

## Curriculum Vitae

- Academician of Georgian national academy of science,
- Major – General, ★
- Doctor of military science, ★
- Doctor of technical science,
- Professor,
- Laureate of state prize,
- Laureate of Institute named after Giorgi Nikoladze,
- Georgia, other states and international organization state and departmental orders and medals, companion of the highest military state award – Vakhtang Gorgassali I degree order. ★
- Honorary citizen of Mtskheta, Batumi and Tbilisi.
- Elguja medzmariashvili General constructor of the First Georgian Space Object.



### Date and place of birth

— August 17, 1946. Batumi

### Education:

— Highest

1964

— Graduated Batumi First high school with Gold medal.

1964-1969

— Georgian Polytechnic Institute, Construction faculty. Construction of Civil and Industrial Engineering, engineer-constructor – honours diploma.

— Military department of Georgian Polytechnic Institute. Military engineering cycle. Military bridges and roads. ★

1970-1973

— Post graduate study in the field of Spatial construction of Georgian Polytechnic Institute with maintaining a thesis.

### Held positions:

1973-1990

• Georgian Polytechnic institute, reader, after professor, the head of building construction department.

1976-1979

• Chairman of Georgian Polytechnic Institute united professional committee.

1977- 1979

• Georgian Polytechnic institute chairman of youth scientists soviet.

1979-1985

• Special constructional bureau - Head of M-19. Constructional bureau was established on initiative of Elguja Medzmariashvili.

1981-1989

• The chief of Tbilisi branch of Moscow Central Scientific-industrial Corporation “KOMETA” and general constructor of military space technology, special state constructional bureau director and general constructor. Constructional bureau was established on initiative of Elguja Medzmariashvili. ★

★ — Related to military activities, service at the Ministry of Defense and military topics

- 1989-2006
  - The General director and constructor of Georgian space construction institute. was established on initiative of Elguja Medzmariashvili.
- 1991- 2005
  - Georgian Technical university military-engineering armed forces and chief of special construction departament, professor - departament was established on initiative of Eguja Medzmariashvili. Head of the Engieenering support Center of the Armed Forces. Center was established on initiative of Elguja Medzmariashvili. ★
- 1999-2002
  - An adviser of defence minister of Georgia in the field of engineering support of troops. ★
- 1999-2004
  - Member of the Georgian parliament. The chief of Military – industrial subcommittee, parliamentary group chief and parliamentary thematic majority leader.
- 2000-2006
  - Military Engineering Academy of the general staff of the Georgian armed forces president. Established on initiative of Elguja Medzmariashvili. ★
- 2006 till now
  - General constructor and president of the scientific council of special systems and Engineering Maintenance of Georgian Technical University. Academy was established on initiative of Elguja Medzmariashvili.
- 2009 till now
- 2014 till now
- 2019 till now
  - Full professor of Georgian Technical university.
  - General scientific worker of Mines Institute.
  - Head of the Department of Engineering Sciences and information Technology at the Georgian National Academy of Sciences - Academician - Secretary.

---

**Scientific fields:**

- Space and terrestrial, special-purpose and military – engineering constructions and complexes. ★
  - Theory of transformable engineering systems.
  - Engineering Preparation for Georgian territory defence. ★
  - Engineering securing In the Theatre of War of Georgia. ★
  - Military Theory. ★
- 

**Published works and amount**

- 400 Part of them have Griff “COMPLETELY SECRET” AND “SECRET”.

**Basic scientific list of works:**

**Monographys:**

- “SECRET”. Arising a question about creating new effective kinds of military – engineering and building constructions. Research report. Georgian Polytechnical institute. Tbilisi. Moscow. Military – engineering Academy. Handwriting. 1977. 87 p. ★
- Space and Earth Transformable constructions. Pub. Germany – Lirchtenstein – Georgia. 1995. 446 p.
- Georgian military – engineering doctrine bases. Monography. Publisher “Technical University”. 2006. 1059 p. ★
- Novel approach to indirect of military theory. 2011. Munich. GRIN. ★
- others .....
- Georgian Military enciclopedic dictionary. Edited by Elguja Medzmariashvili. Publication of Ministry of Defence. 2017. 691p. ★

#### **Textbooks:**

- “SECRET”. Georgian united military – engineering securing bases. Military – engineering strategy and operational art. monography. Publisher “Technical University”. 2002. 390 p. ★
- Transformable systems. Soviet Union Academy of science. “Predictions and Perspectives”. Research and design works. Tbilisi, 1990. 103 p.
- Special basic course of Engineering – constructional art. Georgian Technical University. 2005. 838 p. (with edition of Elguja Medzmariashvili).
- Engineering battle materials. Military - Engineering academy. 2006. 720 p. (with edition of Elguja Medzmariashvili). ★
- others.....

#### **Articles and Inventions:**

- Developing Shell construction issue. Georgian Polytechnical university students №1 scientific Collection. Tbilisi, 1969. 8 p.
- Theoretical and experimental research is combined – complex spatial arched coverage. Scientific transactions “STROITELSTVO” – Tbilisi, Georgian Polytechnical Institute, 1974. Collection № 5 (169). 5 p.
- “COMPLETELY SECRET”. Experimental space complex with transformed radio telescope with the mirror diameter of 30m and ground complex for its test. Science transactions of Georgian Politechnical Institute. Special Construction Bureau. Collection № 1. Tbilisi, 1988. 28 p.
- "COMPLETELY SECRET". Technical proposals for the creation of a microwave system for detection of ballistic missiles "Pershing-2", starting from the territory of Germany. Research report. Georgian Polytechnical Institute. SKB "M-19", Tbilisi. Moscow. TsNPO "Comet". 1984g. 115 p. ★
- A space experiment Confirms Reflector’s high Reliability. Aerospace Courier, № 6, 1999. 4 p.
- Transformable Multiple use of Assault Bridge with 48 Meter Span. Georgian National Academy of Science. Bulletin. Vol. 2, no 4. 2008. 8 p .
- Invention with Griff “COMPLETELY SECRET” ( Subject – military – attack bridges, construction and ability). Soviet Union. №109303, 4.10.1976. ★
- Greeting and Testing Large Space Structures of High Precision Surface. Space Power, Volume 12, Number 1-2, 1993. 12 P.
- Expandable Parabolic Antenna. International Publication number WO 03/003517 A.I. 9.01.2001. International Application Published under the pattent Cooperation Treaty (P.C.T).

- Deployable Space Reflector Antenna. “E.V.M.” International Publication Number WO 03/003517 A I. 9.01. 2003. International Application Published Under the Patent Cooperation Treaty (P.C.T.).
- Deployable Bridge. Georgia. Invention Letters Patent №P5554. Priority 2008-01-29. delivering day 2012-07-02.
- Floating deployable-folding means “E&GM”-3. Georgia. Invention Letters Patent N P5455. Priority 2007-03-29. Delivering day 2012-05-18.
- The basic principles of Creation of large Deployable Space Antenna. Transactions Technical University of Georgia N2 (472) 2009. 20 p.
- Newly structured deployable Bridge with 48 meter Span abstract. Taller, Longer, Lighter. IABSE- IASS symposium, London. 2011. 12 p.
- New variant of the deployable Ring – shaped space Antenna reflector. An international Journal SPACE COMMUNICATIONS (IMPACT FACTOR: 0.077 (JCR08) ISSN: 0924-8625.2009. <http://www.iospress.nl/09248625.php>). 8p.
- Mechanical Supporting Ring structure// CEAS space Journal of European Aerospace Societies. ISSN 1868-2502. Published online: June 2013, 10 p.
- The possible options of conical v-fold bar ring’s deployment with flexible pre-spressed center//.CEAS Space Journal of European Aerospace Societies. ISSN 1868-2502. Published online: June 2013, 9 p.
- Mechanical Support Ring Structure, Patent N: US 9153860 B2, Sh.Tserodze, N.Tsignadze, E.Medzmariashvili, L.Datashvili, J.S. Prowald, 2015.
- Mechanical Support Ring Structure, Patent N: EP 2825827 A1, Sh.Tserodze, N.Tsignadze, E.Medzmariashvili, L.Datashvili, J. S.Prowald, 2015.
- Deployable Antenna Frame, Patent N: EP2904662 B1, European Space Agency, E.Medzmariashvili, N.Tsignadze, N.Medzmariashvili, L.Datashvili, A.Ihle, J.S.Prowald, C.Van't Klooster, 2016.
- Deployable Antenna Frame, Patent N: US 9660351 B2, European Space Agency, E.Medzmariashvili, N.Tsignadze, N.Medzmariashvili, L.Datashvili, A.Ihle, J.S. Prowald, C.Van't Klooster, 2017.
- Others.....

**Basic Science works, which are realized and instilled:**

**Initiative works and projects**

- Peterburg sport palace “IUBILEIN” multispan closing competition project. Closing construction model exhibit was performed on an Exhibitions of Achievements of National Academy in Moscow. Certificate №140071 EANE 1974. Soviet Union.
- “Assault” mechanized military bridge with the span of 48 meter. ★
- Special tactics – New type “assault” bridge folded, transport package deliver to the usage destination and its spreading on the obstruction advantageously is realized with the help of helicopter. ★
- On Access Basis of Military part 52684 , military part 12093 , after examination in 1979, carried a plan of central military-engineering science institute of Nakhabino. ★
- The work was stopped because of Author transition from military-engineering field to military-space one.
- Moscow “ Luzhnick” stadium spread-fold closing competition project. 1993.

**Contract work**

- Work basis – order of Ministry of Agriculture. 1979.
- Concrete-metal and wooden-metal 18 and 24 meter span closure construction.

- Work basis – Joint work under the contract, being affirmed by Ministry of Big-scale radio industry of Soviet Union, between Central Science Industrial Consolidation (CSIC) “KOMETA” – Moscow and Georgian Polytechnical Institute – Tbilisi. Work fulfilled 1980 ÷ 1984.
- «SECRET». «DESIGNING AND RESEARCHING SPACE AND GROUND SPECIAL LARGE-SIZE CONSTRUCTIONS AND BUILDINGS». ★

#### **State Program**

- «COMPLETELY SECRET». «NEW PERSPECTIVE DIRECTION OF MILITARY TECHNIQUE AND FORMS OF THEIR REALIZATION». ★
- Based on proposed materials, the letter of state committee chairman of science and technique of Soviet Union, G.Marchuk and chairman of state military-industrial Committee of Ministers setting of Soviet Union, L.Smirnov, is directed to the chairman of Ministers setting of Soviet Union, N.Rizhnov – 21852 s.2.02.X.1985. ★
- As it is marked in letter “Related to Important current works in Georgian Polytechnical Institute, as improving rocket attack system and creation other facilities, which will help to develop the directions of military technique and armed forces, we find it expedient to agree a sentence of creation special competition bureau.  
Working program of mentioned constructional bureau will be accepted by Ministers Presidium of the Soviet USSR through military-industrial issues.
- VISA –MINISTERS COUNCIL OF SOVIET UNION. MOSCOW. KREMLIN.
- Accepted – N.Rizhov. 1985. October 17. 21852 secret.
- Program is realized:
  - Special State Construction Bureau is made up. ★
  - The state decisions of the Council of Ministers came out in Military industrial issues. ★

#### **Military Prescriptions and special, science and technological works.**

- WORK BASIS - «COMPLETELY SECRET». DECISION OF STATE COMMITTEE OF MINISTERS OF THE SOVIET UNION THROUGH MILITARY-INDUSTRIAL ISSUES №16. MOSCOW. KREMLIN. 12.12.1985. «ABOUT WORKS OF CREATING LOCATION FOR SPACE AND GROUND ANTENNA». In order to maintain work to the distant development and improvement facilities of observing starting ballistic rocket, by resolution of the Central Committee of Communist Party of Soviet Union and council of Ministers of Soviet Union from May 22.1985. ★
- Ground Stand Complex of Full-scale test and collection of large-size space constructions. Mtskheta district – in a village of Saguramo. – built in Georgia and is being functioned. With the decision of “MIC” 12.12.1985 №16, relevant work was fulfilled. ★
- Base for research of ground complexes in extremal and hard climate -meteorological conditions. Borzhomi district – in a village of Tba. Built in Georgia and is being functioned. With the decision of “MIC” 12.12.1985 №16 relevant work was fulfilled. ★
- Space Deployable reflector with the diameter of 30÷50 and more than a meter for building a radio-channel revealing system - «US-KMO». With the decision of “MIC” 12.12.1985 №16 relevant work was fulfilled. ★
- Ground relocating antenna with the diameter of 30 and more than a meter for experimental ground radiometric station reveal starting ballistic missile for radiation their plasmic formation in a range of ultra-high purity radiation. With the decision of “MIC” 12.12.1985 №16 relevant work was fulfilled. ★

- Ground deployable antenna for relocating commanded point of system «US- KMO» - With the decision of “MIC” 12.12.1985 №16 relevant work was fulfilled. ★
- Portable and deployable, reflexive radio-technical engineering post for revealing ballistic missile «Pershing II», starting on a territory of Federal Republic of Germany (FRG) – work was determined on a basis of special mission of Ministry of Defence. With the decision of “MIC” 12.12.1985 №16 relevant work was fulfilled. ★
- Work basis - «COMPLETELY SECRET». COPY № JUST ONE. RESOLUTION CENTRAL COMMITTEE OF THE COMMUNIST PARTY OF SOVIET UNION AND COUNCIL OF MINISTERS OF THE SOVIET UNION №137-47. 27.01.1986. PROGRAM OF FUNDAMENTAL RESEARCHES AND EXPERIMENTAL WORKS – «ROUND». ★
- “Star War” engineering reflexive and linear space constructions. Relevant work of Program “ROUND” was done.
- Work basis - Perspective space program – “PLANET MARS”. Science-industrial consolidation with the name of S.P.Koroleva “ENERGIA”. ★
- “PLANET MARS” expedition engineering ensure Transformable constructions. Program “PLANET MARS” was done. 1989. ★
- WORK BASIS – «COMPLETELY SECRET». DECISION OF MINISTER STATE COMMISSION OF SOVIET UNION OF MILITARY-INDUSTRIAL ISSUES № 72. MOSCOW. KREMLIN. 09.03.1988. – “about development of technical statement on creation experimental space radio-channel complex of revealing”- Central Committee of the Communist Party of Soviet Union and Council of Ministers of the Soviet Union gave a resolution from 1987. August 8. №930-225. ★  
 .... In Technical offer issues about creating and testing facilities , rule of taking in Orbit, carrying out an experiment with a space complex with a usage of orbital spaceship of International Space Station “Buran” should be worked out. ★
- experimental space complex of radio-channel revealing, built on a base of deployable reflector with a high rigidity, with a diameter of 30 meter. “MIC” 09.03.1988 №72 decision was done according to experimental space complex architect determination and its main component, Large-deployable, with a high rigidity and accuracy reflector antenna creation and overground examination.... ★

**Conversional project and its realization in  
Commonwealth of Independent States (CIS).**

- Central Scientific – Industrial Consolidation “COMETA” and State Space Scientific –Production Center with a name of Khrunichev, Scientific – Industrial Consolidation “Radio” and Institute of Space Constructions – in a staff of Closed Joint-stock Company association “COSMO SVIAZ” worked out conversion project of satellite connection “ZERKALO KS”.
- Russian Federation President B.N.E. Eltsin received a sentence about a project realization and entrusted Russian government to assist to its realization by the resolution from 1993.July.1 №1020.
- Russian space agency gave a licence to Central Scientific Research Institute “COMETA” about creating space connection system “ZERKALO KS” in 1993. October 15.
- Mentioned direction of work was accepted by Expert Commission during Russian Federation in 1994. November.
- Space Satellite Communication system “ZERKALO KS” realization, with common value of \$ 500 million, Russian Federation stopped it because of stable financial ensecurity.

**Space Programs realized on Orbit.**

**There are official materials of realizing and functioning Space Programs on Orbit, Scientific Literature, Photo and Video records. Realized programs are carried in an important list of astronauts development chronicles.**

- Work basis – Space Program –“CRAB” – “PROGRESS 40”. Scientific – Industrial Consolidation with a name of S.P.Koroleva “ENERGIA”.
  - Radar, Space paired round antenna “CRAB” with the diameter of 20 meter, located of a spaceship “PROGRESS 40”, Space program was done with a coparticipation of an academician B.V.Patton. Fulfilled in an open space. 1989.
- Work basis – Space program “SOFORA”-“MIR”. Scientific – Industrial Consolidation with a name of S.P.Koroleva “ENERGIA”.
  - Basic construction of engineer providing construction “SOFORA” of Orbit Station – “MIR”. Fulfilled in an open space. 1991.
- Work basis – “Georgian Space Construction Institute”, Company of “Georgian Polytechnic Intellect” and Russian Rocket-Space Corporation – “ENERGIA” with a name of C.P.Koroleva- Initiative, Non-budget, Space program – “REFLECTOR”, according to which the object prepared to run into space in Georgian and created by the Georgian side. at that time, the only orbital station would have to be tested and removed from the station by the Russian side.
  - **“First Georgian Space Reflector”** – 6,42 meter Maximum dimension deployable reflector, was created by the staff of Georgian Space Construction Institute. Its creation was held in Tbilisi Aviation Factory “Tbilaviamsheni”, where construction went through factory – technical and technological examinations. Big-scale flying exams were held by Georgian side. Georgian space object examination directions were determined in an open space By Georgian space construction Institute. Spaceship “PROGRESS”, where scientific cargo – Georgian space object was located, was taken on orbit by a rocket-train “SOYUZ”. “PROGRESS” took Georgian space object folded packet to the Station “MIR”, where international astronaut crew, through provided procedures of program “REFLECTOR”, successfully opened and examined First Georgian Space Object. After finishing space programs, Georgian space object removed orbital station and started flying around Earth, on independent orbit. Fulfilled in an open space.1999.

**Georgian defensive purpose scientific and technological works.**

- Work Basis – Georgian Security Committee special program “Khevi” and Company “Georgian Polytechnical Intellect” Non-budget works. ★
  - Portable, inventory, Military multispan bridges- KM-01T; KM-02T. State Certificate is delivered. The bridge is realized and being used. 2006. ★
  - Work Basis – Georgian State Program adding in military-engineering field. Georgian 3D military – engineering digital map with a scale of 1: 200 000. Instilled with a purpose. 2005. ★
  - Co-operating with foreign countries, Georgian specified regions high accuracy space photo materials. Instilled with purpose. 2006. ★
  - Georgian territory and and creation military-engineering catalogue located on it – Instilled with purpose. 2007. ★

**Telecommunicational large-size space reflectors and reflector antennas, realized with European companies and European space company contract:**

- DAIMLER BENZ AEROSPACE. Contract 150104/95011334 MIT DORIES SATELLITENSYSTEME. GMBH (DSS) 1996\_1997. “Constructional principles of new generation large deployable space reflector”.

- Stand project of European Space Agency. ESA. ESTEC. Contract 15230/01/NL JSC. 2001\_2002\_2003\_2004\_2005 Y.Y. “LDR” \_ Large Deployable Space Reflectors/Antenna.  
Executors: “EGS” – Georgia, “Alenia Aerospacio” – Italy, “Energia” – Russia, “Sener” – Spain, “Magna” – Austria, “HTS” – Sweden.
- TUM/4000102096/10/DE/LD \_ “ESA”, 2011. – Realized in 2012.
- TUM/CCN1/4000102096/10/DE/LD \_ “ESA”, 2011. – Realized in 2013.
- TUM/4000105050/12/DE/LD \_ “ESA”, 2012. – Realized in 2014.
- TUM/4000105050/12/DE/LD-1 \_ “ESA”, 2012. –Realized in 2014.

**Georgian special Purpose Program:**

- Georgian special Purpose Program – 2004-2005-2006 Y.Y. functional directions of Territory protection in Georgian defence system, definition of force maintenance and creation legislative structure, Classifying strategic objects, creation their data bank and forming united military-engineering state large-scale ensureness complex of the country. Special purpose program was completed. ★

**Grant Projects:**

- International grant. INTAS-OPEN-971-30866. 20002001 Y.Y. “Light from Space”.
- International grant. ISTC. G-499. 2001-2002-2003-2004-2005 Y.Y. <<Technology Development about getting alloy on basis of Titan to support maximum effect of form memory, high-rigidity and deformable features.
- Granting agreement N A-02-09, Rustaveli Fund. 2009-2010-1011 Y.Y. Establishment military concepts and creating systemized works on Georgian language according to normative materials, categories and terms of NATO and its member countries for Georgian military defence sustainability. ★

**Realization constructional system abroad according to Georgian patent:**

- China. Technical University of Harbin. Creation of Pneumorigid deployable space reflector functional system with diameter of 6 meter. According to Georgian Patent P2342. Partnership scientific work. 2004.

**Art of military-engineering and directions of thematic researches in military theoretical field, reflected in published monographs, articles, collections and special accounts created for Ministry of defence abroad and in Georgia.**

- Military-engineering art theory. ★
- Special classification about development historical periods and steps of Military-engineering field. ★
- Military-engineering art place and role in military art. ★
- Military characteristics of Georgian civil infrastructure. ★
- Creation prerequisites and necessity of United – civil and military-engineering complexes in Georgia. ★
- Creating questions for Georgian territory defence in conditions of war in 2008. ★
- Providing battle activities and engineering operations in Georgia, also, in conditions of after war 2008. ★
- History and modern requests of military bridges. ★
- Military operations of overtaking obstacles and making demands towards military bridges in Georgia. ★
- Military theory. ★
- Parameters of defining military-political situation intensity steps and space geo-political categories. ★



- Military strategy, operative art and tactics interaction new configuration and its realization abilities through Georgian conditions. ★
- Network-Central war component necessity of setting in motion and abilities in Georgian military organizations. ★
- Military organization and military activity of Georgia. ★
- Opponents fighting efficiency. ★
- Battle system dynamic and geometric parameters. ★
- New systematization of indirect activities of dynamic processes in a military art. ★
- Military activities planing space models. ★
- New appearances and war terms – asymmetry, hybrid, substitute and other evaluations and concrete methods of their creation. ★
- Military historical field in Georgia and infuture development, taking advantage of Military art history. ★
- Development steps of Military-industrial complexes and originalities in Georgia. ★

**Current scientific and technological works:**

- Working complexes – after 2008 war Military-engineering maintainance of Georgian war theatre engineering preparation and battle operation. ★
- Fast built, mechanized military bridge for exstreme. ★
- Creation of a double mark satellite system for Georgia. ★
- Monograph - “transformable space and overground complexes” finish.

**Addressees of Realized and inculcated scientific works:**

- Ministry of Defence; ★
- Ministry of Radio-industry; ★
- Ministry of mechanical engineering; ★
- S.P.Korolev Rocket and Space Corporation “Energia”;
- Military and Space Central Scientific-industrial Corporation “KOMETA”; ★
- Ministry of Defence of Georgia; ★
- Ministry of Internal Affairs of Georgia; ★
- Special State Protection Departament of Georgia; ★
- Ministry of Environment Protection of Georgia;
- Georgian companies;
- German company „Daimler-Benz Aerospace“ - „Dornier-Satellitensysteme“;
- Technological University of Harbin – China;
- Italian company “ „Alenia Aerospazio“;
- Technical University of Munich – “TUM”;
- European Space Agency “ESA”.

**Reflection Scientific works in Academic field:**

- In 2004-2005, Lecture courses called “Georgian united military-engineering ensure”, were held in General Staff military-engineering academy of Georgian Armed Forces. ★

- From 2010, necessary lecture course for students called – “Transformable Constructions” are managed in Georgian Technical University.
- From 2014, First time in Georgia, it has been started a Doctorate Program in Military-engineering field. ★

**Activities in Scientific Organization, which caused:**

- Creation of special state constuctional bureau. ★
- Creation of Georgian Space Construction Institute and Mountainous Zone stand complexes of Saguramo and Borjomi. ★
- Establishment of “Military-engineering forces and special constructions chair of Georgian Technical University. ★
- Establishment of General Staff military-engineering academy of Georgian Armed Forces. ★
- Establishment of Construction, Special system and engineering ensureness institute of Georgian Technical University.
- In 2001, carrying out an international scientific conference “Big Silk Road Space Telecommunicational system”, with participation of European and USA companies inTbilisi.
- In 2009 and 2014, carrying out an international scientific conference by ESA in a field of Large-deployable space reflector, attended by World leader scientists and constructors.
- Establishing scientific magazine “MILITARY THEORY” in Georgia. ★
- Creation Scientific magazine “MILITARY SCIENCE. GEORGIA” in Georgian national Scientific academy and its edition. ★
- Onflowing editionally several dozen of million dollars, creation hundreds of working places, Bringing new technologies and orders in manufacturing.

**Admiring First Georgian Space Object:**

- Every July 23, by Presidents command, it is established the day of First Georgian Space Object.
- First Georgian Space Object, in Foreign encyclopedia, scientific literature and official documents, is admired as a priority directions in space technics, also the date of delivering it on orbit, is brought in a list of historical chronicles of developing cosmonautics.
- For the First Georgian Space Object –Reflector’s delivering on orbit, examination successfully and exceptional attitude towards mentioned appearance, in August 2, 1999, 79 citizens of Georgia and foreign countries are awarded with Georgian State orders and medals.
- Georgia published postal marks for celebrating departure of t he First Georgian Space Object in an open space.

**Achievements connected to activities:**

- Awarding with Georgian Patriarchate deed, for taking part in building of Saint Trinity Church in Tbilisi.
- Honorary deed of Georgian national scientific academy for scientific activities in a space mechanical field. 2014.
- Georgian and foreign diplomas and deeds for the best inventions and patents.
- Choosing as a honorary ciziten of Mtskheta.
- Being a member of different Academies.

- Being a member of an editorial staff of Scientific Magazine - "Problems of Mechanics", "Building", "Georgian Politics", "Terminology", and "Military Theory".
- Being a member of an organizational Committee of an International Scientific Conference.
- Results of Scientific researches, except quoted literature, completed as a space construction, mentioned in a scientific articles, encyclopedias and readingbooks.
- Part of Monographs are located in a national library of foreign and Georgian Parliament. Including: German national library – N.B.G; British Library and Bavaria State Library.
- Results of Scientific activities and biography is brought in the most important World's bibliography results, including - Who's who in the World, USA. 2008,2009; Who's who in Science and Engineering.USA. 2007,2008,2009; IBC Foremost Engineers of the World; Cambridge, England. 2008. In Georgian, Russian and English languages in Internet-Encyclopedia – "Wikipedia".
- Internet-website – Category: Constructors of Rocket-space systems – 60 famous constructors.
- Internet-website – Cosmonautics – Superwiki.ru 726
- Internet-website – Rocket Technics – Superwiki.ru 206
- Internet-website – Space technics – Superwiki.ru 297
- Internet-website – [PDF] Earth Observation History.pdf 621
- Internet-website- RSC "Energia" – Corporation – Program "Reflector" brought in a list of important chronicles of Cosmonautics.
- Materials of the First Georgian Space Object and its Scientific activity is saved in Georgian Public Broadcaster "Golden Fund".
- Materials about admitting, also are searched through the internet by rubrics: "NASA MEDZMARIASHVILI; ESA MEDZMARIASHVILI; EXPERIMENT "REFLECTOR"; SPACE STATION "MIR"; deployable space reflector - with photo materials; NATO E.Medzmariashvili; Elguja Medzmariashvili, Gunter's Spusage Reflector and other.

**List of basic achievements :**

- I. Creation First Georgian Space Reflector, delivering it o orbit and program "reflector" realization in an open space.
- II. Creation a theory of Transformable engineering systems.
- III. Cosmonautics field – Establishing Georgian Scientific and technical school of Construction building.
- IV. Developing scientific directions in Military-engineering field in Georgia. ★
- V. Creation of new generation orbital systems and their realization in foreign space programs.
- VI. Create and develop new generation space and military-Engineering techniques in Georgia and abroad. ★
- VII. To create a scientific direction in the academic field - create a new learning discipline according to which lectures are read in the university, as well as PhD program in military science. ★

**Elguja Medzmariashvili** [Medzmariashvili@gtu.ge](mailto:Medzmariashvili@gtu.ge)

**Notice: On this stage, Mentioned griffs of works and documents “completely secret” and “secret” are “unsecreted”.**