

**Yerevan State University and NAS  
Armenian Student Chapter**

**Annual Report-2009**

## **This report includes:**

1. Names and email addresses of elected Officers.
2. List of current Student Chapter Members.
3. Details of Chapter activities since last report.
4. Details of planned activities for the future.
5. Financial information.

### **1. Names and email addresses of elected Officers.**

With according to lows of SPIE and our chapter<sup>1</sup> has been held an election of the office. Here we represent new office.

- |                   |                  |  |
|-------------------|------------------|--|
| 1. President      | Gevorgyan Narine | <a href="mailto:gnarine@gmail.com">gnarine@gmail.com</a>         |
| 2. Vice-President | Antonosyan Diana | <a href="mailto:dantonosyan@gmail.com">dantonosyan@gmail.com</a> |
| 3. Secretary      | Grigoryan Naira  | <a href="mailto:nairagrig@gmail.com">nairagrig@gmail.com</a>     |
| 4. Treasurer      | Nanumyan Vahan   | <a href="mailto:vnanumyan@gmail.com">vnanumyan@gmail.com</a>     |

### **2. List of current Student Chapter Members**

1. Abovyan Gor
2. Antonosyan Diana (Vice-President)
3. Arzakantsyan Mikayel
4. Azizbekyan Hrayr
5. Bakhramyan Henrikh
6. Balasanyan Nikolay
7. Dadalyan Tigran
8. Davtyan Aram
9. Gevorgyan Narine (President)
10. Gevorgyan Tigran
11. Gogyan Anahit
12. Grigoryan Naira (Secretary)
13. Hovhannisyan Lilit
14. Hovsepyan Sevada
15. Hovsepyan Stepan
16. Malkhasyan Vahan
17. Martirosyan Araqs
18. Martirosyan Artsrun
19. Mkrtchyan Nune
20. Muzhikyan Pavel
21. Nanumyan Vahan (Treasurer)
22. Nersisyan Ani
23. Raymers Anna
24. Sargsyan Robert
25. Yeghiazaryan Levon

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<sup>1</sup> No one could be uninterruptedly elected on the same office-position twice.

### 3. Details of Chapter activities since last report.

The 2009 was amazingly successful and productive for our chapter. The activities of the Chapter were marked and we got some awards:

- We won “Education Outreach Grant” from SPIE and “International Scientific Meetings and Conferences Support Program” grant from National Foundation of Science and Advanced Technologies for organization MPOP-2009 for organization MOP-2009, which had great success
- Our chapter has been invested with certificate of excellence for our website: “Honorably Mentioned Chapter Website”.

- *Seminars and meetings*

We continued our traditional scientific seminars and they went over big, the announcements of the seminars now are available on our site: [www.spie.am](http://www.spie.am). We try adapting our site for students and making it more informative and easy in use.

One of our chapter meetings we held at a height of 3700 meters. Our chapter has very interesting excursion of Aragats Cosmic Rey Center (ASEC). After it we subjugate the South top of Aragats, where we have the best SP IE meeting.



- *Introduction of School-Children with Big World of Physics*

The best 40 school-children from 8 schools (6 from Yerevan and 2 regional) have been chosen during the Olympiad organized by SPIE members. These pupils have had great chance to be introduced with Big World of Physics. We organized excursion to Yerevan State University, LT-PYRKAL, Institute for Physical Researches and Byurakan Astrophysical Observatory.



In Yerevan State University school-children met with dean of the Physics Faculty, visited laboratories of: Solid State Physics, Molecular Physics, Optics and Laser physics.



In LT-PYRKAL they see the technology of growth of crystals and some military products of the Institute.



In Institute for Physical Researches children met with director of the Institute, visited laboratories of Laser Technologies and Crystal Growth.



At the end of the day we got to Byurakan Astrophysical Observatory, where we met with directors of institute and Armenian Astrophysical Society, and see the work of the biggest Telescope in the Caucasus.

Everywhere school-children have had perfect lectures of leading specialists, demonstration of experiments and products of the Institutes.



There was organized an interesting lecture by Professor A. Mikaelyan on the history of the telescopes about our earth and space, in general, in one of the schools of Yerevan were have been gathered school-children from regions and some schools of Yerevan.



This program had great success; we got perfect feedbacks both from pupils and the directors of the schools, so we decided to continue the project. (Future plans).

- *Modern Problems in Optics and Photonics (MPOP-2009)*  
*International Advanced Research Workshop*  
 27 August – 2 September, Yerevan, Armenia, 2009  
[www.ipr.sci.am/mpop](http://www.ipr.sci.am/mpop)



The main achievement of this year of course is the workshop MPOP-2009.

The objective of this workshop was to bring together experienced and young scientists working on various aspects of optics and photonics, to discuss the most recent developments in that area. Students had opportunity to present their research in both oral and poster presentations, so they knew opinion of experienced scientists, learnt their advices.



The program committee of the workshop elected 3 students for the best presentations. These students: Artur Davoyan (Australia), Elena Silaeva (Russia), Dariusz Łukaszewski (Poland), have been invested with certificates and awarded with the prize.

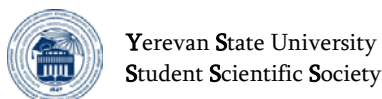
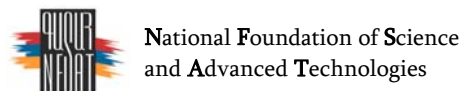
#### Organized by

- Yerevan State University  
*Department of Physics*
- National Academy of Science of Armenia  
*Institute for Physical Research*
- Russian-Armenian (Slavonic) State University
- State Committee of Science of Armenia
- YSU & NAS SPIE Armenian Student Chapter
- OSA Armenian Student Chapter

#### Topics

- *Photonic Crystals and Metamaterials, Biophotonics*
- *Quantum Optics & Quantum Information*
- *Atomic Spectroscopy*
- *Optical Features of Quantum Nanostructures*
- *Modeling of Complex Systems*

#### Sponsors





## SPIE/OSA Student Chapter Congress

There was organized OSA/SPIE congress where students have discussed:

How develop the optics in the region and how involve more students in optics.

There have been strengthened ties between our chapter and SPIE and OSA Chapters of Lomonosov MSU, Warsaw University of Technology Chapters, and established new ties with Nizhniy Novgorod and University of Latvia SPIE and OSA Chapters. Moreover there were discussions about joint organizing future scientific meetings.



## Results



The number of the conference attendees was exceed 120 scientists from Armenia, Australia, Belgium, France, Germany, Greece, Iran, Iraq, India, Japan, Latvia, Poland, Russia, Singapore, Taiwan, United Kingdom and Ukraine.

Brief descriptions of the participant's research work has been included in the Book of Abstract of MPOP, which was published in "Gitutiun" Publishing House of the National Academy of Sciences of Republic of Armenia, Yerevan – 2009 (ISBN 978-5-8080-1788-8).

There will be published the proceedings of the workshop. Part of the full papers will be published in the International Publishing House: World Scientific, Singapore and the part in "Gitutiun" Publishing House of the National Academy of Sciences of Republic of Armenia.

The excellent organization of the workshop has been expressed by the all participants: both the scientific and the social parts. The workshop has created the network among Armenian and foreign young scientist and students involved in optics.

There were established good scientific collaborations among scientists from different countries as a result of the workshop. There are plans to develop the cooperation on base of joint scientific projects.



- *SPIE Chapter meeting with students*



Our Chapter being desired to be better informed about the problems and interests of the students has established good ties with Yerevan State University Student Scientific Society. There has been held joint, enlarged meeting with students of faculties of Physics and Radio Physics. During the meeting were presented the goals and ideas of SPIE. Students have been acquainted with the works and future planes of SPIE Armenian Student Chapter. We sure that lot of new active members will be involved in our chapter at upcoming year!

- *Celebrating New Year and X-mas*



The 2009 was very productive and lucky year for our chapter. We see this year off with perfect mood. During the last SPIE meeting we have analyzed the year around the little X-mas tree in festive atmosphere with jokes and, of course, with X-mas presents.



- *SPIE student members have visited following foreign research institutes:*

- ✓ Department of Physics, University of Delhi, Delhi, India
- ✓ Department of Physics, University of Allahabad, Allahabad, India
- ✓ Centre for Environmental Science & Technology, Faculty of Science, Banaras Hindu University, Varanasi, India
- ✓ Laboratoire Interdisciplinaire Carnot de Bourgogne, UMR CNRS 5209, Dijon, France
- ✓ Laboratory of Information Technologies JINR, Dubna, Russia
- ✓ Moscow State Technical University n.a. N.E. Bauman, Moscow, Russia
- ✓ Moscow Institute of Physics and Technology, Moscow, Russia
- ✓ Université Paul Verlaine - Metz, Metz, France
- ✓ Cergy-Pontoise University, France

- *SPIE student members have taken part in the following International conferences:*

- ✓ SPIE Optics + Photonics, San Diego, USA
- ✓ SPIE Europe Optics + Optoelectronics 2009, Prague, Czech Republic
- ✓ International Advanced Research Workshop “Modern Problems in Optics & Photonics”, Yerevan, Armenia
- ✓ "Journées des Ecoles Doctorales", Dijon, France
- ✓ Summer College on “Nonequilibrium Physics from Classical to Quantum Low Dimensional Systems”, Trieste, Italy
- ✓ International Conference on “Mathematical Modeling and Computational Physics”, Dubna, Russia
- ✓ 7<sup>th</sup> International Conference on “Computer Science and Information Technologies”, Yerevan, Armenia

- ✓ Workshop and Summer school "Ultrafast control of quantum systems by strong laser fields", Rethymnon, Crete, Greece
- ✓ International Conference on "Laser Physics", Ashtarak, Armenia
- ✓ 52<sup>nd</sup> MIPT's Scientific Conference, Moscow, Russia
- ✓ Romanian Conference in Advanced Materials, Brashov, Romania

#### **4. Details of planned activities for the future.**

We are going to continue organization of Physics Olympiad for the undergraduate school-children of several schools of Armenia. Winners of the Olympiads would go on an outing to leading Institutes and Universities of Armenia.

We have an idea to hold an open air chapter meeting, as many good ideas appear in informal atmosphere in the bosom of the nature.

We are going to publish newspapers with interviews of representatives of scientific and industrial physical world. These interviews would include useful advices to students regarding their career.

We have plans to organize "Young Scientists" section during the annual Conference on Laser Physics-2010 which is hold in Ashtarak, Armenia.

Seminars, meetings are going to be traditional and one of the most motivating activity.

#### **5. Financial information.**

Beginning balance: \$1150 +\$240 (LT-PYRKAL)+\$100 (YSU)

Seminars and meetings: \$240

Membership expenses (by LT-PYRKAL): \$ 240

Physics Olympiad and excursion to leading Institutes and Universities of Armenia for school-children: \$250

Excursion to the Cosmic Ray Detectors of Aragats Space Environment Center, and Open air chapter meeting: \$220

Participation fee for RCAM-2009: \$50

Registration & Hosting of the site: \$95

Support for students for printing large format posters: \$85

Snacks and beverages during MPOP for congress: \$110

Accommodation expenses for SPIE members of collaborative chapters during MPOP-2009: \$200

Ending balance: \$ 0