

ANNUAL REPORT FOR YEAR 2002

IEEE AP-S SOCIETY

Chapter Name: Georgian

1. BASIC INFORMATION

A. Societies that your chapter is joint with, if any: AP-S, EDS, MTT, EMC

B. Chapter Web address, if any: <http://ewh.ieee.org/r8/Ukraine/Georgian>

C. Officers for 2002 (please fill the table below):

| | Chair | Vice Chair | Secretary |
|---------|--|--|--|
| Name | Prof. Revaz Zaridze | Dr. Zaur Tchakhnakia | Dr. Nina Khuchua |
| Address | 3 Chavchavadze Ave., TSU, Laboratory of Applied Electrodynamics (LAE), 380028, Tbilisi, Georgia | 13 Chavchavadze Ave., TSU, RPC "Electron Technology", 380079, Tbilisi, Georgia | 13 Chavchavadze Ave., TSU, RPC "Electron Technology", 380079, Tbilisi, Georgia |
| Phone | + 995 32 29-08-21 | + 995 32 22-06-36 | + 995 32 22-06-26 |
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| Email | rzaridze@resonan.ge rzaridze@lae.ictsu.tsu.edu.ge | zaur@gol.ge | nt@gol.ge |

D. Officers for 2003 (if known at this time):

| | Chair | Vice Chair | Secretary |
|---------|--|--|--|
| Name | Prof. Revaz Zaridze | Dr. Zaur Tchakhnakia | Dr. Nina Khuchua |
| Address | 3 Chavchavadze Ave., TSU, Laboratory of Applied Electrodynamics (LAE), 380028, Tbilisi, Georgia | 13 Chavchavadze Ave., TSU, RPC "Electron Technology", 380079, Tbilisi, Georgia | 13 Chavchavadze Ave., TSU, RPC "Electron Technology", 380079, Tbilisi, Georgia |
| Phone | + 995 32 29-08-21 | + 995 32 22-06-36 | + 995 32 22-06-26 |
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3. CHAPTER ACTIVITIES DESCRIPTION

(This information is used in the selection of the Best Chapter Award).

Both the IEEE MTT/ED/AP/CPMT/SSC West Ukraine Chapter and MTT/ED/AP/EMC Republic of Georgia Chapter annually in autumn organize the International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), which is held in Ukraine or in Georgia. <http://www.ewh.ieee.org/soc/cpmt/ukraine>

Scientific and technical information in the field of semiconductor technology (Tbilisi State University, Tbilisi technical University, Institute of Cybernetics, Institute of Metallurgy of the Georgian Academy of Sciences, etc.) has been obtained and disseminated.

On May 26, 2002, on the Day of Independence of Georgia, a presentation took place at the Research and Production Complex (RPC) "Electron Technology" of Tbilisi State University, engaged in scientific and applied research in the field of gallium arsenide (GaAs) integrated circuits (IC) and semiconductor devices. President of Georgia, Mr. Eduard Shevardnadze was and honored guest at this presentation. Members of Government, Ambassador of Germany in Georgia and honored foreign guests from Fraunhofer-Institut fuer Angewandte Festkoerperphysik (Germany), Science for Peace Programme (SfP) NATO-HQ (Brussels, Belgium) were also present.

3.1 Summary Information for 2002

A. Number of technical meetings (in which a technical presentation is made)

1. Presentations from student members of your chapter: 1
2. Presentations from non-student members of your chapter: 8
(A member of your chapter is one who belongs to the AP-S Society and who lives within your Section. Do not include IEEE Distinguished Lecturers)
3. Presentations from outside speakers: 6
(This includes speakers from outside your chapter. Do not include IEEE Distinguished Lecturers.)
4. Presentations from IEEE Distinguished Lecturers: ---

TOTAL numbers of technical meetings: 5

B. Average total attendance at the technical meetings: 65
(Average over all of the technical meetings held during the year.)

C. Number of non-technical (organizational) meetings held: 7

D. Number of workshops, short courses, or conferences organized or co-organized by your chapter: 1

3.2 Technical Meeting Information for 2002 (use additional pages if necessary)

Note: For “Category”, please use the following:

S: speaker is a student member of the chapter

M: speaker is a non-student member of the chapter (but do not include IEEE Distinguished Lecturers)

O: speaker is from outside the chapter (but do not include IEEE Distinguished Lecturers)

D: speaker is an IEEE Distinguished Lecturer.

| | Title of Presentation/Name of Speaker | Attendance | | | Category |
|-----------|---|------------|-----------|-----------|----------|
| | | AP-S | Other | Total | |
| 1 | Experimental and numerical investigation of pear-shaped antenna / Giorgi Ghvedashvili | 8 | 20 | 28 | M |
| 2 | Investigation of the resonance characteristics of the car case / David Kakulia | 8 | 15 | 23 | S |
| 3 | Electromagnetic imaging for a conducting cylinder buried in the three layers structure / Chien-Ching Chiu | 8 | 22 | 30 | O |
| 4 | Scattering and propagation in finite Photonic crystals with complex material filling / David Karkashadze | 8 | 18 | 26 | M |
| 5 | Efficient FDTD simulation of fields in coaxial cables with multi-layered insulation partially formed by dispersive layers of extremely high permittivity / Anna Gheonjian | 8 | 14 | 22 | M |
| 6 | Software creation for the finite photonic crystals simulation / Alexander Bijamov | 8 | 14 | 22 | M |
| 7 | Implementation a hybrid MAS and SPA algorithm for broadband electromagnetic induction problems / Irma Shamatava | 8 | 20 | 28 | O |
| 8 | The method of decomposition on eigenfunctions application to inhomogeneous coaxial cables simulation / Elena Nikolaeva | 8 | 14 | 22 | O |
| 9 | On the theory of symmetric short vibrator / Guram Kevanishvili | 8 | 22 | 30 | O |
| 10 | About evaluation of the potential integrals for near field calculations in MoM solution to EFIE for triangulated surfaces / Faik Bogdanov | 8 | 18 | 26 | M |
| 11 | Visualization of the latent body’s shape and position based on the measured scattered field / Kakhaber Tavzarashvili | 8 | 14 | 22 | M |
| 12 | Modified phase problem with nonsymmetrical data / Nikolai Voitovich | 8 | 18 | 26 | O |
| 13 | Drop-Shaped Antenna Radiation And Its Interaction With The User / Giorgi Ghvedashvili | 8 | 10 | 18 | M |

3.3 Summary of Workshops, Short Courses, and Conferences for 2002

Include below a list of each workshop, short course, or conference that was organized or co-organized by your chapter. Include the title of the event, the dates of the event, a description of the event, and an indication of the level of involvement of your chapter.

VIIth International Seminar/Workshop Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED – 2002), organized and sponsored by IEEE MTT/ED/AP/EMC Republic of Georgia Chapter, IEEE MTT/ED/AP/CPMT/SSC West Ukraine Chapter in cooperation with Tbilisi State University, Tbilisi, Georgia, Pidstryhach Institute of Applied Problems of Mechanics and Mathematics, NASU, Lviv, Ukraine in Technical Co-Sponsorship with IEEE EDS in cooperation with IEEE MTT, AP, CPMT, and SSC Societies, was held on October 10-13, 2002, Tbilisi, Georgia

Suggested Topics

- Propagation and Scattering in Non-homogeneous Media
- Electrodynamics of Crystals and Waveguide Structures
- Antennas and Scattering
- Waveguides and Transmitting Lines
- Synthesis Theory and Acoustics

Local Organizing Committee Co-Chairman: Prof. Revaz S. Zaridze

For more information, please, visit the web site:

<http://www.ewh.ieee.org/soc/cpmt/ukraine/Data/Diped2002/diped2002.html>

3.4 Special Projects

Give a description of any special projects that your chapter participated in during the year, and indicate any funding that was obtained from AP-S or other sources.

No special Projects.

4. DESCRIPTION OF OTHER ACTIVITIES

(This information is used in the selection of the Best Chapter Award)

4.1 Are there any ways in which your chapter has improved over last year (please limit to one page)?

Possibilities include increased attendance, number of meetings, level of activity, etc.

The number of meetings and possibilities of attendance conferences was increased.

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1. Associate Professor David Karkashadze attended the NATO Advanced Research Workshop BIANISOTROPIC'S 2002 9th International Conference on Electromagnetics of Complex Media, which was held on May 8-11, 2002 in Marrakech, Morocco. <http://www.ccr.jussieu.fr/bian02/>
 2. Prof. Revaz Zaridze attended the 2002 American Electromagnetics (AMEREM 2002) Conference, which was held on June 2-7, 2002 in Annapolis, Maryland, USA. www.amerem.org
 3. Prof. Revaz Zaridze attended the 2002 IEEE Antenna & Propagation Society International Symposium, which was held on June 16-21, 2002 in San Antonio, Texas, USA. <http://www.ieeeaps.org/2002APSURSI>
 4. Giorgi Ghvedashvili (Ph.D.) and Alexander Bijamov (Ph.D.) attended the IX-th International Conference on Mathematical Methods in Electromagnetic Theory (MMET2002), which was held on September 10-13, 2002 in Kiev, Ukraine. <http://www.kharkov.ukrtel.net/mmet02>
 5. All members of Georgian Chapter participated in VIth International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED-2002), which was held on October 10-13, 2002 in Tbilisi, Georgia. <http://www.ewh.ieee.org/soc/cpmt/ukraine/>
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4.2. What were your unique or innovative chapter activities (please limit to one page)?

Some possibilities that you might want to include are:

- Collaboration with other IEEE societies and chapters
- Student involvement and new member recruitment
- Interaction with industry or the community

Collaboration with MTT/ED/AP/CPMT/SSC West Ukraine Chapter. Annually organize the International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), which is held in Ukraine or in Georgia.

Involving students and recruitment new members
