http://www.oeaw.ac.at/vid/download/WP2005_10.pdf
18. Ediev D. M. 2005. On modeling the optimal strategies of overcoming the demographic crisis of Russia. In: *Population policy: State of the art and perspectives: IV Valentey readings*. Moscow, Moscow State University. P. 46-51.
19. Ediev D. M. 2005. On using the demographic potentials concept in developing the multi-level system of monitoring and controlling the efficiency of demographic policy. In: *Population policy: State of the art and perspectives: IV Valentey readings*. Moscow, Moscow State University. P. 51-54.
20. Ediev D. M. 2005. Application of the demographic potential concept to estimating the Lotka's coefficient in the system of monitoring the small-sized population. In: *Population policy: State of the art and perspectives: IV Valentey readings (book 2)*. Moscow, Moscow State University. P. 256-262.
21. Tebuev Dj. B., Ediev D. M. 2005. On the optimal choice of standard life table in the Brass model when estimating the life table for a small population. *Investigated in Russia (Demographic section)*, 155: 1630-1636. <http://zhurnal.ape.relarn.ru/articles/2005/155.pdf>.
22. Ediev D. M. 2004. Demographic Losses of Deported Soviet Peoples. *Population and Society*. No. 79 (2004). P. 1-4. In Russian

23. Ediev D. M. 2004. Demographic Losses of Deported Soviet Peoples. *Demoscope Weekly*. No. 147 – 148 (Feb. 23 – Mar. 7, 2004). <http://demoscope.ru/weekly/2004/0147/tema01.php> In Russian
24. Ediev D. M. 2004. Estimation of the population of Crimean Tatars based on materials of post-war population censuses of USSR. In: Danilova I. A., Denisenko M. B. (Eds.) *Population and Crises: regional and ethnic peculiarities of demographic development in Russia and USSR*. Moscow: Max-Press. – Vol. 10. P. 138-150.
25. Ediev D. M. 2003. International Migration as a Factor of Overcoming the Depopulation of Russia. In: *Migration and National Security*. Moscow: Moscow State University, 2003. P. 62-72. In Russian
26. Ediev D. M. 2003. Migration in the Caucasus Region: Trends, Determinants, and Perspectives. // The European Council. *Migration policies on the eve of the EU enlargement: what challenges for future co-operation within the East European region*. (Kiev, Oct. 9-10.) P. 61-100.
27. Ediev D. M. 2002. On Conditions of Monotonic Convergence of Population Structure to the Structure of Stable Equivalent Population in Kullback Distance Within the Model of Reproduction of Demographic Potential. *Investigated in Russia (Demographic section)*, 17: 182-190. <http://zhurnal.ape.relarn.ru/articles/2002/017.pdf> In Russian
28. Ediev D. M. 2002. Interrelations between the Spectrum of Leslie Matrix and the Age Pattern of Demographic Potentials. *Investigated in Russia (Demographic section)*, 74e: 815-823. <http://zhurnal.ape.relarn.ru/articles/2002/074e.pdf>
29. Ediev D. M. 2001. Reconstruction of the US Immigration History: Demographic Potential Approach. *Investigated in Russia (Demographic section)*, 140e: 1619-1635. <http://zhurnal.ape.relarn.ru/articles/2001/140e.pdf>
30. Ediev D. M. 2001. Aggregate Population Forecasting With the Use of Demographic Potentials Technique. *Investigated In Russia (Demographic section)*, 38e: 408-431. <http://zhurnal.ape.relarn.ru/articles/2001/038e.pdf>
31. Ediev D. M. 2001. *Econometrics (studying linear relations). Methodical guidelines for students of economic specialties*. Print Office of Karachay-Cherkessian State Technological Institute. Cherkessk. 32 p.
32. Ediev D. M., Tebueva F.B. 2001. *Econometrics (forecasting methods). Methodical guidelines for students of economic specialties*. Print Office of Karachay-Cherkessian State Technological Institute. Cherkessk. 8 p.
33. Ediev D. M. 1999. Steadiness of Economic-Demographic Potentials to Deviations of Population Reproduction Regime from the Model. Nyzhny Arkhyz: SAO of Russian Academy of Sciences, 1999. Preprint No. 135T. 4 pp.
34. Ediev D. M. 1996. Economic Analysis of Demographic Dynamics. *Modeling the Processes of Management and Information Processing*. Moscow: Moscow Institute of Physics and Technology, 76-80.
35. Perepelitsa V. A., Khubiev R. N., Kochkarov A. M., Ediev D. M. 1994. Methodical guidelines and problems for the course of "Mathematical programming". Part.1 "Linear and discreet programming" for students of specialty «Applied mathematics». Print Office of Karachay-Cherkessian Technological Institute. Cherkessk. 98 p.

Conference proceedings and abstracts:

1. Ediev, D.M. 2011. The Pay-as-you-go vs Funded pension system in low-mortality countries: a demographic perspective. British Society for Population Studies (BSPS) annual conference. York, September 7-9, 2011. <http://www2.lse.ac.uk/socialPolicy/BSPS/annualConference/2011/Abstracts.aspx>
2. Ediev, D.M. 2011. Life Expectancy in Developed Countries Is Higher than Conventionally Estimated. Implications from Improved Measurement of Human Longevity. *Population Association of America (PAA) Annual Meeting*. Washington, D.C., March 31- April 2, 2011. <http://paa2011.princeton.edu/sessionViewer.aspx?SessionId=405>
3. Ediev, D.M. 2010. On the tempo and quantum. *European Population Conference*. Vienna, September 1-4, 2010. <http://epc2010.princeton.edu/abstractViewer.aspx?submissionId=100141>
4. Scherbov S., Ediev, D.M. 2009. Life table techniques for small populations: effects of population size, of the mortality level, and of age composition. *XXVI International Population Conference of*

the IUSSP, Marrakech September 27- October 2, 2009.

<http://iussp2009.princeton.edu/abstractViewer.aspx?submissionId=90356>

5. Ediev, D.M. 2009. Extrapolative projections of mortality: towards a more consistent method. The central scenario and study of estimation errors. XXVI International Population Conference of the IUSSP, Marrakech September 27- October 2, 2009.
<http://iussp2009.princeton.edu/abstractViewer.aspx?submissionId=91023>
6. Ediev, D.M. 2008. Migration as a factor of population reproduction. *European Population Conference*. Barcelona, July 9-12, 2008.
<http://epc2008.princeton.edu/abstractViewer.aspx?submissionId=80387>
7. Ediev, D.M. 2007. Migrations and migration aspirations in northern Caucasus. *Proceedings of III Russian scholar conference "Modernization of economics of the South of Russia and new strategies of regional economic policies" (Dombai readings)*. Dombai, April 12-16, 2007. P. 183-188.
8. Ediev D. M. 2007. Applying the demographic potential concept to analyze the migration role in population replacement. *Proceedings of international conference «Migration and development» (V Valentey Readings)*. Moscow, Moscow State University. V. I. P. 282-284.
9. Ediev D. M. 2004. On conditions of non-extendibility of the class of monotonic indicators of convergence of population age structure to the stable equivalent. *Proceedings of the international Russian-Kazakh Symposium «Mixed-type equations and related problems of analysis and informatics»*. Nalchik-Elbrus. P. 311-316.
10. Karasova Z. I., Ediev D. M. 2004. Vertical integration of enterprises of Russian economy as a way to enhance their competitiveness. Humanitarian and socio-economic sciences at the beginning of XXI century. Proceedings of II Russian scholar conference. Nizhny Novgorod. P. 3-4.
11. Tebuev Dj. B., Ediev D. M. 2004. Applying simulation modeling to obtain confidence intervals for life table indicators. (*Proceedings of the international Russian-Kazakh Symposium «Mixed-type equations and related problems of analysis and informatics»*. Nalchik-Elbrus. P. 316-317.
12. Tebuev Dj. B., Ediev D. M. 2004. An approach to constructing life tables for a small population. Proceedings of IV international conference «New technologies in management, business and law». Nevinnomyssk.
13. Ediev D. M. 2003. Demographic losses of deported soviet peoples. *European Population: Challenges and Opportunities*. Proceedings of the Conference of the European Population association. Warsaw, August 23-27, 2003. P. 177.
14. Ediev D. M. 2002. Applied mathematics and demographic education in XXI century. Proceedings of international conference «Demographic education in 21 century in countries of CIS, Baltic and Eastern Europe». Moscow: Lomonosov Moscow State University, P. 131-133.
15. Tebuev Dj. B., Ediev D. M. 2002. Application of the Brass model to estimating life tables from incomplete data. *Proceedings of IV scholar-practical conference of Karachay-Cherkessian State Technological Institute. Cherkessk. V. II. Solutions to contemporary scientific-technical and socio-economic problems*. Print Office of Karachay-Cherkessian State Technological Institute. Cherkessk. P. 37-38.
16. Korkmazov M. A., Ediev D. M. 2002. Indirect estimation the net reproduction rate based on the total fertility rate, infant mortality rate and life expectancy at birth. *Proceedings of IV scholar-practical conference of Karachay-Cherkessian State Technological Institute. Cherkessk. V. II. Solutions to contemporary scientific-technical and socio-economic problems*. Print Office of Karachay-Cherkessian State Technological Institute. Cherkessk. P. 25-27.
17. Tebueva F. Kh., Ediev D. M. 2002. Modeling the realltion of the Lotka;s coefficient from net reproduction rate. *Proceedings of IV scholar-practical conference of Karachay-Cherkessian State Technological Institute. Cherkessk. V. II. Solutions to contemporary scientific-technical and socio-economic problems*. Print Office of Karachay-Cherkessian State Technological Institute. Cherkessk. P. 38-40.
18. Uzdénov Sh. M., Ediev D. M. 2002. Indirect estimation of life expectancy at birth of a given gender from data on opposite gender or the total population. *Proceedings of IV scholar-practical conference of Karachay-Cherkessian State Technological Institute. Cherkessk. V. II. Solutions to contemporary scientific-technical and socio-economic problems*. Print Office of Karachay-Cherkessian State Technological Institute. Cherkessk. P. 48-49.

19. Shidakov E. I., Ediev D. M. 2002. Indirect estimation of life expectancy at birth from standardized mortality rates. *Proceedings of IV scholar-practical conference of Karachay-Cherkessian State Technological Institute. Cherkessk. V. II. Solutions to contemporary scientific-technical and socio-economic problems*. Print Office of Karachay-Cherkessian State Technological Institute. Cherkessk. P. 57-58.
20. Ediev D. M. 2000. Principles of Aggregate Economic-Demographic Modeling Based on Demographic Potentials' Technique. *Proceedings of the Workshop on Demographic-Macroeconomic Modeling*. Rostock, Max-Planck Institute for Demographic research, 2000. 17 pp. www.demogr.mpg.de/Papers/workshops/ws001011.htm
21. Ediev D. M. 1999. On the problem of reconstructing the population trend using statistical methods. *Proceedings of II scholar conference of the Business and Law Faculty of Karachay-Cherkessian Technological Institute. V. III «Applied mathematics»*. Print Office of Karachay-Cherkessian Technological Institute. Cherkessk. P. 37-39.
22. Ediev D. M. 1998. Economic potential of Karachay-Cherkessian Republic. *Proceedings of regional scholar-practical conference «Northern Caucasus at the eve of XXI Century»*. Institute of Economics and Management, Research center "Caucasian Studies". Pyatigorsk. P. 105-106.
23. Ediev D. M. 1998. Dynamics of the demographic potential of Russia. *Proceedings of II Russian Symposium "Mathematical modeling and computer technologies"*. V. I "Economical-mathematical modelling." Kislovodsk Institute of Economics and Law. Kislovodsk. P. 100-101.
24. Ediev D. M. 1996. Steadiness of economic-demographic evaluations. *Proceedings of XXXIX Jubilee Scholar Conference of Moscow Institute of Physics and Technology "Contemporary problems of basic and applied physics and mathematics"*. Moscow: Moscow Institute of Physics and Technology
25. Ediev D. M. 1996. Demographic potential. *Proceedings of international conference "Non-local boundary and related problems of mathematical biology, informatics and physics"*. Kabardino-Balkaria Research Center of Russian Academy of Sciences, Institute of Applied Mathematics and Informatics. Nalchik. P. 109-110.
26. Ediev D. M. 1996. Economic potential of region (economic-demographic approach). *Proceedings of the international conference "Economics and Law – strategies 3000"*. V. IV "Mathematical modeling and computer technologies". Kislovodsk Institute of Economics and Law. Kislovodsk. P. 18-23.
27. Ediev D. M. 1995. Fast algorithms for solving linear programming tasks with two variables. *Proceedings of the conference "Mathematical programming and applications"*. Institute of applied Mathematics of Ural Branch of Russian Academy of Sciences, Association of mathematical programming, Russian Fund for Basic Research. Ekaterinburg. P. 203-204.
28. Ediev D. M. 1995. Optimal transformation of currency portfolio. *Proceedings of I scholar-practical conference of the Staff, doctoral and graduate students of Karachay-Cherkessian Technological Institute*. Print Office of Karachay-Cherkessian Technological Institute. Cherkessk.