Giorgi Ghvedashvili

Personal information

DOB: 12.04.1974

Address: 1, Chavchavadze Ave., 0179 Tbilisi, Georgia Phone: +995 322 222-473 (office) +995 577 595 778 (cell)

Fax: +995 322 222-473

E-mail: giorgi.ghvedashvili@tsu.ge

Professional experience

01.2010 - Head

Department of Scientific Research and Development

Ivane Javakhishvili Tbilisi State University, TSU

26.09.2012 - **Professor**

Faculty of Exact and Natural Sciences, TSU

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

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)

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

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 Worksop

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

2009-2010 President Grant for Young Scientists, GNSF2008-2009 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 1st 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

2002 - IEEE Member (2010-2013 Georgian Chapter 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

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)

Network Administration (Cisco, CCNA)

Scientific Projects

2013-2017	TSU Team Leader
TEMPUS IV	Development of Embedded System Courses with implementation of Innovative
6 th Call	Virtual approaches for integration of Research, Education and Production in UA, GE,
	AM - DESIRE 544091-TEMPUS-1-2013-1-BE-TEMPUS-JPCR
2013-2015	Project Leader
Shota Rustaveli	Development of Grid Infrastructure and Services to Support Research Communities in
National Science	Georgia
Foundation	
09.2012	Organizing Committee Member
Shota Rustaveli	XVII International Seminar/Workshop on Direct and Inverse Problems of
National Science	Electromagnetic and Acoustic Wave Theory
Foundation /	
Conference Grant	
0911.2010	Project Leader
IREX, UASP	"Tbilisi State University Research Portal"
2009-2011	Project manager
SNF, SCOPE	"Modernization of LAE infrastructure and development of Unique Georgian Research
	Portal"
2009-2012	Project manager
GNSF	"Buried objects detection and discrimination: combining fast, accurate and physically
	complete forward and inverse models for UXO identification problems"
2009-2012	Project manager
GNSF	"Simulation of Composite Meta-Materials for Nano-Optical Devices"
2009-2010	Project Leader
President Grant for	"Study of Soil's Roughness Effect in the Unexploded Ordnances (UXO) Problem
Young Scientists, GNSF	(Detection and Discrimination) Using Electromagnetic Modeling, Based on the
2000 2010	Method of Auxiliary Sources (MAS)"
2008-2010	Project Leader
NATO NIG	"Development of the Network Infrastructure at R&E Center and Mod of Distance
2007 2000	Learning at TSU"
2007-2009	Project Research Staff
CRDF/GRDF	"Advanced EM forward and inverse modeling approaches: application to subsurface
2006 2000	objects detection and discrimination"
2006-2008	Project Leader
GNSF	"Research of Dielectric Coated Personal Communication Systems (PCS) Antennas to
	meet modern claims of Electromagnetic Compatibility (EMC) with Achieving
2005 2009	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
111170	Communication Systems (PCS) Antenna and Study of its Interaction with the User
	Using Effective Numerical Method to Achieve Maximal Health Safety"
2003-2004	Project Research Staff
CRDF/GRDF	1 TOJECE NESCRICII STRIII
CKDI/GKDI	

"D 1
"Development of an Efficient Numerical Method and Creation of User-Friendly
Software Package for the Solution of Electromagnetic Compatibility Problems for
Unbounded Complex Structures"

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 55Mn 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. 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.
- 6. 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.
- 7. TSU Research Management on the way of reforms. IREX University Administration Support Program Conference, October 5-6, 2013, Kiev, Ukraine.
- 8. 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.
- 9. MAS Simulations of optical antenna structures. 7th Workshop on Numerical Methods for Optical Nano Structures. July 4-6, 2011, Zurich, Switzerland
- 10. 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.
- 11. 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
- 12. 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
- 13. 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
- 14. Investigation of Pear-shaped Monopole Antenna. Progress in Electromagnetics Research Symposium (PIERS-2008). Cambridge, MA 02139, USA
- 15. 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
- 16. 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
- 17. 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

- 18. 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
- 19. 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
- 20. 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
- 21. 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

Publications

- 1. D. Kakulia; A. Lomia; G. Ghvedashvili. "'CO' Shape Wire Antenna". Proceedings of XXIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, (DIPED-2016), September 26-29, 2016, Tbilisi, Georgia, pp. 108-110.
- 2. Gavasheli, T., Mamniashvili, G., Gegechkori, T., Shermadini, Z., Ghvedashvili, G., "Cumulative stimulated echo in magnets". Proceedings of XXIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory, (DIPED-2016), September 26-29, 2016, Tbilisi, Georgia, pp. 123-126.
- 3. 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; pp. 208-211.
- K. Tavzarashvili, G. Ghvedashvili, G. Kajaia, T. Gogua, N. Tkeshelashvili. "3D Optical Nano-Antenna". Proceedings of 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.
- 5. 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 of 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
- 6. D. Kakulia, V. Ghoghoberidze, G. Ghvedashvili. "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
- 7. 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
- 8. K. Tavzarashvili, G. Ghvedashvili, T. Gogua. "Computer simulation of nanoplasmonic antennas". Proceedings of 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.
- 9. 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.
- 10. 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", Proceedings of 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.
- 11. 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)
- 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.
- 13. 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.
- 14. 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.

- 15. 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.
- 16. 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.
- K. Tavzarashvili, G. Ghvedashvili, D. Kakulia. MAS-MBPE Application for Plasmonic Structures. Photonics Global Conference 2010 (PGC 2010), Digital Object Identifier: <u>10.1109/PGC.2010.5706136</u> Dec 14-16, 2010 Singapore. Page(s): 1 - 5.
- 18. 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
- 19. 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.
- 20. 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.
- 21. Giorgi N. Ghvedashvili, David G. Kakulia, Kakhaber N. Tavzarashvili, and T. L. Gogua. Investigation of Pearshaped Monopole Antenna. PIERS Proceedings, Progress In Electromagnetics Research Symposium (PIERS 2008 Cambridge), pp. 311 317, July 2-6, Cambridge, USA, 2008
- 22. 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.
- 23. K. Tavzarashvili, Ch. Hafner, Cui Xudong, R. Vahldieck, D. Karkashadze, and G. Ghvedashvill. "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.
- 24. 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.
- 25. 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.
- 26. 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.
- 27. 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.
- 28. 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
- 29. 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.
- 30. 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.
- 31. 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.
- 32. 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.
- 33. 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.
- 34. 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
- 35. V. Tabatadze, D. Kakulia, G. Ghvedashvili, G. Saparishvili, 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.
- 36. 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.
- 37. Zaridze R., Tabatadze V., Kakulia D., Ghvedashvili G., Saparishvili 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.
- 38. 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.
- 39. 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.
- 40. 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.
- 41. 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.
- 42. 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.

- 43. 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.
- 44. 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.
- 45. 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. Dniepropetrovsk, Ukraine. IEEE: 04EX840. ISBN: 0-7803-8441-5. pp. 69-72.
- 46. 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.
- 47. 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.
- 48. 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.
- 49. R. Zaridze, K. Tavzarashvili, G. Ghvedashvili, D. Kakulia, G. Saparishvili, 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.
- 50. 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
- 51. 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.
- 52. 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.
- 53. 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.
- 54. 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.
- 55. 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.
- 56. G. Ghvedashvili, R. Zaridze, K. Tavzarashvili, G. Saparishvili, 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.

- 57. R. Zaridze, G. Ghvedashvili, K. Tavzarashvili, G. Saparishvili, 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.
- 58. 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.
- 59. 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.
- 60. 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, ISNB 0-7803-7070-8. pp. 738-741.
- 61. 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, ISNB 0-7803-7070-8. pp. 472-475.
- 62. 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.
- 63. 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.
- 64. 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.
- 65. 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.