

Giorgi Ghvedashvili

Personal information

DOB: 12.04.1974

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Professional experience

01.2010 -	Head Department of Scientific Research and Development Ivane Javakhishvili Tbilisi State University, TSU
01.2014 -	Head Department of Electrical and Electronics Engineering (EEE) Faculty of Exact and Natural Sciences, TSU
26.09.2012 -	Professor Faculty of Exact and Natural Sciences, TSU
27.09.2009 -26. 09.2012	Associate Professor Faculty of Exact and Natural Sciences, TSU
2008 - 01.2010	Deputy Head Department of Scientific Research and Development, TSU
2007-2008	Main Specialist Scientific Department, TSU
2006-2007	Associate Professor Faculty of Exact and Natural Sciences, TSU
2003-2006	Research staff member Laboratory of Applied Electrodynamics and Radio Techniques, TSU
2000-2003	Engineer Laboratory of Applied Electrodynamics, TSU

Scientific/Academic degree

2002	Candidate of Physical-Mathematical Sciences, Ph.D. / Academic doctor
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Education

12.2002	Ph.D. in Radio Physics, Diploma #003505
1996-1999	Ph.D. Student Specialty – Superconductivity, Faculty of Physics, TSU
1996	MS in Physics of Elementary Particles (diploma with honor AH #00166) Faculty of Physics, TSU

Working experience abroad / academic missions

02.03.2015 – 17.04.2015	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)
14.06 – 15.07.2010	Invited Professor Swiss Federal Institute of Technology Zurich, ETH Zurich
1.11.2006 - 7.11.2006	Visit to Estonia and Finland in frames of TACIS project #123052 “Creating an effective model of science administration: review of EU best practices and elaboration of policy recommendations with the Ministry of Education and Science of Georgia”

04.2005 – 08.2005	Postdoctoral research fellow at the Computational Optics Group at ETH Zurich, Switzerland (Under INTAS Postdoctoral Fellowship)
09.2004 – 12.2004	Postdoctoral research fellow at the Department of Mathematical Analysis and Applications at University of Veliko Tirnovo 'St.St. Cyril and Methodius', Bulgaria (Under INTAS Postdoctoral Fellowship)

Academic experience

2003 -	Lectures and Practical courses: Electricity and Magnetism Optics Computer Modeling of Physical Processes Research Management Electronics Electromagnetic Compatibility (EMC) Antennas and Propagation (AP)
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Area of research experience

Scattering and inverse problems in electrodynamics
Antenna design
EMC/EMI problems in applied electrodynamics
Numerical Methods
Influence EM fields on the Biological Objects (SAR Problems)

Trainings/Workshops

14-16.04.2021	12 Professional Development Hours for participation at the 2021 ABET Symposium, Received Certificate
17-20.07.2019	2019 ABET July Commission Meetings (EAC Institutional Representation Orientation), Received Certificate
10-13.04.2019	2019 ABET Symposium: Generation Cyber; ABET Advanced Program Assessment Workshop (APAW), Received Certificate
9-15.04.2018	ABET Training at SDSU & Annual ABET Symposium, Received Certificate
12-13.04.2018	2018 ABET Symposium (14 Professional Development Hours), Received Certificate
11.04.2018	2018 ABET Symposium, Fundamentals of Program Assessment (7 Professional Development Hours), Received Certificate
14-21.09.2014	Trainings in frames of TEMPUS „DESIRE“ 544091-TEMPUS-1-2013-1-BE-TEMPUS-JPCR project, Received Certificate
13-15.09.2011	WIPO National TISC Workshop on Innovation Support Through Access to Technical Knowledge, Received Certificate
09.-11.2010	University Administration Support Program (UASP), International Research and Exchange Board (IREX), Kent State University, USA; Management Topic: Research Management
3-6.05.2010	Technology Transfer and Technology Licensing Workshop CLDP/SSGF/GRDF, Received Certificate
26.09.2010 -18.11.2010	International Research&Exchange Board (IREX), University Administration Support Program (UASP)
10.2009 – 04.2010	CCNA Cisco Network Academy, GRENA
5.11 – 7.11.2008	Black Sea Economic Cooperation (BSEC) Workshop, S&T Working Group Meeting, Borovets, Bulgaria
06.2008	Technology commercialization, basic business practices and partnership development CRDF/GNSF/GRDF, Received Certificate

2.04 – 5.04.2008	“Forum on Higher Education” - Congress of the Black Sea Universities Network in frames of BSEC, Kiev, Ukraine
11.2007	"Technological Management: commercialization of R&D results in scientific research institutes". The Science & Technology Center in Ukraine (STCU). Received Certificate
16.07.2007-10.08.2007	Strategic Planning and Organizational Management Training. USAID Certificate

Awards, honors

2013-2015	Certificate of appreciation for the activities carried out at the scientific board of the Georgian National Science Foundation
2009-2010	President Grant for Young Scientists, GNSF
2008-2009	I. Vekua Young Scientists Fellowship Grant
10.2006	Diploma for the Best Project in Natural Sciences honored by Ministry of Science and Education of Georgia and Georgian National Scientific Foundation (GNSF)
05.2006	1 st Prize Winner of INTAS Young Scientists Writing Competition 2006
2004-2006	INTAS Young Scientists Postdoctoral Fellowship Grant
10.2002	Award for the recognition of the remarkable young scientist paper presentation at the VI International Seminar/Workshop "Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory" (Diped-2002); 2002, Tbilisi, Georgia
09.2002	Award for the recognition of the remarkable young scientist paper presentation at the International Conference "Mathematical Methods in Electromagnetic Theory" (MMET 2002), 2002, Kiev, Ukraine
1992 – 1994	Student Fellowship Grant by Soros Foundation (Georgia)

Memberships

2016 - 2022	Member of TSU Academic Council
2012 -	Member of Editorial Board, Journal "TSU Science"
2009, 2013-2015	Member of Scientific Board, Georgian National Science Foundation
2002 -	IEEE Member (2010-2013 Georgian Chapter Chairman, since 2014 – Vice Chairman)
2010 -	Individual Full Member of Society of Research Administrators International (SRA International)
2010 -	Professional Member of American Association for the Advancement of Science (AAAS)

Invited lectures and presentations in Bulgaria in frame of the INTAS Postdoctoral Fellowship Grant

09.2004 – 12.2004	University of Veliko Tirnovo "St. St. Cyril and Methodius" South-West University "Neofit Rilsky" of Blagoevgrad Konstantin Preslavsky University of Shumen Technical University of Gabrovo Technical University of Varna Technical University-Sofia Branch Plovdiv University "Paisii Hilendarski" of Plovdiv University of Rousse "Angel Kinchev" Higher College of Telecommunications and Posts of Sofia University of Chemical Technology & Metallurgy of Sofia
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Participation in scientific projects - see attachment

Conferences - see attachment

Publications - see attachment

Skills

Foreign languages

English - fluent

Russian - fluent

Computer skills

Windows, Microsoft office (Word, Excel, Power Point, Outlook), Adobe Photoshop, Adobe Acrobat Professional, Paint Pro Shop

Programming languages (C++, FORTRAN, Basic)

Attachment

Scientific Projects

2023- Shota Rustaveli National Science Foundation of Georgia	Mentor “Electromagnetic pollution background investigation/analysis at the locations of the educational institutions of Tbilisi (Georgia) and assessment related possible risks” YS-23-131
15-Sep-2020 – 14-Sep-2021 Office of Naval Research Global	Project Leader “XXVth International Seminar/Workshop Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED)” Award N62909-20-1-2065
2019-2020 Erasmus+: Higher Education – International Capacity Building (E+CBHE) Project	Project Participant / TSU Team Member “Raising Research Capacity of Georgian HEIs through Developing R&D Units (HERD)” (Agreement number – 2018-2578 / 001 – 001; Project reference number: 598207-EPP-1-2018-1-GE-EPPKA2-CBHE-SP)
2013-2015 TEMPUS IV 6 th Call	TSU Team Leader 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
2013-2015 Shota Rustaveli National Science Foundation	Project Leader Development of Grid Infrastructure and Services to Support Research Communities in Georgia
09.2012 Shota Rustaveli National Science Foundation / Conference Grant	Organizing Committee Member XVII International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory
09.-11.2010 IREX, UASP	Project Leader “Tbilisi State University Research Portal”
2009-2011 SNF, SCOPE	Project manager “Modernization of LAE infrastructure and development of Unique Georgian Research Portal”
2009-2012 GNSF	Project manager “Buried objects detection and discrimination: combining fast, accurate and physically complete forward and inverse models for UXO identification problems”
2009-2012 GNSF	Project manager “Simulation of Composite Meta-Materials for Nano-Optical Devices”
2009-2010 President Grant for Young Scientists, GNSF	Project Leader “Study of Soil’s Roughness Effect in the Unexploded Ordnances (UXO) Problem (Detection and Discrimination) Using Electromagnetic Modeling, Based on the Method of Auxiliary Sources (MAS)”

2008-2010 NATO NIG	Project Leader “Development of the Network Infrastructure at R&E Center and Mod of Distance Learning at TSU”
2007-2009 CRDF/GRDF	Project Research Staff “Advanced EM forward and inverse modeling approaches: application to subsurface objects detection and discrimination”
2006-2008 GNSF	Project Leader “Research of Dielectric Coated Personal Communication Systems (PCS) Antennas to meet modern claims of Electromagnetic Compatibility (EMC) with Achieving Maximal Health Safety for User”
2005-2008 SNF SCOPE	Project Research Staff “Simulation and Synthesis of Metamaterials for Electromagnetics and Optics”
2004-2006 INTAS	Young Scientists Post-Doctoral Fellowship Grant “Investigation, Development and Creation of Realistic Model of Personal Communication Systems (PCS) Antenna and Study of its Interaction with the User Using Effective Numerical Method to Achieve Maximal Health Safety”
2003-2004 CRDF/GRDF	Project Research Staff “Development of an Efficient Numerical Method and Creation of User-Friendly Software Package for the Solution of Electromagnetic Compatibility Problems for Unbounded Complex Structures”

Attachment**Conferences**

1. 3D Optical Nano-Antenna. XXth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2015), September 21-24, 2015, Lviv, Ukraine.
2. Effect of ^{55}Mn NMR Echo Enhancement of Nuclei Arranged in Domain Walls of Half-Metallic Heusler Compound NiMnSb in Applied Magnetic Fields. XIXth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), 2014 September 22-25, Tbilisi, Georgia
3. Extension of the method of Auxiliary Sources for the Eigenvalue problems of the Laplace Operator in Case of Space Periodic Bounaries. XIXth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), 2014 September 22-25, Tbilisi, Georgia
4. Bio Heat Equation Modeling on Macro and Micro Scales. XIXth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), 2014 September 22-25, Tbilisi, Georgia
5. G. Ghvedashvili. TSU on the Way of Reforms: from Capacities to Excellence. Conference “Enhancement of European International Cooperation and Eastern Partnership in R&D&I” organized under the Lithuanian Presidency of the Council of the European Union. Vilnius, 30 September – 1 October 2013. <http://www.eep.eu2013.vu.lt/images/Ghvedashvili.pdf>
6. G. Ghvedashvili, T. Gogua. TSU Research Management - on the way of reforms. IREX University Administration Support Program Conference, October 5-6, 2013, Kiev, Ukraine.
7. Computer simulation of nanoplasmonic antennas. XVIIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2013), September 23-26, 2013, Lviv, Ukraine.
8. TSU on the Way of Reforms: from Capacities to Excellence. Conference “Enhancement of European International Cooperation and Eastern Partnership in R&D&I” organized under the Lithuanian Presidency of the Council of the European Union. Vilnius, 30 September – 1 October 2013.
9. TSU Research Management - on the way of reforms. IREX University Administration Support Program Conference, October 5-6, 2013, Kiev, Ukraine.
10. ORGANIZATION AND MANAGEMENT OF RESEARCH ACTIVITIES IN MODERN EDUCATIONAL ENVIRONMENT. PROBLEMS AND CHALLENGES. 5th International Conference of Education, Research and Innovation. November 19-21, 2012, Madrid, Spain.
11. MAS Simulations of optical antenna structures. 7th Workshop on Numerical Methods for Optical Nano Structures. July 4-6, 2011, Zurich, Switzerland.
12. Web based research administration and information system. XVIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2011), September 26-29, 2011, Lviv, Ukraine.
13. MAS approach to modeling of electromagnetic field's scattering on two-dimensional periodic structures. 6th Workshop on Numerical Methods for Optical Nano Structures. July 6-7, 2010, Zurich, Switzerland
14. Investigation of EMI response for magnetically susceptible and conductive rough surfaces. XIVth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2009), September 21-24, 2009, Lviv, Ukraine
15. MAS-MBPE Application for Analysis of Channel Plasmon Polaritons. XIVth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2009), September 21-24, 2009, Lviv, Ukraine
16. Investigation of Pear-shaped Monopole Antenna. Progress in Electromagnetics Research Symposium (PIERS-2008). Cambridge, MA 02139, USA
17. Inverse (Receiving) Problem for Pear Shape Monopole Antenna (PSMA) And Study Antenna's Influence on the User Body. Xth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2007), Lviv, Ukraine

18. Numerical and Experimental Analysis of Pear-Shaped Monopole Antenna and Study of its Field Interaction with the User. 11th International Conference on Mathematical Methods in Electromagnetic Theory (MMET-2006), Kharkov, Ukraine
19. Personal Communication Systems (PCS) Antenna with Managed Radiation Characteristics and Study of its Interaction with the User". Second World Congress "Safety in Aviation" Air Traffic Management, Security and Safety Symposium. Workshop "Microwaves, Radar & Remote Sensing" (MRRS 2005) , Kiev, Ukraine
20. Numerical and experimental investigation of dielectric coated personal communication systems (PCS) antenna. Xth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2005), Lviv, Ukraine
21. Realistic model of personal communication systems (PCS) antenna and its interaction study with the user". VIIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2003), Lviv, Ukraine
22. Drop-Shaped Monopole Antenna and Its Interaction with the User's Head". IX-th International Conference on Mathematical Methods in Electromagnetic Theory (MMET2002), Kiev, Ukraine
23. Experimental and Numerical Investigation of Pear-Shaped Antenna". VIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2002), Tbilisi, Georgia

Attachment

Publications

1. Gavasheli, T., Mamniashvili, G., Gegechkori, T., **Ghvedashvili, G.** "Magnetic video-pulse impact on NMR spin echo signals of nuclei located in domain walls of magnets". (2023) Proceedings of International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED, 2023-September, pp. 176-179. DOI: 10.1109/DIPED59408.2023.10269510
2. Nozadze, T., Kurtsikidze, M., Jeladze, V., **Ghvedashvili, G.**, "Hand Influence on the Mobile Phone Antennas Matching to the Free Space", (2022) Proceedings of International Conference on Communications, Electromagnetic and Medical Applications, CEMA, pp. 21-24.
3. Gavasheli, T., Mamniashvili, G., **Ghvedashvili, G.**, Gegechkori, T. "NMR Spin-Echo Study of the Domain Wall Pinning in Cobalt Micropowders". (2022) 2022 IEEE 2nd Ukrainian Microwave Week, UkrMW 2022 - Proceedings, pp. 405-409. DOI: 10.1109/UkrMW58013.2022.10037055
4. Nozadze, T., Henke, K., Kurtsikidze, M., Jeladze, V., **Ghvedashvili, G.**, Zaridze, R. "Study How the Hand Affects on the Mobile Phone Dipole Antenna Matching Conditions to the Free Space at 3700 MHz Frequency" (2022) 2022 IEEE 2nd Ukrainian Microwave Week, UkrMW 2022 - Proceedings, pp. 439-443. DOI: 10.1109/UkrMW58013.2022.10037056
5. Kereselidze, R., Kakulia, D., **Ghvedashvili, G.**, Prishvin, M., Sapharishvili, G. Preliminary results of a two wire loop em system study. Proceedings of International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED, Volume 2021-September, Pages 126-129, 8 September 2021. DOI 10.1109/DIPED53165.2021.9552283
6. Gavasheli, T., Gegechkori, T., Mamniashvili, G., **Ghvedashvili, G.** NMR spin echo study of domain wall pinning in lithium ferrite in combination with an additional magnetic video-pulse. Proceedings of International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED, Volume 2021-September, Pages 199-202, 8 September 2021. DOI 10.1109/DIPED53165.2021.9552256
7. Gavasheli, T., Mamniashvili, G., Gegechkori, T., Zedginidze, T., Petriashvili, T., **Ghvedashvili, G.**, Peikrishvili, A., Godibadze, B., Maisuradze, A. „Dynamical Consolidation of Cobalt Nanowires for Potential Fabrication of Rare-Earth Free Permanent Magnets“. Proceedings of International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED, Volume 2020-September, Pages 133 – 137, 15 September 2020. DOI 10.1109/DIPED49797.2020.9273371
8. Kakulia, D., **Ghvedashvili, G.**, Shoshiashvili, L. EM Response Study of an Underground Cavity. Proceedings of International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED, Volume 2020-September, Pages 67-70, 15 September 2020. DOI 10.1109/DIPED49797.2020.9273356
9. L. Kvinikadze, **G. Ghvedashvili**, A. Kukulava, T. Gogua, T. Tsitlanadze, T. Gavasheli. "The Administrative Challenges of Policy Making for Estimation of Faculty Performance Accountability". Proceedings of ICERI2019 Conference, 11-13 November 2019, Seville, Spain, ISBN: 978-84-09-14755-7.
10. D. Kakulia, **G. Ghvedashvili**, L. Shoshiashvili. "Modeling of Soil's Cavity EM Response". Proceedings of 2019 XXIVth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED, Pages 157-159.
11. G. Kajaia, K. Tavzarashvili, **G. Ghvedashvili**. "Shelled Plasmonic Nanostructures". Proceedings of 2019 XXIVth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED, Pages 181-184.
12. A. Lomia, L. Shoshiashvili, D. Kakulia, B. Baratashvili, G. Chaganava, **G. Ghvedashvili**, F. Shubitidze. "Heat Production During mNP Hyperthermia - applied on a Deep Seated Tumors". Proceedings of International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED, Volume 2018-September, 21 November 2018, Article number 8543303, Pages 208-212.
13. Tsisana Gavasheli, Zurab Shermadini, **Giorgi Ghvedashvili**, Saba Suladze, Grigor Mamniashvili, Tatiana Gegechkori, Leri Rukhadze. "Magnetometry and NMR Study of Carbon Nanopowders

- Doped with Cobalt Nanoclusters and Self-assembly of their Polymer Nanocomposites under Magnetic Field”. Proceedings of International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED, Volume 2018-September, 21 November 2018, Article number 8543303, Pages 233-236.
14. 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”. 22nd International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED 2017, Dnipro; Ukraine; 25 September 2017 through 28 September 2017; Category number CFP17458-PRT; Code 131764 – Proceedings, 6 November 2017, Article number 8100593, Pages 178-182
 15. Kakulia, D., Sazandrishvili, N., **Ghvedashvili, G.** “Application notes on a lossy medium model in the method of auxiliary sources and solving of eigenvalue problems”. 22nd International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED 2017, Dnipro; Ukraine; 25 September 2017 through 28 September 2017; Category number CFP17458-PRT; Code 131764 – Proceedings, 6 November 2017, Article number 8100613, Pages 248-251
 16. Kakulia, D., Lomia, A., **Ghvedashvili, G.** “CO' shape wire antenna”. Proceedings of International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, DIPED 2016- Tbilisi; Georgia; 26 September 2016 through 29 September 2016; Category number CFP16458-ART; Code 125381, 5 December 2016, Article number 7772227, Pages 108-110
 17. 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 2016, Tbilisi; Georgia; 26 September 2016 through 29 September 2016; Category number CFP16458-ART; Code 125381, December, Article number 7772232, pp. 123-126
 18. Kajaia, G., Tkeshelashvili, N., Tavzarashvili, K., **Ghvedashvili, G.** “MAS simulation of plasmonic scatterers”. Proceedings of 2016 IEEE International Conference on Mathematical Methods in Electromagnetic Theory, MMET 2016; Lviv; Ukraine; 5 July 2016 through 7 July 2016; Volume 2016-August, 15 August 2016, Article number 7544116, Pages 208-211.
 19. K. Tavzarashvili, G. **Ghvedashvili, G.** Kajaia, T. Gogua, N. Tkeshelashvili. "3D Optical Nano-Antenna". Proceedings 2015 XXth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2015), September 21-24, 2015, Lviv, Ukraine, pp. 102-105.
 20. Ts. Gavasheli, G. **Ghvedashvili, A.** Akhalkatsi, G. Mamniashvili, T. Gegechkori, O. Maghradze. "Effect of 55Mn NMR Echo Enhancement of Nuclei Arranged in Domain Walls of Half-Metallic Heusler Compound NiMnSb in Applied Magnetic Fields." Proceedings 2014 XIXth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), 2014 September IEEE Catalog Number: CFP14458-PRT ISBN (IEEE): 978-4799-6213-6 ISBN (NASU): 978-966-02-7158-6
 21. D. Kakulia, V. Ghoghoberidze, G. **Ghvedashvili, G.** "Extension of the method of Auxiliary Sources for the Eigenvalue problems of the Laplace Operator in Case of Space Periodic Boundaries". Proceedings 2014 XIXth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), 2014 September IEEE Catalog Number: CFP14458-PRT ISBN (IEEE): 978-4799-6213-6 ISBN (NASU): 978-966-02-7158-6
 22. K. Lomia, L. Shoshiashvili; D. Kakulia; G. **Ghvedashvili, F.** Shubitidze. "Bio Heat Equation Modeling on Macro and Micro Scales". Proceedings 2014 XIXth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), 2014 September IEEE Catalog Number: CFP14458-PRT ISBN (IEEE): 978-4799-6213-6 ISBN (NASU): 978-966-02-7158-6

23. K. Tavzarashvili, G. **Ghvedashvili**, T. Gogua. "Computer simulation of nanoplasmonic antennas". XVIIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2013), September 23-26, 2013, Lviv, Ukraine, pp. 97-100.
24. G. **Ghvedashvili**, L. Kvinikadze, G. Shabashvili. Organization and Management of Research Activities in Modern Educational Environment. Problems and challenges. Proceedings of Vth International Conference of Education, Research and Innovation (ICERI2012), November 19-21, 2012, Madrid, Spain, pp. 4724 - 4732.
25. D. Kakulia, A. Lomia, T. Gogua, G. **Ghvedashvili**, T. Gavasheli. The MAS based simulation of plane wave angular incident on two-dimensional dielectric sphere array, XVIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2012), September 24-27, 2012, Tbilisi, Georgia, pp. 63 - 67.
26. D. Kakulia, K. Tavzarashvili, G. **Ghvedashvili**, D. Karkashadze, Ch. Hafner. The Method of Auxiliary Sources Approach to Modeling of Electromagnetic Field Scattering on Two-Dimensional Periodic Structures. Journal of Computational and Theoretical Nanoscience, Volume 8, Number 8, August 2011, pp. 1609-1618(10)
27. K. Tavzarashvili, G. **Ghvedashvili**. MAS simulations of optical antenna structures. International Conference on Nanotechnology, Optoelectronics and Photonics (ICNOP 2011), November 28-30, 2011, Venice, Italy, pp. 1479-1483.
28. G. **Ghvedashvili**, L. Shoshiashvili, T. Gogua, K. Tavzarashvili. Web based research administration and information system. Proceedings of XVIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2011), September 26-29, 2011, Lviv, Ukraine. pp. 161-164.
29. K. Tavzarashvili, G. **Ghvedashvili**, D. Kakulia. MAS simulation of plasmon coupling in nanosphere pairs. Proceedings of XVIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2011), September 26-29, 2011, Lviv, Ukraine. pp. 170-173.
30. D. Kakulia, K. Tavzarashvili, G. **Ghvedashvili**, G. Chelidze. Inversion of a prolate metallic object's orientation with the Gauss-Newton minimization algorithm. Proceedings of XVIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2011), September 26-29, 2011, Lviv, Ukraine. pp. 119-122.
31. L. Shoshiashvili, K. Tavzarashvili, G. **Ghvedashvili**, T. Gogua. Electromagnetic research environment (EMagRE)-Crossplatform EM software package based on FDTD method. Proceedings of XVIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2011), September 26-29, 2011, Lviv, Ukraine. pp. 174-177.
32. K. Tavzarashvili, G. **Ghvedashvili**, D. Kakulia. MAS-MBPE Application for Plasmonic Structures. Photonics Global Conference 2010 (PGC 2010), Digital Object Identifier: [10.1109/PGC.2010.5706136](https://doi.org/10.1109/PGC.2010.5706136) Dec 14-16, 2010 Singapore. Page(s): 1 - 5.
33. K. Tavzarashvili, D. Kakulia, G. **Ghvedashvili**, D. Karkashadze. MAS approach to modeling of electromagnetic field's scattering on two-dimensional periodic structures. 6th Workshop on Numerical Methods for Optical Nano Structures. July 6-7, 2010, Zurich, Switzerland
34. G. **Ghvedashvili**, D. Kakulia, F. Shubitidze. Investigation of EMI response for magnetically susceptible and conductive rough surfaces. Proceedings of XIVth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2009), September 21-24, 2009, Lviv, Ukraine. pp. 49-52.
35. K. Tavzarashvili, G. **Ghvedashvili**, D. Karkashadze, G. Saparishvili. MAS-MBPE Application for Analysis of Channel Plasmon Polaritons. Proceedings of XIVth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2009), September 21-24, 2009, Lviv, Ukraine. pp. 236-239.
36. Giorgi N. **Ghvedashvili**, David G. Kakulia, Kakhaver N. Tavzarashvili, and T. L. Gogua. Investigation of Pear-shaped Monopole Antenna. PIERS Proceedings, Progress In Electromagnetics Research Symposium (PIERS 2008 Cambridge), pp. 311 - 317, July 2-6, Cambridge, USA, 2008

37. D.Kakulia, G.**Ghvedashvili** and F.Shubitidze. Extending MAS/TSA Technique for Conducting Environments to Enhance Underwater UXO Discrimination. PIERS Proceedings, Progress In Electromagnetics Research Symposium (PIERS 2008 Cambridge), pp. 65 - 69, July 2 - 6, 2008, Cambridge, USA, 2008.
38. K. Tavzarashvili, Ch. Hafner, Cui Xudong, R. Vahldieck, D. Karkashadze, and G. **Ghvedashvili**. "Model-Based Parameters Estimation (MBPE) for Metallic Photonic Crystal Filters". Applied Computational Electromagnetics Society (ACES) Journal, Volume 22, Number 2, July 2007, pp.228-235.
39. D. Kakulia, A. Razmdze, G. **Ghvedashvili**, L. Shoshiashvili, R. Zaridze. "Numerical study of human expose by EM radiation". Proceedings of 7th International Symposium on Electromagnetic Compatibility and Electromagnetic Ecology, 26-29 June, 2007, St Petersburg, Russia. Page(s): 303-306.
40. R. Zaridze, D. Kakulia, G. **Ghvedashvili**, G. Saparishvili, T. Gogua, I. Avaliani. The Internet Network Connection through the LinkStar RCST Terminal in Georgia. Proceedings of XIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2007), September 17-20, 2007, Tbilisi, Georgia. pp. 11-15.
41. G.N.**Ghvedashvili**, G.G. Kajaia, D.G. Kakulia, L.S. Shoshiashvili, T.L. Gogua. Inverse (receiving) problem for pear shape monopole antenna (PSMA) and study antenna's influence on the user body. Proceedings of XIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2007), September 17-20, 2007, Tbilisi, Georgia. pp. 118-121.
42. K.Tavzarashvili, Ch.Hafner, Cui Xudong, Ruediger Vahldieck, D.Kakulia, G.**Ghvedashvili**, and D.Karkashadze. Method of Auxiliary Sources and Model-Based Parameter Estimation for the Computation of Periodic Structures. Journal of Computational and Theoretical Nanoscience, Volume 4, Number 3, May 2007, pp.667-674.
43. G.N. **Ghvedashvili**, K.N. Tavzarashvili, D.G. Kakulia, and R.S. Zaridze. Personal Communication Systems (PCS) Antenna with Managed Radiation Characteristics and Study of its Interaction with the User. Journal of Telecommunications and Radio Engineering, Volume 66, Issue 14, 2007, pp. 1265-1272
44. G.N. **Ghvedashvili**, G.G. Kajaia, G.S. Saparishvili, R.S. Zaridze. "Analyze of Dielectric Coated Personal Communication Systems (PCS) Antenna and Study of its Field Interaction with the User". Proceedings of 17th International Zurich Symposium on Electromagnetic Compatibility. 27 February - 3 March, 2006, Singapore. pp. 517-520.
45. G.N. **Ghvedashvili**, G.G. Kajaia, G.Sh. Saparishvili, D.G. Kakulia, R.S. Zaridze. "Numerical and Experimental Analysis of Pear-Shaped Monopole Antenna and Study of its Field Interaction with the User". Proceedings of the 11th International Conference on Mathematical Methods in Electromagnetic Theory (MMET-2006). June 26-29, 2006. Kharkiv, Ukraine. pp. 115-117.
46. V. Tabatadze, D. Kakulia, G. **Ghvedashvili**, G. Saparishvili, R. Zaridze. "Application of Equivalent Currents and Charges Conception for Visualization of the Body's Front-Face Area Based on Total Field's Reconstruction". Proceedings of the 11th International Conference on Mathematical Methods in Electromagnetic Theory (MMET-2006). June 26-29, 2006. Kharkiv, Ukraine. pp. 520-522.
47. D. Kakulia, G. Kajaia, G. **Ghvedashvili**, D. Karkashadze, R. Zaridze. "Frequency-Selective Dielectric Layer and its Modeling by Method of Auxiliary Sources". Proceedings of the 11th International Conference on Mathematical Methods in Electromagnetic Theory (MMET-2006). June 26-29, 2006. Kharkiv, Ukraine. pp. 574-576.
48. R. Zaridze, D. Kakulia, G. **Ghvedashvili**, G. Saparishvili, V. Tabatadze, A. Bijamov Jr. "Numerical Simulation for Experimental Surface Recognition Based on Reflected Field Reconstruction". Proceedings of MEDITERRANEAN MICROWAVE SYMPOSIUM 2006, September 19-21, 2006, Genova, Italy. pp. 204-206.
49. D. G. Kakulia, G. G. Kajaia, G. N. **Ghvedashvili**, D. D. Karkashadze, R. S. Zaridze. Transmission characteristics of dielectric layers with periodical dents. Proceedings of XIth International

- Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2006), October 11-13, 2006, Tbilisi, Georgia. pp. 91-94
50. V. Tabatadze, D. Kakulia, G. **Ghvedashvili**, G. Sapparishvili, R. Zaridze. Visualization of the body's front-face area based on total field's reconstruction. Proceedings of XIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2006), October 11-13, 2006, Tbilisi, Georgia. pp. 185-188.
 51. D. Karkashadze, L. Shoshiashvili, G. **Ghvedashvili**, D. Kakulia, G. Kajaia, T. Gogua. 3D IWGA Source in FDTD modeling. Proceedings of XIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2006), October 11-13, 2006, Tbilisi, Georgia. pp. 197-200.
 52. Zaridze R., Tabatadze V., Kakulia D., **Ghvedashvili** G., Sapparishvili G. "Acceleration of Total Field's Reconstruction for Visualization of Scatterer Surface". Proceedings of the European Conference on Antennas & Propagation (EuCAP 2006), November 6-10, 2006, Nice, France.
 53. A. Bijamov, G. **Ghvedashvili**, N. Gritsenko, D. Kakulia, G. Kajaia, L. Nikolaeva, A. Razmadze. L. Shoshiashvili, R. Zaridze. "Program kit to study human head exposed to EM radiation". The Proceedings of 6th International Symposium on Electromagnetic Compatibility and Electromagnetic Ecology, June 21-24, 2005, Saint-Petersburg, Russia. pp 270-273.
 54. R. S. Zaridze, D. Kakulia, K. Tavzarashvili, G. **Ghvedashvili**, D. J. Pommerenke, Kai Xiao. "The Method of Auxiliary Sources as an Efficient Numerical Technique for Large 3D Semi Open Structures". 2005 IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting, July 3-8, 2005, Washington DC, USA. p. 98-101.
 55. G.N. **Ghvedashvili**, K.N. Tavzarashvili, D.G. Kakulia, R.S. Zaridze. "Numerical and experimental investigation of dielectric coated personal communication systems (PCS) antenna". Proceedings of Xth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2005), September 12-15, 2005, Lviv, Ukraine. pp. 187-190.
 56. G.H. **Ghvedashvili**, K.N. Tavzarashvili, D.G. Kakulia, R.S. Zaridze. "Personal Communication Systems (PCS) Antenna with Managed Radiation Characteristics and Study of its Interaction with the User". Second World Congress "Safety in Aviation" Air Traffic Management, Security and Safety Symposium. Proceedings of the International Workshop on Microwaves, Radar and Remote Sensing (MRRS-2005). September 19-21, 2005, Kiev, Ukraine. pp. 227-232.
 57. D.G. Kakulia, G.H. **Ghvedashvili**, K.N. Tavzarashvili, R.S. Zaridze. "Efficiency of Method of Auxiliary Sources for Mathematical Modeling and Simulation of Applied Problems". Second World Congress "Safety in Aviation" Air Traffic Management, Security and Safety Symposium. Proceedings of the International Workshop on Microwaves, Radar and Remote Sensing (MRRS-2005). September 19-21, 2005, Kiev, Ukraine. pp. 233-238.
 58. R.S. Zaridze, D.G. Kakulia, K.N. Tavzarashvili, G.N. **Ghvedashvili**, D.P. Pommerenke, K. Xiao. "Electromagnetic Analysis for Vehicle Antenna Development Using Method of Auxiliary Sources", Proceedings of the 2004 IEEE International Antennas and Propagation Symposium and USNC/URSI National Radio Science Meeting, June 20-26, 2004, Monterey, California. AP Session: 5, Page(s): 185-188.
 59. R.S. Zaridze, G.N. **Ghvedashvili**, K.N. Tavzarashvili, L.S. Shoshiashvili, G.G. Kajaia. "PCS Antenna with the User Interaction and Far Field Pattern Evaluation", Proceedings of the 2004 IEEE International Antennas and Propagation Symposium and USNC/URSI National Radio Science Meeting, June 20-26, 2004, Monterey, California. AP Session: 125, p. 188.
 60. R. Zaridze, D. Karkashadze, D. Kakulia, K. Tavzarashvili, G. **Ghvedashvili**. "The Method of Auxiliary Sources in Applied Electrodynamics". Proceedings of the 10th International Conference on Mathematical Methods in Electromagnetic Theory (MMET-2004). September 14-17, 2004. Dnepropetrovsk, Ukraine. IEEE: 04EX840. ISBN: 0-7803-8441-5. pp. 69-72.
 61. D. G. Kakulia, D. D. Karkashadze, K. N. Tavzarashvili, G. N. **Ghvedashvili**, R. S. Zaridze, D. J. Pommerenke, Kai Xiao. "M.A.S.-M.o.M. hybrid method with wire's image using in excitation problems". Proceedings of IXth International Seminar/Workshop on Direct and Inverse Problems of

- Electromagnetic and Acoustic Wave Theory (DIPED-2004), October 11-14, 2004, Tbilisi, Georgia. pp. 69-72.
62. K. N. Tavzarashvili, G. N. **Ghvedashvili**, D. G. Kakulia, D. D. Karkashadze, R. S. Zaridze. "The method of auxiliary sources and eigen-function series representation for modeling of the open cable radiation problem". Proceedings of IXth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2004), October 11-14, 2004, Tbilisi, Georgia. pp. 73-76.
 63. L. Shoshiashvili, E. Nikolaeva, D. Nikolaev, R. Zaridze, G. **Ghvedashvili**, K. Orjonikidze. "Temperature Rise in Human Head Exposed To EM Radiation". Bulletin of the Georgian Academy of Sciences, 170, #1, ISSN 0132-1447, July-August, 2004, Tbilisi, Georgia, pp. 74-77.
 64. R. Zaridze, K. Tavzarashvili, G. **Ghvedashvili**, D. Kakulia, G. Sapparishvili, A. Bijamov. "The MAS For Numerical Modelling of EMC/EMI in Vehicles and SAR Problems". 15th International Zurich Symposium & Technical Exhibition on EMC 2003, Zurich, Switzerland, February 18-20, 2003, 88 N3 pp. 471-474.
 65. R. Zaridze, K. Tavzarashvili, G. **Ghvedashvili**. "Electromagnetic Analysis of the Distributed Structures Applied to EMC and SAR Estimation Problems". 2003 IEEE International Antennas and Propagation Symposium and USNC/CNC/URSI North American Radio Science Meeting, June 22-27, 2003, Columbus, OH, USA. IEEE Catalog #03CH37450C
 66. A. Bijamov, R. Zaridze, K. Tavzarashvili, G. **Ghvedashvili**. "Visualization of the Latent Body's Shape and Position Based on the Measured Scattered Field", Bulletin of the Georgian Academy of Sciences, 168, #1, ISSN 0132-1447, July-August, 2003, Tbilisi, Georgia, pp. 48-51.
 67. K. Tavzarashvili, G. **Ghvedashvili**, G. Kajaia. "Software creation for the simulation of the mobile phone antennas interaction with human". Proceedings of VIIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2003), Lviv, September 23-25, 2003. pp. 166-168.
 68. G. **Ghvedashvili**, K. Tavzarashvili, G. Kajaia, R. Zaridze. "Realistic model of personal communication systems (PCS) antenna and its interaction study with the user". Proceedings of VIIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2003), Lviv, September 23-25, 2003. pp. 169-172.
 69. R. Zaridze, K. Tavzarashvili, G. **Ghvedashvili**, A. Bijamov, J. Jojishvili, D. Kakulia. "Investigation of Some antenna structures for PCD and their Interaction with the user head". 2002 IEEE Antennas and Propagation Society International Symposium, San Antonio, Texas, June 16-21, 2002, vol. 3, pp. 34-37.
 70. R. Zaridze, D. Kakulia, K. Tavzarashvili, A. Bijamov, G. **Ghvedashvili**, G. Chelidze. "Method of Auxiliary Sources Implementation for Diffraction Problem Solution on Semi-Open Metallic Surface with Partitions and Enclosed Dielectric Objects". Presented to 2002 IEEE AP-S International Symposium, San Antonio, Texas, June 16-21, 2002, pp.172-175.
 71. G. **Ghvedashvili**, R. Zaridze, K. Tavzarashvili, G. Sapparishvili, A. Bijamov. "Drop-Shaped Monopole Antenna and Its Interaction with the User's Head". Proceedings of IX-th International Conference on Mathematical Methods in Electromagnetic Theory (MMET2002), Kiev, Ukraine, September 10-13, 2002, vol. 2, pp. 485-487.
 72. R. Zaridze, G. **Ghvedashvili**, K. Tavzarashvili, G. Sapparishvili, A. Bijamov. "Experimental and Numerical Investigation of Pear-Shaped Antenna". Proceedings of VIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2002), Tbilisi, Georgia, October 10-13, 2002, pp. 61-64.
 73. R. Zaridze, D. Kakulia, G. Chelidze, G. **Ghvedashvili**. "Investigation of the Resonance Characteristics of the Car Case". Proceedings of VIIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2002), Tbilisi, Georgia, October 10-13, 2002, pp. 102-105.
 74. R. Zaridze, K. Tavzarashvili, G. **Ghvedashvili**, A. Bijamov. "Numerical modeling of metallic antenna covered with dielectric layer with considering cable excitation". Proceeding of All-Russian Scientific

- and Technical Conference "Radiation and Scattering of Electromagnetic Waves" (RSEMW 2001). TSURE, Taganrog, Russia, June 18-22, 2001, pp. 155-157.
75. R. Zaridze, G. Bit-Babik, K. Tavzarashvili, A. Bijamov, D. Kakulia, G. **Ghvedashvili**. "The Method of Auxiliary Sources in Scattering and Diffraction Problems" Proceeding of IEEE Antenna & Propagation Society International Symposium, July 8-13, 2001, Boston, Massachusetts, USA. IEEE Catalog Number: 01CH37229, ISBN 0-7803-7070-8. pp. 738-741.
 76. R. Zaridze, G. Bit-Babik, K. Tavzarashvili, A. Bijamov, G. **Ghvedashvili**. "Analyses of Voluminous Metallic Antenna Covered with Dielectric Layer". Proceeding of IEEE Antenna & Propagation Society International Symposium, July 8-13, 2001, Boston, Massachusetts, USA. IEEE Catalog Number: 01CH37229, ISBN 0-7803-7070-8. pp. 472-475.
 77. G. **Ghvedashvili**, R. Zaridze, K. Tavzarashvili, A. Bijamov, I. Chelidze, D. Kakulia. "Numerical Simulation of Metallic Antenna Covered with Dielectric Layer", Bulletin of the Georgian Academy of Science, 163, #2, ISSN 0132-1447, March-April, 2001, Tbilisi, Georgia, pp. 253-255.
 78. R. Zaridze, D. Kakulia, K. Tavzarashvili, A. Bijamov, G. **Ghvedashvili**, G. Chelidze, "Electrodynamic Properties of Semi-open Objects with Cavities and Partitions", Proceedings of VIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2001), Lviv, Ukraine, September 18-20, 2001, pp. 54-59.
 79. R. Zaridze, G. **Ghvedashvili**, K. Tavzarashvili, G. Saparishvili, A. Bijamov, G. Bit-Babik. "Radiation Characteristics of Pear-Shaped Metal-Dielectric Antenna with Cable Excitation". Proceedings of VIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2001), Lviv, Ukraine, September 18-20, 2001, pp. 49-53.
 80. R. Zaridze, D. Kakulia, K. Tavzarashvili, A. Bijamov, G. **Ghvedashvili**, G. Chelidze, "Determination of Eigenvalues of the Object Using the Method of Auxiliary Sources (MAS)". Proceedings of VIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2001), Lviv, Ukraine, September 18-20, 2001, pp. 183-190.