

Tsisana Gavasheli



Personal information

DOB: 28.03.1967

Address: 1, Chavchavadze Ave., 0179 Tbilisi, Georgia

Phone: +995 32 222-473 (office) +995 219897 (cell)

Fax: +995 32 222-473

E-mail: tsismari.gavasheli@tsu.ge

Professional experience

- 20.10.2014 - **Assistant Professor**
Faculty of Exact and Natural Sciences, TSU
- 20.10.2011 – **Main specialist**
Department of Scientific Research and Development
Ivane Javakhishvili Tbilisi State University, TSU
- 01.10.2006 -13.10.2014 **Invited Professor**
Faculty of Exact and Natural Sciences, TSU
- 21.03.2011-20.10.2011 **Chief specialist**
Scientific Department, TSU
- 20.08.2007-21.03.20011 **Laboratory assistant**
Faculty of Exact and Natural Sciences, TSU
- 16.10.2006 – 16.10.2008 **Assistant Professor**
Faculty of Exact and Natural Sciences, Sokhumi State University (Branch of TSU)
- 28.12.2004 – 01.09.2006 **Teacher**
Faculty of Physics, department of radiophysics and Electronics, TSU
- 02.12.1992-28.12.2004 **Research staff**
Faculty of Physics, department of radiophysics and Electronics, TSU

Scientific/Academic degree

1995 Candidate of Physical-Mathematical Sciences, Ph.D. / Academic doctor

Education

09.1995 Ph.D. in Radio Physics, Diploma # 000927

1989-1992 Ph.D. Student
Specialty – Radiophysics, Faculty of Physics, TSU

1989 MS in Radiophysics (diploma with honor HB №069482)
Faculty of Physics, TSU

Academic experience

2003 - Lectures and Practical courses:
Physics of magnetism
Semiconductor physics
Electrical Circuits

Area of research experience

Long-term Memory and Magnetoacoustic Effects at Excitation of
Magnetostrictive Materials
Low temperature physics
Problems of NMR Spin-Echo Spectroscopy
Multiple echo in magnetic materials
The echo structure and potential applications
Pulsed EPR spectroscopy of monocrystal
NMR, EPR and magnetometer investigation of nanostructures.

Trainings/Workshops

2017, 14-17 May, Participate in the Washington DC, USA, TechConnect 2017 – TechConnect
World Innovation Conference&Expo

02.03. -17.04.2015 ,Participate in the Exchange Visitor Program at San Diego State University
(SDSU) – within the scope of signed agreement between Georgia and the USA (the
second compact of high education project, Millennium challenge Corporation)

14-21.09.2014 Summer school UKF – Nitra, Slovakia. “New teaching approaches in
Engineering”

7-8.05.2014 The Center for International Projects of the Academy of Science of Moldova
(CIP) and the Center of Social Innovation (ZSI) Workshop “Evaluation and
Expertise for Scientific Excellence in the EaP Region” (Chisinau, Moldova)

10-11.03.2014 Word Intellectual Property Organization and National Intellectual property
Center of Georgia Region Workshop “Commercialization of intellectual property
and Promoting knowledge transfer” (Tbilisi Georgia)

19-22.02.2014 CRDF GLOBAL (The U.S. Civilian Research & Development Foundation), AUTM
(Association of University Technology Managers) 2014 Annual Meeting “AUTM
Startup Business Development Course” Received Certificate (San Francisco, USA)

- 19-20.04.2013 Science&Tecnology Enterpreneurship Progam (STEP) Technology Commercialization Practicum CRDF /GRDF /GNSF. Received Certificate (Tbilisi, Georgia)
- 31.05. – 02.06.2011 4th Commercialization Reactor, Workshop, Virtual CEO Ltd/LIAA (Riga, Latvia)

Awards, honors

02. 2014 travel grant to the U.S as a winner of the Essay & Case Study Competition conducted at the conclusion of the CRDF Global STEP Technology Commercialization Practicums. (San Francisco, USA)
- 09.2012 Award for the recognition of the remarkable young scientist paper presentation at the XII International Seminar/Workshop "Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory" (Diped-2012 , Tbilisi,Georgia)

Memberships

- 2002 - Member of International Electronic Paramagnetic (EPR) Society;
2012- IEEE Member;
2014 - Member of Association of University Technology Managers (AUTM);

Participation in scientific projects

see attachment

Conferences

see attachment

Publications

see attachment

Skills

Foreign languages

English - fluent

Russian - fluent

Computer skills

Windows XP/7/Vista, Microsoft office (Word, Excel, Power Point, Outlook), Adobe Photoshop, Adobe Acrobat Professional.

Scientific Projects

2014-2016 Shota Rustaveli National Science Foundation FR/41/3-250/14	Project Leader “Synthesis and characterization of carbon nanoparticles doped of magnetic nanoclusters with application in self-assembling and self-healing magnetic polymer nanocomposite films on their basis”
2014-2016 Shota Rustaveli National Science Foundation / Science &Technology Center in Ukraine MTCU/110/6-110/14	Project Leader “Magnetoacoustic and memory effects study in magnetostrictive materials by NMR and magnetic video-pulse techniques”
2013-2015 TEMPUS IV 6 th Call	TSU Team member Development of Embedded System Courses with implementation of Innovative Virtual approaches for integration of Research, Education and Production in UA, GE, AM - DESIRE 544091-TEMPUS-1-2013-1-BE-TEMPUS-JPCR
16-23.02. 2014 Civilian Research & Development Foundation /travel grant	Grantee Science&Technology Entrepreneurship Program Visit leading innovation hubs and technology commercialization offices and receive professional training at world-class universities
2009-2012 Shota Rustaveli National Science Foundation GNSF/ST08-123/#410	Project Research Staff “Study of hydrogen influence on martensitic transformations in alloys having the shape memory effect”
2009-2011 Shota Rustaveli National Science Foundation GNSF/ST08-416/ #636/17	Project Research Staff “Investigation of the latest high-temperature superconductor on the basis of iron”

Conferences:

1. 2017, 14-17 May, Washington DC, USA, TechConnect 2017 – TechConnect World Innovation Conference&Expo, „Magnetometry and optical spectroscopy study of the photocatalytic activity of TiO₂ nanopowders coated by NiB nanoclusters using the electroless technology“, Ts.A.Gavasheli, T.O.Gegechkori, G.I.Mamniashvili, M.M.Nadareishvili, T.I.Zedginidze, T.G.Petriashvili, A.D. Shengelaya, D.M.Daraselia, D.L.Japaridze, <http://www.techconnectworld.com/World2017/>
2. The 117th International Conference on Nanoscience, Nanotechnology and Advanced Materials (IC2NM)2017, Hong Kong, 27th - 28th January, 2017..Gavasheli, G.Mamnishvili, T.Gegechkori, Z.Shermadini “Cumulative 57Fe NMR Stimulated Echoes in Lithium Ferrite”, <http://www.academicworld.org/Conference2017/HongKong/1/IC2NM/>
3. 2016, 9-11 November, University Pompeu Fabra, Barcelona, Spain, Applied Nanotechnology & Nanoscience International Conference - ANNIC 2016, „NMR investigation of domain wall dynamics and hyperfine field anisotropy in magnets by the magnetic video-pulse excitation method“, Ts.A.Gavasheli, G.I.Mamniashvili, T.O.Gegechkori, www.premc.org/annic2016
4. 2017, 27-28 January, HongKong (HongKong), Academics world, „International Conference on Nanoscience, Nanotechnology and Advanced Materials-(IC2NM)“. CUMULATIVE 57Fe NMR STIMULATED ECHOES IN LITHIUM FERRITE”, Ts.Gavasheli, G.Mamniashvili, T.Gegechkori, Z. Shermadini, <http://www.academicworld.org/Conference2017/HongKong/1/IC2NM/>
4. 2016, V International Conference on Superconductivity and Magnetism -ICSM2016, Fethiye/Blue Lagoon (Ölüdeniz), Turkey, “The origin of the domain-acoustic echo in magnetite” Ts. Gavasheli, D. Daraselia, D. Japaridze, G. Mamniashvili T. Gegechkori, Yu. Sharimanov, D. Gventsadze, <http://icsm2016.org/>
5. 2016, V International Conference on Superconductivity and Magnetism -ICSM2016, Fethiye/Blue Lagoon (Ölüdeniz), Turkey, „On the 55Mn NMR Echo Enhancement in Half-Metallic Heusler Compound NiMnSb in Applied Magnetic Fields“ Mamniashvili, G., Gegechkori, T., Gavasheli, T. <http://icsm2016.org/>
6. “Stimulated domain-acoustic echo possessing the long-term memory in magnetite powders” The first SDSU-Georgia STEM workshop on Nanotechnology and Environmental Sciences, September 5-6 2015, Tbilisi, Georgia
7. “Echo Enhancement of Nuclei Arranged in Domain Walls of Half-Metallic Compound in Applied Magnetic Fields” The Second Scientific Conference in Exact and Natural Sciences 2014, Ivane Javakhishvili Tbilisi State University, 29 January -3 February, 2014, <http://conference.ens-2014.tsu.ge/>
8. “Effect of ⁵⁵Mn NMR Echo Enhancement of Nuclei Arranged in Domain Walls of Half-Metallic Heusler Compound NiMnSb in Applied Magnetic Fields” Proceedings of XIXth International

- Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), 2014 September 22-25, Tbilisi , Georgia
9. AUTM (Association of University Technology Managers) 2014 Annual Meeting , “AUTM Startup Busines Development Course” , February 19-22,2014, San Francisco, USA
 10. "The devolpment of physical dating methods in Archaeology in Georgia" Interdisciplinary Archaeology II, dedicated to the 95 th anniversary of University, Iv. javakhishvili Tbilisi State University Faculty of Humanities, Institute of Archeology Archeological Associaeation of Georgia, November 10-11, 2013 Tbilisi, Georgia
 11. “Technology for production of carbon nanoparticles doped with magnetic clusters“ XVIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, (DIPED), September 24-27, 2012, Tbilisi , Georgia
 12. Long-term memory and magnetoacoustic responses at excitation of magnetostrictive materials by RF pulses using pulsed NMR technique Proceedings of XVIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), September 24-27, 2012, Tbilisi , Georgia
 13. The MAS based simulation of plane wave angular incident on two-dimensional dielectric sphere array”
 14. Proceedings of XVIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), 2012 September 24-27, Tbilisi , Georgia
 15. “NMR Spin-Echo Spectroscopy in Magnets Using Arbitrary Length Radio-Frequency Pulses” 3rd International conference on superconductivity and magnetism – ICSM2012, 29 April – 4 May 2012, Istanbul Turkey
 16. Timing and Spectral Diagrams of Magnetic Video-Pulse Excitation Influence on NMR Spin-Echo in Magnets” 3rd International conference on superconductivity and magnetism – ICSM2012, 29 April – 4 May 2012, Istanbul-Turkey
 17. “magnetoacoustic responses at excitation of magnetostrictive material”, International scientific conference deducted 90th anniversary of Georgian Technical University, “Basic Paradigms in Scientific and Technology Development for the 21th Century”, Georgian Technical University, Tbilisi, Georgia, September 19-21, 2012
 18. “Technology for production of carbon nano particles” International scientific conference dedicated 90th anniversary of Georgian Technical University “Basic Paradigms in Scientific and Technology Development for the 21th Century”, Georgian Technical University, Tbilisi, Georgia, September 19-21, 2012
 19. “Water cleaning synergistic device” Latvian Investment and Development Agency (LIAA) and “FNG Invest” Virtual CEO International technology and business promotion event “Commercialization Reactor”, May 31- June 3, 2011, Riga, Latvia
 20. “NMR and magnetometry study of nanosized cobalt powders synthesized with electron-beam technology” Int. Conf. Recent trends in Nanomagnetism, Spintronics and their Applications (RTNSA), 1-4, June 2011, Ordizia, Basque Country, Spain.

21. "Magnetoacoustic and memory effects in magnetostrictive materials studied by pulsed NMR and magnetic video-pulse excit" , Advances in Applied Physics and Materials Science Congress (APMAS2011), 12-15 May 2011, Antalya, Turkey.
22. Inductive excitation of magnetoelectric responses in layered magnetoelectric composite materials using a magnetic video-pulse excitation" First International Conference for Students and Young Scientists on Materials Processing Science (1ICSYS), Georgian Ceramic Society. Georgian Technical University, 10-13 October, 2010.
23. "Magnetometry and NMR study of nanomaterials" First International Conference for Students and Young Scientists on Materials Processing Science (1Icsys), Georgian Ceramic Society, Georgian Technical University, 10-13 October, 2010.
24. The receiving and study of hematite nanoparticles for hyperthermia" First International Conference for Students and Young Scientists on Materials Processing Science (1Icsys), Georgian Ceramic Society, Georgian Technical University, 10-13 October, 2010.
25. "Magnetic video-pulse influence on domain wall NMR in magnetic materials", 55th Annual Conference on Magnetism & Magnetic Materials MMM-, 14-18 November, 2010, Atlanta, Georgia, USA
26. "Complex physical methods of dating in archeology", International conference "Georgian arhaeology at the turn of the 21 century: results and perspectives" 10-12 November, Tbilisi, Georgia
27. "Multiple NMR spin echo in magnets", International Conference on Functional Materials, 5-10 October, 2009, Crimea, Ukraine.
28. "Multiple NMR spin echoes in magnets: the echo structure and potential applications", 53 rd Annual conference on magnetism and magnetic materials (2008MMM), 12-15 september, 2008, Austin, Texas, US
29. "Multiple echoes in magnets", The International Conference in Physics dedicated to the 90th Anniversary of Ivane Javakhishvili Tbilisi State University (TSU), , 25-26 september, 2008, Tbilisi, Georgia
30. "Ligand superfine interaction with hole center in CaF₂:Na", Magnetic Resonance-91, 5-8 may, 1991, Kazan

Publications

1. **Gavasheli, T.**, Gegechkori, T., Ghvedashvili, G., Mamniashvili, G., “Study of self-healing and self-assembly processes in polymer nanocomposites synthesized with carbon nanoparticles doped by magnetic nanoclusters”, 2017 22nd International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED 2017 – Proceedings 8100593, pp. 178-182 www.ewh.ieee.org/soc/cpmt/ukraine/Data/.../Program_DIPED-17.pdf
2. Mamniashvili, G., Gegechkori, T., **Gavasheli, T.**, “On the 55Mn NMR Echo Enhancement in Half-Metallic Heusler Compound NiMnSb in Applied Magnetic Fields”, Journal of Superconductivity and Novel Magnetism, 2017, 30(10), pp. 2981-2984 <https://link.springer.com/article/10.1007/s10948-016-3651-7>
3. **T.A Gavasheli**, G.I Mamniashvili, T.O Gegechkori “NMR investigation of domain wall dynamics and hyperfine field anisotropy in magnets by the magnetic video-pulse excitation method” IOP Conf. Series: Journal of Physics: Conf. Series 1234567890 829 (2017) 012022 doi :10.1088/1742-6596/829/1/012022 <http://iopscience.iop.org/article/10.1088/1742-6596/829/1/012022/meta>
4. Gavasheli, T., Mamniashvili, G., Gegechkori, T., Shermadini, Z., Ghvedashvili, G. “Cumulative stimulated echo in magnets” Proceedings of International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED, Volume 2016-December, 5 December 2016, Article number 7772232, Pages 123-126 www.ieee.org/r8/ukraine/georgian/.../Tech%20Prog%20DIPED-2016.pdf
5. G Mamniashvili, T Gegechkori, A Akhalkatsi, **T Gavasheli** “On the role of the hyperfine field anisotropy in the formation of a single-pulse NMR spin echo in cobalt“ J. Supercond. Nov. Magn. Vol. 28, N3 (2015) pp. 911-916. <https://link.springer.com/article/10.1007/s10948-014-2812-9>
6. **T. Gavasheli** , G. Mamniashvili, and.etc.,Technology for production of magnetic carbon nanopowders doped with iron and cobalt nanoclusters“ J. Magn. Magn. Mater. Vol. 373, N 1 (2015) pp. 200-206. <https://www.infona.pl/resource/bwmeta1.element.elsevier-39422bb7-4f0d-31f1-b406-41b02a0ccf85>
7. G. Mamniashvili, T. Gegechkori, M. Okrosashvili, E. Kutelia, A. Akhalkatsi, **T. Gavasheli**, D. Daraselia, D. Djaparidze, A. Shengelaya „Production of cobalt nanopowders by electron-beam technology and their NMR and magnetometry study“, J. Magn. Magn. Mater. Vol. 373, N1 (2015) pp. 177-182. <https://www.infona.pl/resource/bwmeta1.element.elsevier-b07ffba-f3315-336e-ac1a-3af40b07b666>
8. M. D. Zviadadze, G. I. Mamniashvili, T. O. Gegechkori, A. M. Akhalkatsi, **T. A. Gavasheli** „NMR spin-echo spectroscopy in magnets using arbitrary duration radio-frequency pulses“,J. Supercond. Nov. Magn. Vol.26, N4 (2013) pp.1405-1409. <https://link.springer.com/article/10.1007/s10948-012-2039-6>
9. G. I. Mamniashvili,. O. GegechkoriA. M. Akhalkatsi, **T. A. Gavasheli**, E. R. KuteliaL. N. RukhadzeD. I. Gventsadze ,“Timing and spectral diagrams of magnetic video-pulse excitation influence on NMR spin-echo in magnets“,J. Supercond. Nov. Magn. Vol.26, N4 (2013) pp.1401-1404. <https://link.springer.com/article/10.1007/s10948-012-1869-6>
10. Mamniashvili,. O. GegechkoriA. M. Akhalkatsi, **T. A. Gavasheli**, “Two pulse stimulated echo in magnets“.Phys.Met.Metallogr.V.113, N 9 (2012) pp. 849-854 <https://elibrary.ru/item.asp?id=20147835>
11. G. Mamniashvili, T. Gegechkori, A. Akhalkatsi, **T. Gavasheli**, “On the Role of the Hyperfine Field Anisotropy in the Formation of a Single-Pulse NMR Spin Echo in Cobalt” Journal of Superconductivity and Novel Magnetism, Journal of Superconductivity and Novel Magnetism, March 2015, Volume 28, Issue 3, pp 911–916, <https://link.springer.com/article/10.1007/s10948-014-2812-9>
12. T. Gegechkori, G. Mamniashvili, E. Kutelia, L. Rukhadze, N. Maisuradze, B. Eristavi, D. Gventsadze, A. Akhalkatsi, T. Gavasheli, D. Daraselia, D. Japaridze, A. Shengelaya, “Technology for production

- of magnetic carbon nanopowders doped with iron and cobalt nanoclusters “, Journal of Magnetism and Magnetic Materials, Volume 373, 1 January 2015, Pages 200-206, <http://www.sciencedirect.com/science/article/pii/S0304885314004405>
13. G. Mamniashvili, T. Gegechkori, M. Okrosashvili, E. Kutelia, A. Akhalkatsi, **T. Gavasheli**, D. Daraselia, D. Djaparidze, A. Shengelaya, A. Peikrshvili, D. Lesuer “Production of cobalt nanopowders by electron-beam technology and their NMR and magnetometry study”, Journal of Magnetism and Magnetic Materials, Volume 373, 1 January 2015, Pages 177-182 <http://www.sciencedirect.com/science/article/pii/S030488531400287X>
 14. G.I. Mamniashvili, T.O. Gegechkori, A.M. Akhalkatsi, **Ts. A. Gavasheli**. “On the mechanism of formation of multiple echo in magnetic materials” “Physics of Metals and Metallography” Volume 114, Number 10, 2013, pp.833-837. <http://link.springer.com/article/10.1134/S0031918X13100074#page-1>
 15. M.D. Zviadadze, G.I. Mamniashvili ,T.O. Gegechkori, A.M. Akhalkatsi, **T.A. Gavasheli** , “NMR Spin Echo Spectroscopy in Magnets Using Arbitrary Duration Radio-Frequency Pulses” Journal of Superconductivity and Novel Magnetism. Volume: 26 Issue: 4 Special Issue: SI Pages: 1405-1409 Published: APR 2013.<http://link.springer.com/article/10.1007/s10948-012-2039-6#page-1>
 16. G.I.Mamniashvili, T.O.Gegechkori, A.M. Akhalkatsi, **T.A.Gavasheli**, E.R. Kutelia, L.N. Rukhadze, D.I. Gventsadze, “Timing and Spectral Diagrams of Magnetic Video-Pulse Excitation Influence on NMR Spin–Echo in Magnets”, Journal of Superconductivity and Novel Magnetism. Volume: 26 Issue: 4 Special Issue: SI Pages: 1401-1404 Published: APR 2013 <http://link.springer.com/article/10.1007/s10948-012-1869-6>
 17. M.D. Zviadadze, G.I. Mamniashvili, T.O. Gegechkori, A.M. Akhalkatsi, **T.A. Gavasheli**, “Two-pulse stimulated echo in magnets”, “Physics of Metals and Metallography” Volume: 113 Issue: 9 Pages: 849-854 Published: SEP 2012, <http://link.springer.com/article/10.1134/S0031918X12090165>
 18. G.I. Mamniashvili, Y.G. Sharimanov, T.O. Gegechkori, A.M. Akhalkatsi, **T.A.Gavasheli**, Long-term Memory and Magnetoacoustic Effects at Excitation of Magnetostrictive Materials by RF and Magnetic Pulses Using Pulsed NMR Technique“ Advances in Applied Acoustics (AIAA) Vol.2, N1, pp.34-43, 2013, <http://www.seipub.org/AIAAS/paperInfo.aspx?ID=5636>
 19. V.Llicheli, A.Akhalkatsi, **T.Gavasheli**, G.Mamniashvili, T.Gegechkori, M.Gogebashvili, "The development of physical dating methods in Archaeology in Georgia" Interdisciplinary Archaeology II, dedicated to the 95 th anniversary of University, Iv. javakhishvili Tbilisi State University Faculty of Humanities, Institute of Archeology Archaeological Association of Georgia, p. 81-83, ISSN 1987-8281, 2013, Publishing House "Universal" Tbilisi, <http://www.nplg.gov.ge/ec/en/bibl/browse.html?pft=biblio&from=9698>
 20. A.M. Akhalkatsi, **T.A. Gavasheli**, D.M. Daraselia, D.L. Djaparidze, A.D. Shengelaya, G.I .Mamniashvili, T.O. Gegechkori, E.R. Kutelia, L.N. Rukhadze, D.I. Gventsadze, “Technology for production of carbon nanoparticles doped with magnetic clusters“, Proceedings of XVIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory(DIPED), pp.119-122, September 24-27, 2012, Tbilisi , Georgia <http://ewh.ieee.org/r8/ukraine/georgian/DIPED/DIPED%20Program.pdf>
 21. G.I .Mamniashvili, Y.G. Sharimanov, T.O Gegechkori, A.M. Akhalkatsi, **T.A. Gavasheli**, D.I. Gventsadze, “Long-term memory and magnetoacoustic responses at excitation of magnetostrictive materials by RF pulses using pulsed NMR technique”, Proceedings of XVIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory,(DIPED), pp. 131-135, 2012 September 24-27, Tbilisi , Georgia <http://ewh.ieee.org/r8/ukraine/georgian/DIPED/DIPED%20Program.pdf>

22. D. Kakula, A. Lomia, T. Gogua, G. Ghvedashvili, **T. Gavasheli**, “The MAS based simulation of plane wave angular incident on two-dimensional dielectric sphere array”, Proceedings of XVIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), pp. 63-67, 2012 September 24-27, Tbilisi, Georgia http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6344101&url=http%3A%2F%2Fieeexplore.ieee.org%2Fxppls%2Fabs_all.jsp%3Farnumber%3D6344101
23. G.I. Mamniashvili, T.O. Gegechkori, A.M. Akhalkatsi, **T.A. Gavasheli**, E.R. Kutelia, L.G. Rukhadze, D.I. Gventsadze, “Peculiarities of timing and spectral diagrams of magnetic video-pulse excitation influence on NMR spin-echo in magnets”, arXiv preprint arXiv:1204.5844, 2012/4/26, <http://arxiv.org/ftp/arxiv/papers/1204/1204.5844.pdf>
24. MD Zviadadze, GI Mamniashvili, TO Gegechkori, AM Akhalkatsi, **TA Gavasheli**, “Formation mechanisms and relaxation of NMR spin-echo signals excited by two arbitrary duration radio-frequency pulses in magnets”, arXiv preprint arXiv:1204.5344, 2012/4/24 <http://arxiv.org/abs/1204.5344>
25. G.I. Mamniashvili, T.O. Gegechkori, T.N. Khoperia, T.I. Zedgenidze, F.K. Akopov, A.M. Akhalkatsi, **T.A. Gavasheli**, “New developments in Materials Science” p.35-42 materials science and technologies, ISBN 978-1-61668-852-3, Nova Science Publishers, Inc. New York, 2011, https://www.novapublishers.com/catalog/product_info.php?products_id=14239
26. E.R. Kutelia, L.N. Rukhadze, N.I. Maisuradze, B.G. Eristavi, D.I. Gventsadze, A.M. Akhalkatsi, **T.A. Gavasheli**, D.M. Daraselia, D.L. Djaparidze, A.D. Shengelaya, G.I. Mamniashvili and T.O. Gegechkori. “Investigation of morphology and magnetic properties of carbon powder nanoparticles doped with iron and cobalt atoms”, Georgian Engineering News (Founded in 1996 Issued quarterly in English and Russian) No. 3. (vol.55), 2010 p.75- 82. GFID GEN LTD <http://www.tech.caucasus.net/gen/inf48.htm>
27. A. M. Akhalkatsi, **Ts.A. Gavasheli**, T.O. Gegechkori et al. “Enhanced resolution NMR spin echo method to study cobalt nanopowders and half metals using additional magnetic video-pulse excitation. Georgian Electronic Scientific Journals (GESJ): Physics. Date: 2009-03-26; ID: 1529 #.1(1) pp 35-40 http://gesj.internet-academy.org.ge/ge/list_artic_ge.php?b_sec=phys&issue=2009-06
28. M. Zviadadze, G. Mamniashvili, **T. Gavasheli** and et al. “NMR Spin-Echo Spectroscopy in Magnets Using Arbitrary Length Radio-Frequency Pulses” 3rd International conference on superconductivity and magnetism – ICSM 2012, 29 April – 4 May 2012, Istanbul-Turkey. Abstract M-0-350, Book of Abstracts, p. 292 (2012) <http://www.icsm2012.org/> <http://link.springer.com/article/10.1007/s10948-012-2039-6#page-1>
29. G.I. Mamniashvili, **T.A. Gavasheli**, E.R. Kutelia, D.I. Gventsadze and oth. “Timing and Spectral Diagrams of Magnetic Video-Pulse Excitation Influence on NMR Spin-Echo in Magnets” 3rd International conference on superconductivity and magnetism – ICSM2012 29 April – 4 May 2012, Istanbul-Turkey. Abstract M-P-547, Book of Abstracts, p. 445 (2012) <http://link.springer.com/article/10.1007/s10948-012-1869-6>
30. G. Mamniashvili, Y. Sharimanov, T. Gegechkori, A. Akhalkatsi, **T. Gavasheli**, D. Gventsadze, E. Kutelia, Sh. Nachkebia, “Long-term memory and magnetoacoustic responses at excitation of magnetostrictive material”, International scientific conference dedicated 90th anniversary of Georgian Technical University “Basic Paradigms in Scientific and Technology Development for the 21st Century”, Georgian Technical University, Tbilisi, Georgia, September 19-21, 2012. Transactions, pp. 268-276] http://gesj.internet-academy.org.ge/conf_gtu90/ge/program_ge.php
31. A.M. Akhalkatsi, **T.A. Gavasheli**, D.M. Daraselia, D.L. Djaparidze, A.D. Shengelaya, G.I. Mamniashvili, T.O. Gegechkori, E.R. Kutelia, L.N. Rukhadze, D.I. Gventsadze “Technology for production of carbon

- nanoparticles doped with magnetic clusters”. Proceedings of the International scientific conference dedicated 90th anniversary of Georgian Technical University “Basic Paradigms in Scientific and Technology Development for the 21st Century”, Georgian Technical University, Tbilisi, Georgia, September 19-21, 2012. http://gesj.internet-academy.org.ge/conf_gtu90/ge/program_ge.php
32. **T.A.Gavasheli**, G.I.Mamniashvili, ” Water cleaning synergistic device“, Latvian Investment and Development Agency (LIAA) and “FNG Invest” Virtual CEO International technology and business promotion event “Commercialization Reactor”, (Proceedings) Riga, Latvia, May 31- June 3, 2011 <http://virtualceo.eu/ru/4th-commercializationreactor--3105-02062011-riga-37600>
 33. G.I. Mamniashvili, E.R. Kutelia, **T.A. Gavasheli** and others. ” NMR and magnetometry study of nanosized cobalt powders synthesized with electron-beam technology” Int. Conf. Recent trends in Nanomagnetism, Spintronics and their Applications (RTNSA), 1-4, June 2011, Ordizia, Basque Country, Spain. Book of Abstracts, p.154. <http://www.ehu.es/ocs/public/conferences/19/schedConfs/14/accommodation-32.pdf>
 34. J. Aneli, D. Gventsadze, G. Mamniashvili, Yu. Sharimanov, **T. Gavasheli** and other, " Magnetoacoustic and memory effects in magnetostrictive materials studied by pulsed NMR and magnetic video-pulse excit“, Advances in Applied Physics and Materials Science Congress (APMAS2011), 12-15 May 2011, Antalya, Turkey. Book of Abstracts. vol.2. p. 241 <http://www.apmas2011.org/>; www.aiaa-journal.org
 35. M. Chikovani, A. Akhalkatsi, **T. Gavasheli** and others. “ Inductive excitation of magnetoelectric responses in layered magnetoelectric composite materials using a magnetic video-pulse excitation” First International Conference for Students and Young Scientists on Materials Processing Science (1ICSYS), Georgian Ceramic Society. Georgian Technical University, 10-13 October, 2010. Programme and Book for Manuscripts, p.94-98 (2010). http://keramika.gtu.ge/pdf/konferencia_2010.pdf
 36. M.A.Chikovani, A.M.Akhalkatsi, **T.A.Gavasheli**, D.M.Daraselia, D.L.Djaparidze, A.D.Shengelaya, G.I.Mamniashvili, T.O.Gegechkori. M.O.Okrosashvili, E.R.Kutelia. A,B.Peikrshvili, “ Magnetometry and NMR study of nanosized cobalt powders synthesized with electron-beam technology”, First International Conference for Students and Young Scientists on Materials Processing Science (1Icsys), Georgian Technical University, 10-13 October, 2010, Programme and Book for Manuscripts, p.88-94 (2010). http://keramika.gtu.ge/pdf/konferencia_2010.pdf
 37. G.Donadze, G.Mamniashvili, A.Akhalkatsi, D.Daraselia, D.Japaridze, O.Romelashvili, A.Shengelaia, **T.Gavasheli**, J.G.Heinrich, Z.Kovziridze, “ The receiving and study of hematite nanoparticles for hyperthermia”, First International Conference for Students and Young Scientists on Materials Science (1ICSYS), Georgian Ceramic Society. Georgian Technical University, 10-13 October, 2010, Programme and Book for Manuscripts, p. 37-45 (2010). http://keramika.gtu.ge/pdf/konferencia_2010.pdf
 38. G.I. Mamniashvili, T.O. Gegechkori, A.M. Akhalkatsi, T.A. Gavasheli. “Magnetic video-pulse influence on domain wall NMR in magnetic materials” 55th Annual Conference on Magnetism & Magnetic Materials MMM-, 14-18 November, 2010, Atlanta, Georgia, USA. Report GP-13. <http://www.magnetism.org/55thprogram.pdf>
 39. Mamniashvili G.I., Akhalkatsi, A. M.; **Gavasheli, T. A.**; Gegechkori, T. O.; et al., “Multiple NMR spin echoes in magnets: The echo structure and potential applications”, Journal of Applied Physics Volume: 105 Issue: 7 Article Number: 07D303 Published: APR 1 2009, http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=5131736&url=http%3A%2F%2Fieeexplore.ieee.org%2Fxppls%2Fabs_all.jsp%3Farnumber%3D5131736
 40. A.M.Akhalkatsi, **T.A.Gavasheli**, T.O.Gegechkori, G.I.Mamniashvili, Z.G.Sheradini, W.G.Clark, “Multiple NMR spin echo in magnets”, International Conference on Functional Materials, (Proceedings) DP-1P/46, p.66-70, October 5-10, 2009, Crimea, Ukraine http://icfm.crimea.edu/sites/default/files/program/icfm_program_2009.pdf

41. A.M.Akhalkatsi, **T.A.Gavasheli**, T.O.Gegechkori, G.I.Mamniashvili, Z.G.Shermadini, W.G.Clark. "Multiple NMR spin echoes in magnets: the echo structure and potential applications" (Proceedings) 53rd Annual conference on magnetism and magnetic materials (2008) MMM. EU-06. P.161-165, Austin, Texas, US.2008 <http://www.magnetism.org/53rdprogram.pdf>
42. A.Akhalkatsi, **T.Gavasheli**, T.Gegechkori, G.Mamniashvili, Z.Shermadini, "Multipulse echoes in magnets".Materials of the International Conference in Physics dedicated to the 90th Anniversary of Ivane Javakhishvili Tbilisi State University (TSU)25-26 september 2008 <http://www.phys08.tsu.ge/Materials.htm>
43. **Ts. A. Gavasheli**, D.M. Daraseliya, D.L. Dzhaparidze, R.I. Mirianashvili, O.V. Romelashvili, T.I. Sanadze, "A method for estimating the local lattice distortions near a magnetic ion from ligand hyperfine parameters: Yb³⁺ trigonal centers in SrF₂ and BaF₂", Physics of the Solid State, Volume: 48 Issue: 1 Pages: 58-62 Published: JAN 2006 , <http://link.springer.com/article/10.1134/S1063783406010124>
44. **Ts. A. Gavasheli**, D.M. Daraseliya, D.L. Dzhaparidze, R.I.Mirianashvili, O.V. Romelashvili, T.I. Sanadze, "Method for estimating local lattice distortions near a magnetic ion based on the parameters of the ligand hyperfine interaction: Ce³⁺ in the fluorite homologous series", Physics of the Solid State, Volume: 44 Issue: 10 Pages: 1880-1884 Published: 2002 , <http://link.springer.com/article/10.1134/1.1514776>
<https://ir.stonybrook.edu/xmlui/bitstream/handle/11401/70503/PSSv44i10final.pdf?sequence=2>
45. **T.A. Gavasheli**, D.M. Daraseliya, D.L. Dzhaparidze, R.I. Mirianashvili, T.I. Sanadze, "Pulsed EPR spectroscopy of the V_{KA} center in CaF₂ : Na ",Physics of the Solid State ,Volume: 40 Issue: 9 Pages: 1470-1473 Published: SEP 1998, http://apps.webofknowledge.com.ludwig.lub.lu.se/full_record.do?product=UA&search_mode=GeneralSearch&qid=13&SID=V1xyGs4Jles1nrL6BYG&page=1&doc=8
46. **Gavasheli, Ts. A.**; Daraseliya, D. M.; Mirianashvili, R. I.; Sanadze, T. I., "Hyperfine and quadrupole interaction of a Na⁺ ion with a hole center in CaF₂:Na" <http://adsabs.harvard.edu/abs/1994PhSS...36..979G>
https://www.researchgate.net/publication/253373428_Hyperfine_and_quadrupole_interaction_of_a_Na_ion_with_a_hole_center_in_CaF2Na
47. **T.A. Gavasheli**, R.I. Mirianashvili, O.V. Romelashvili, T.I. Sanadze "Electron spin resonance of a hole center in CaF₂:Na", Physics of the Solid State, Volume: 34 Issue: 2 Pages: 672-675 Published: FEB 1992, <http://cat.inist.fr/?aModele=afficheN&cpsidt=5494073>
48. **T.Gavasheli**, D.Daraselia, R.Mirianashvili, T.Sanadze, "Ligand superfine interaction with hole center in CaF₂:Na". Magnetic Resonance-91, p.23-29, symposium materials, 6-8 september, 1991 Kazan.

