Yerevan State University &
National Academy of Sciences
SPIE Student Chapter
ID – 3159960

Activity Report
(2014)
Contents of REPORT

Current Members .............................................................................................................................................. 3
Seminars .......................................................................................................................................................... 4
Visit to the CANDLE Synchrotron Research Institute ................................................................................. 6
The Big World of Physics ............................................................................................................................... 7
Visited foreign research institutes ................................................................................................................ 7
Participation of our members in conferences ................................................................................................. 8
SPIE Student Chapter Leadership Workshop in ............................................................................................... 10
San Diego ..................................................................................................................................................... 10
Publications of our chapter’s members ........................................................................................................... 11
Our Website .................................................................................................................................................. 11
Open air meeting and visit to the Byurakan Astrophysical Observatory ....................................................... 12
Cancer party ................................................................................................................................................ 12
Conferences ................................................................................................................................................ 13
Modern Problems of Physics .......................................................................................................................... 13
2nd International Advanced School on Frontiers in Optics & Photonics ....................................................... 15
2nd International Symposium “Optics and its Applications” .......................................................................... 19
New Year party in Friends pub ...................................................................................................................... 31
Upcoming Event ......................................................................................................................................... 32
Plans of future chapter activities .................................................................................................................. 32
Financial Information ................................................................................................................................ 33
Current Members

Elected officers starting with 1 January, 2015

Chapter President: Hakob Hakobyan
hakob.fizika@gmail.com

Chapter Vice-President: Naira Grigoryan
gr.naira@gmail.com

Chapter Secretary: Nvard Ghazaryan
ngghazaryan@gmail.com

Chapter Treasurer: Tigran Kotanjyan
tigrankotanjyan@gmail.com

List of Current Student Chapter Members

1. Arevik Amiryan  
2. Vardan Avetisyan  
3. Davit Baghdasaryan  
4. Astghik Chalyan  
5. Tereza Evanisyan  
6. Narine Gevorgyan  
7. Hermine Gharagulyan  
8. Nvard Ghazaryan  
9. Naira Grigoryan  
10. Eduard Hakobyan  
11. Hakob Hakobyan  
12. Meruzhan Kerobyan  
13. Davit Khachatryan  
14. Maria Khachatryan  
15. Tigran Kotanjyan  
16. Astghik Kuzanyan  
17. Hrach Toneyan  
18. Petros Petrosyan  
19. Khachik Sahakyan  
20. Anush Sargsyan  
21. Stepan Hovsepyan
Seminars

We organized the series of seminars with eminent foreign and Armenian scientists during 2014, in order to make Optics and Photonics more popular, to make science more interesting and to answer actual questions that arise for students. Seminars were conducted by popular lecturers from scientific and industrial centers of Armenia and other countries, and our chapter members. As always the topics of seminars included various fields of science, optics, astrophysics. Some seminars were unique and were met very enthusiastic and attracted participants of various specialties.

1. Prof. Anna Vedda  
Department of Materials Science,  
University of Milano-Bicocca, Italy

“Investigation of defects in materials”

2. Prof. Tigran Vartanyan  
ITMO University, Russia

“Thin layers of atomic vapors: spectroscopy and photophysics”

3. Prof. Klaas Bergmann  
Department of Physics,  
Technical University Kaiserslautern, Germany

“Population transfer between quantum states to perfection: Stimulated Raman Adiabatic Passage (STIRAP)”
4. Prof. Atom Muradyan
Department of Physics, Yerevan State University, Yerevan, Armenia

“Three-level medium as a former of a series of short light pulses”

5. YSU&NAS SPIE student chapter member Gor Hovsepyan

“Multiphoton blockades in pulsed regimes”

6. YSU&NAS SPIE student chapter member Tatevik Chalyan

“Research of laser beam wavefront distortion in the systems with corner cube retroreflector”
Visit to the CANDLE Synchrotron Research Institute

We organized lab tour to the CANDLE Synchrotron Research Institute for bachelor, master and PhD Students from Yerevan State University, Institute for Physical Research of NAS RA and Russian-Armenian (Slavonic) University of Armenia. The program was aimed to give an opportunity to students to learn more about experimental culture and technique. These events are motivating and inspiring students to improve their knowledge on physics and get acquainted with the research of CANDLE more closely.

Officially the Center for the Advancement of Natural Discoveries using Light Emission, more commonly CANDLE Synchrotron Research Institute, is a project and a research center-institute in Yerevan, Armenia. CANDLE is a project of 3 gigaelectronvolts energy, third generation synchrotron light source for fundamental, industrial and applied research in biology, physics, chemistry, medicine, material and environmental sciences.
The Big World of Physics

This activity becomes traditional which includes work with schoolchildren, to make Optics more interesting and popular for them. Traditionally we were taking them to excursions to various University laboratories, this year we visited «Usmunq» school in Yerevan. Here SPIE & OSA Student Chapter members prepared experiments and showed them.

Visit to foreign research institutes

- European Centre for Theoretical Studies, Trento, ITALY
- Nanoscience Laboratory, Department of Physics, University of Trento, Povo (TN), ITALY
- Institute for Theoretical Physics, University of Wroclaw, Wroclaw, POLAND
- Wroclaw University of Technology, Wroclaw, POLAND
- University of Rostock, Rostock, GERMANY
- Visit to Ghent University, Ghent, Belgium
- University of Burgundy, Dijon, France
Participation of our members in conferences

1. **ICTP Winter College** on Optics: Fundamentals of Photonics - Theory, Devices and Applications, Trieste, Italy (10-21 February, 2014)
2. **ALPS’14**, Yokohama, Japan (April 22-25, 2014)
4. 3rd International Symposium on **Non-equilibrium Dynamics (NeD-2014)** and the 4th Network Workshop on **Theory of Ultra Relativistic heavy Ion Collisions (TURIC-2014)**, Hersonissos, Crete, Greece (9 - 14 June, 2014)
5. Helmholtz International Summer School **Nuclear Theory and Astrophysical Applications (NTAA14)**, BLTP JINR, Dubna, Russia (July 21 - August 1, 2014)
6. **DESY** International Summer Student Program 2014, Hamburg, Germany (July 22 - September 11, 2014)
10. **CERN Accelerator School**, Prague, Czech Republic (August 31 -September 12, 2014)
13. 4th **Compact Stars in the QCD Phase diagram** International Workshop, 2014, Prerow, Germany (26-30 September)
14. 3-rd International Conference of Nanotechnologies **NANO-2014**, Tbilisi, Georgia (20-24 October, 2014)
15. **Armenia - among 20 most innovate countries in the world in 2018**, Dilijan, Armenia (31 October - 1 November, 2014)
16. **Ninth scientific conference of RAU**, Yerevan, Armenia (3-8 December, 2014)
ALPS’14, Yokohama, Japan

NeD-2014 and TURIC-2014, Hersonissos, Crete, Greece

DESY, Hamburg, Germany

NANO-2014, Tbilisi, Georgia
SPIE Student Chapter Leadership Workshop in San Diego

Thanks to the SPIE student chapter travel grant, the president of our chapter - Astghik Kuzanyan, was able to attend the SPIE Optics+Photonics 2014 (16-21 August, 2014), held in San Diego. Astghik participated in the SPIE Student Chapter Leadership Workshop in San Diego, where active members from all over the world had opportunity to interact and learn from each other. Here they also had a chance to interact with popular lecturer Jean-Luc Doumont.
Publications of our chapter’s members

1. Paytsar Mantashyan, Rafael Drampyan, Jeroen Beeckman, Oliver Willekens, "Optical induction of Bessel-like lattices in methyl-red doped liquid crystal cells" Optics Communications 338 (2014) 467–472.

Our Website

One of the important goals of our chapter is the popularization of its official website: www.spie.am
The website contains information about our chapter upcoming activities, chapter newsletter and our projects archive. The information about upcoming scientific meetings and schools organized by other SPIE chapters and various scientific centers are also posted in the website. It also contains useful links and other information for the students and for those who are interested in the activity of SPIE. We hope that our website will help to get knowing about our chapter activities.
Open air meeting and visit to the Byurakan

Astrophysical Observatory
To entice MSc and PhD students to become/stay a member of the student chapter and have friendly relations between each other, the chapter members organized a trip to the mount Aragac and Byurakan Astrophysical Observatory located on the slope of mount Aragats. Besides spending good time, YSU & NAS SPIE student members had opportunity to visit observatory and watch stars by telescope.

Cancer party
2014 is an important year for football fans. Our chapter organized a cancer party to watch together one of the games of the World Cup.
Conferences

It became good tradition for our chapter to organize and co-organize International Conferences, Schools and Meetings. The year 2014 was very important for our chapter as we organized School Modern Problems of Physics, Yerevan, Armenia (13-16 May, 2014), 2nd International Advanced School on Frontiers in Optics & Photonics, Yerevan-Ashtarak, Armenia (30 August - 5 September, 2014) and 2nd International Symposium on Optics and its Applications, Yerevan-Ashtarak, Armenia (1-5 September, 2014).

Modern Problems of Physics

In May of 2014 together with YSU & NAS OSA Student Chapter and YSU Student Scientific Society we organized school “Modern Problem of Physics” for the students of Armenian universities. Professors from different universities and institutes had lectures in the school. After lectures participants have lab tour in LT-PYRKAL.

Organizing Committee

Members of SPIE and OSA Student Chapters of Armenia

School locations

The conference was held at:
• Yerevan State University
• LT-PYRKAL

Sponsors

School is very grateful for the generous support of all our sponsors. Without their help, the school would not be able to take place.

Youth Foundation of Armenia

Prof. Levon Mouradian

Prof. Gayane Grigoryan

Prof. David Sarkisyan

Prof. Hayk Sarkisyan
Our chapter with collaboration with Armenian TC of International Commission for Optics, the Russian-Armenian University (RAU), the Institute for Physical Research of National Academy of Sciences of Armenia (IPR), LT-PYRKAL and the Department of Physics of Yerevan State University (YSU), was organized 2nd International Advanced School Frontiers in Optics & Photonics. First FOP school was organized in 2012 by our chapter.

**ORGANIZERS**

**Directors:** Narine Gevorgyan (RAU, Armenia / ICTP, Italy), Paytsar Mantashyan (IPR of NAS, Armenia)

**Coordinator:** Tatevik Chalyan (LT-Pyrkal, Armenia)

**Managers:** David Hayrapetyan (RAU, Armenia), Artsrun Martirosyan (IPR of NAS, Armenia)

**International Advisory and Program Committees:**
Michael Berry (University of Bristol, UK), Aranya Bhattacherjee (University of Delhi/ J. Nehru Uni., India), David Blaschke (University of Wroclaw, Poland / JINR Dubna, Russia), Konstantin Bliokh (Advanced Science Institute RIKEN, Japan), Dmitry Budker (University of California at Berkeley, USA), Gagik Buniatyan (LT-PYRKAL, Armenia), Maria L. Calvo (Universidad Complutense de Madrid, Spain), Gayane Grigoryan (IPR of NAS / RAU, Armenia), Angela Guzman (CREOL, USA), Rafik Hakobyan (YSU, Armenia), Eduard Kazaryan (Russian-Armenian University, Armenia), Albert Kirakosyan (YSU, Armenia), Levon Mouradian (YSU, Armenia), Aram Papoyan (IPR of NAS, Armenia), Hartmut Ruhl (Ludwig-Maximilians-University, Germany), David Sarkisyan (IPR of NAS, Armenia), Hayk Sarkisyan (RAU / YSU, Armenia)

**Local Committee:**
David Baghdasaryan (RAU, Armenia), Astghik Chalyan (RAU, Armenia), Artak Gevorgyan (RAU, Armenia), Hakob Hakobyan (YSU, Armenia), Eduard Hakobyan (RAU, Armenia), Tigran Kotanjyan (RAU, Armenia), Taron Mnatsakanyan (RAU, Armenia), Anna Reymers (RAU, Armenia), Hovhannes Tevosyan (RAU, Armenia)

**SPONSORS:**

Lecturers

Miguel Alonso (Uni. of Rochester, USA)
✓ Geometrical description of Ince-Gaussian cavity modes and other propagation-invariant beams

Asgar Asgari (Uni. of Tabriz, Iran & Uni. of Western Australia, Australia)
✓ New graphene based III-Nitride Schottky barrier solar cells

Jeroen Beeckman (Ghent Uni., Belgium)
✓ Voltage and temperature tuning of laser properties using liquid crystals

Janos Bergou (CUNY, USA)
✓ A Lecture on Quantum Measurements
✓ Sequential quantum measurements

Michael Berry (Uni. of Bristol, UK)
✓ Seven wonders of physics
✓ The brilliant Raman stumbles
✓ Curl forces and beyond

Aranya Bhattacherjee (Uni. of Delhi & J. Nehru Uni., India)
✓ Quantum Optomechanics: Macroscopic Quantum Phenomena
✓ Optomechanical effect on the Dicke quantum phase transition and quasi-particle damping in a Bose-Einstein condensate: a new tool to measure weak force

David Blaschke (Uni. of Wroclaw, Poland & JINR, Russia)
✓ WKB - type approximations in the theory of vacuum particle creation in laser fields
✓ JINR

Konstantin Bliokh (CEMS, RIKEN, Japan)
✓ Magnetoelectric effects in local light-matter interactions

Rene Brun (CERN, Switzerland)
✓ The world of High Energy Physics at CERN

Humberto Cabrera (IVIC, Venezuela)
✓ Thermal lens investigation of diffusion in binary fluid mixtures
✓ Medical Applications of Lasers

Mark Dennis (Uni. of Bristol, UK)
✓ Vikings in shades: navigating by skylight polarization
✓ Knotted vortices in light
Jean-luc Doumont (Principiae, Belgium)
✓ Making the most of your presentation

Aigars Ekers (KAUST, Saudi Arabia & Uni. of Latvia, Latvia)
✓ Manipulation of hyperfine state populations via the Autler-Townes effect

Mher Ghulinyan (CMM-Fondazione Bruno Kessler, Italy)
✓ Silicon Photonics: Vertical evanescent coupling of planar Whispering-gallery mode resonators for complete on-chip integration
✓ Chi(2) optical nonlinearities in Silicon

Karen Hatsagortsyan (MPIK Heidelberg, Germany)
✓ Laser-induced spin dynamics in above-threshold ionization

Reza Kheradmand (Uni. of Tabriz, Iran)
✓ Interaction and Switching of Dark Discrete Cavity Soliton

Pawel Machnikowski (Wroclaw Uni. of Technology, Poland)
✓ Collective spontaneous emission from ensembles of semiconductor quantum dots

Vladimir Manko (Lebedev Physical Institute, Russia)
✓ Probability representation of states in quantum mechanics and quantum optics

Joseph Niemela (ICTP, Italy)
✓ ICTP
✓ ICO
✓ International Year of Light

David Petrosyan (IESL, FORTH, Greece & Aarhus Uni., Denmark)
✓ Correlations of Rydberg excitations in optically driven atomic ensembles

In Vagharshapat, - one of the historical capitals of Armenia (120 AD-330 AD)
Luis Ponce (CICATA IPN, Mexico & Uni. de Havana, Cuba)
✓ Photonics technologies for surface processing: The example of cactus epilation
✓ The BRALAX project - A useful experience for career development of researchers and entrepreneurs in photonics

Fred Reinholtz (Uni. of Luebeck, Germany)
✓ Adaptive Optics in Non-Linear Microscopy

Heidi Reinholtz (Uni. of Rostock, Germany)
✓ Diagnostics of warm dense matter via optical properties

William Rhodes (FAU, USA)
✓ Four Centuries of Imaging Technology
✓ Secure Communication by Coherence Modulation at the Photon Counting Level

Stefano Ruffo (Florence Uni. and INFN, Italy)
✓ Ensemble inequivalence in systems with wave-particle interaction

Tigran Shahbazyan (Jackson State Uni., USA)
✓ Optical spectroscopy of plasmonic systems
The ICTP Scientific Event: SMR2633

2nd International Symposium

“Optics and its Applications”

September 1-5, 2014
Yerevan – Ashtarak, Armenia

Dedicated to the 50th Anniversary of
the Abdus Salam International Centre for Theoretical Physics
http://indico.ictp.it/event/a13253/

Sponsors:
Local Organizing Committee

Secretary: Ave LUSENTI
ICTP, Italy

Coordinator: Paytsar MANTASHYAN
IPR of NAS, Armenia

Managers: Davit HAYRAPETYAN
RAU, Armenia
Artur MARTIROSYAN
IPR of NAS, Armenia

LOC Members: Melanya Grigoryan (Integrator Ltd, Armenia), Astghik Kuzanyan (IPR of NAS, Armenia), Lilit Mantashyan (Guw-Re Ltd Educational Centre, Armenia)

International Advisory and Program Committees

Chairmen:
David BLASCHKE
University of Wroclaw, Poland
JINR Dubna, Russia

David SARKISYAN
IPR of NAS, Armenia

Members:
Roman ALAVERDYAN (YSU, Armenia); Levon ASLANYAN (YSU, Armenia); Marcis AUZINSH (University of Latvia, Latvia); Stefano BELLUCCI (Frascati National Laboratory INFN, Italy); Michael BERRY (University of Bristol, UK); Aranya BHATTACHERJEE (University of Delhi, India); Konstantin BLOIKH (Advanced Science Institute RIKEN, Japan); Dmitry BUDKER (University of California at Berkeley, USA); Vigen CHALTYKYAN (IPR of NAS, Armenia); Milcho DANAILOV (Elettra, Italy); Carlos DUQUE (Universidad de Antioquia, Colombia); Vladimir GERDT (JINR Dubna, Russia); Gayane GRIGORYAN (IPR of NAS, Armenia); Rafik HAKOBYAN (YSU, Armenia); Alexey KAVOKIN (University of Southampton, UK); Eduard KAZARYAN (RAU, Armenia); Arsen KHVEDELIDZE (Institute of Mathematics, Georgia); Albert KIRAKOSYAN (YSU, Armenia); Radik KOSTANYAN (IPR of NAS, Armenia); Takayuki MIYADERA (Kyoto University, Japan); Levon MOURADIAN (YSU, Armenia); Atom MURADYAN (YSU, Armenia); Armen NERSESSIAN (YSU, Armenia); Avinash PANDEY (University of Allahabad, India); Luis PONCE (CICATA IPN, Mexico / Universidad de Havana, Cuba); Hartmut RUHL (LMU, Germany); Marat SOSKIN (Institute of Physics NASU, Ukraine); Sergue VINITSKY (JINR Dubna, Russia); Gert von BALLY (Centre for Biomedical Optics and Photonics, Germany); Ruben ZADOYAN (Newport Technology & Applications Center, USA)
The 2\textsuperscript{nd} International Symposium “Optics and its Applications” (OPTICS-2014) was organized by the Abdus Salam International Centre for Theoretical Physics (ICTP), in collaboration with the International Commission for Optics (ICO), the Russian-Armenian University (RAU), the Institute for Physical Research of National Academy of Sciences (IPR), the LT-Pyrkal cjsc, and the Faculty of Physics of Yerevan State University (YSU).

Co-organizing student chapters:
- YSU & NAS SPIE Chapter
- OSA and SPIE Bauman Moscow State Technical Univ. Chapters

The Symposium “Optics and its Application” was the First Official ICTP Scientific Event in Armenia. We are very grateful to the ICTP for accepting the proposal for this event by the member of our chapter, Narine Gevorgyan. Being an ICTP symposium our project got a high level of recognition by international institutions and societies.

The Symposium Program included:
- Presentations of institutions, societies and international projects
- Plenary talks
- Invited talks
- Professional development lectures for students by SPIE visiting lecturers
- Special lecture for students by OSA traveling lecturer
- Sectional oral presentations
- Students’ presentations
- Poster contributions
- Exhibition
- Lab tours
- Social programs

The Greek-Armenian industrial company LT-Pyrkal (5 min before the symposium opening)
INVITED SPEAKERS presented talks of different type:

- **Presentations of institutions, societies and international projects:**
  - David Blaschke (Poland & Russia); Rene Brun (Switzerland); Joseph Niemela (Italy); Grigory Trubnikov (Russia); Viktor Voronov (Russia). Total 7 presentations.

- **Plenary talks:**
  - Janos Bergou (USA); Michael Berry (UK); David Blaschke (Poland & Russia); Karen Hatsagortsyan (Germany); William Rhodes (USA); Stefano Ruffo (Italy); David Sarkisyan (Armenia); Tigran Shahbazyan (USA). Total 8 plenary talks

- **Invited talks:**
  - Gernot Alber (Germany); Miguel Alonso (USA); Aranya Bhattacherjee (India); Jeroen Beeckman (Belgium); Stefano Bellucci (Italy); Konstantin Bliokh (Japan); Humberto Cabrera (Venezuela & Italy); Mark Dennis (UK); Vladimir Derbov (Russia); Anton Desyatnikov (Australia); Aigars Ekers (Saudi Arabia & Latvia); Mher Ghulinyan (Italy); Arsen Khvedelidze (Georgia & Russia); Pawel Machnikowski (Poland); Vladimir Manko (Russia); Levon Mouradian (Armenia); Atom Muradyan (Armenia); Aram Papoyan (Armenia); David Petrosyan (Greece & Denmark); Luis Ponce (Cuba & Mexico & Italy); Fred Reinholz (Germany); Heidi Reinholz (Germany); Hayk Sarkisyan (Armenia); Monika Szafranska (Poland); Temo Vekua (Germany); Sergue Vinitsky (Russia). Total 26 invited talks.

- **Special lectures for students:**
  - Jean-luc Doumont (Belgium); Luis Ponce (Cuba & Mexico & Italy); William Rhodes (USA). Total 3 lectures.
The symposium also included sectional presentations which were selected by the program committee of the symposium from submitted abstracts of registered participants. In total there were 63 abstracts submitted by accepted participants: 27 Oral and 36 Poster presentations.

The abstracts of all presentations were collected in the Book of Abstracts which was printed by the Russian-Armenian (Slavonic) University.

Full texts of the presented talks and posters will be published in the symposium proceedings in the journal ADVANCED SCIENCE FOCUS (ASFo). Editors of the Proceedings: Stefano Bellucci, Aram Papoyan and Hayk Sarkisyan.

URL: http://www.aspbs.com/asfo/

Statistics of participants

The Symposium allowed 146 participants as representatives from 29 countries of five continents, namely: Armenia, Australia, Belgium, Cuba, Denmark, Egypt, France, Georgia, Germany, Greece, India, Iran, Italy, Japan, Latvia, Lithuania, Mexico, Moldova, Poland, Russia, Saudi Arabia, South Africa, Switzerland, Turkey, Ukraine, United Kingdom, USA, Uzbekistan and Venezuela.
Each day of the symposium was held at a different scientific organization: the Greek-Armenian industrial company LT-Pyrkal, the Russian-Armenian University, the Institute for Physical Research of NAS, National Academy of Sciences, and the Yerevan State University. This gave the participants the opportunity to visit these institutions and their laboratories.
During OPTICS-2014 there were 12 oral and 23 poster presentations held by students. The best oral student presentation was awarded a prize by the Armenian SPIE student chapter and 2 certificates were given for the second place.

**Awarded Students:**

**I place:**
**Yousef Pourvais** (University of Zanjan, Iran)

**II place:**
**Irina Fokina** (Bauman Moscow State Technical University, Russia)
**Naira Grigoryan** (University of Kassel, Germany)

During the symposium there were organized parallel sessions. One of the parallel sessions was a memorial seminar dedicated to the 70th anniversary of academician A.N. Sissakian, the former director of JINR Dubna. The event was held at the presidium of the Armenian Academy of Sciences with presentations delivered by members of a delegation from JINR Dubna.
Special cakes with coverage of logos of international sponsors (ICO, OSA, SPIE) were served during the coffee-breaks. During the Symposium Dinner we celebrated the jubilee of ICTP by sharing a cake which was prepared for that occasion with a special cover.

Our chapter brought Armenian brandy with logos of sponsors & organizers.
During the conference there was also a social program consisting of excursions to the historic ancient city of Yerevan – Erebuni (782 BC) and to the sites of the monastery Geghard (the monastery complex was founded in the 4th century inside a cave, the main chapel was built in 1215), and the temple Garni (1st century).
Open-air restaurant in Geghard: Preparation of Lavash – Armenian bread.
In 2014 "Lavash, the preparation, meaning and appearance of traditional bread as an expression of culture in Armenia" was included in the Representative List of the Intangible Cultural Heritage of Humanity (http://www.unesco.org/culture/ich/RL/00985)

Lessons of playing Duduk. UNESCO proclaimed the Armenian duduk and its music as a Masterpiece of the Intangible Heritage of Humanity (http://www.unesco.org/culture/ich/03eur_uk.htm). The Armenian Duduk is made from apricot wood. By the way, the scientific name of Apricot is Prunus armeniaca which means: Armenian plum.
The Symposium took place in a friendly atmosphere which gave the opportunity for fruitful scientific exchange and initiation of new as well as maintenance of existing scientific contacts. All participants were excited about the excellent organization and logistics as well as the high professional level of all presentations. They asked for a continuation of this successful symposium series...

The Symposium was particularly useful for students who could develop contacts among themselves and with expert scientists.

In the end all participants received certificates of participation, which were kindly provided by ICTP.

We are very proud that our main international project “International Symposium on Optics & its Applications” had a very successful continuation...
ACKNOWLEDGMENTS

We (YSU & NAS SPIE Student Chapter) would like to express our sincere gratitude to all our colleagues who were involved in the organization process and will still spend half a year more for preparing the proceedings of the symposium. Without their help, this scientific event would not have been as successful as it was!

Special thanks for generous support to all sponsors!!!!
New Year party in Friends pub

Our group in Republic Square with the main Christmas tree of Armenia

Best wishes from YSU and NAS of Armenia for 2015!!!

Merry Christmas and Happy New Year!!!
Upcoming Event

YSU&NAS SPIE Student Chapter in collaboration with Armenian TC of International Commission for Optics, the Russian-Armenian University, the Institute for Physical Research of NAS, LT-PYRKAL and the Department of Physics of Yerevan State University, will organize 3rd International Symposium on Optics & its Applications. Co-organizing Student chapters: YSU & NAS OSA Chapter; OSA & SPIE BMSTU Chapters.

The Symposium highlights:
✔ Lectures by eminent scientists
✔ Students presentations
✔ Hands-on research activities
✔ Lab tours
✔ Exhibition
✔ Social programs

3rd International Symposium
“Optics and its Applications”
OPTICS-2015
October 1-5, 2015
Yerevan – Ashtarak, Armenia

Plans of future chapter activities

✔ Our Chapter will participate as co-organizer in significant event - 3rd International Symposium Optics & its Applications-2015.
✔ We will continue the project “The Big world of Physics”.
✔ We will continue organizing seminars with leading scientists and PhD students.
✔ We are going to organize experimental classes for young students, and during these classes we are planning to conduct theoretical and experimental lectures concerning topics, photonics and electronics.
✔ We have planned several lab tours for students to the leading educational and industrial centers of Armenia.
✔ We will organize “Young Scientists” section during the Int. Symposium Optics and its applications 2015.
✔ We will organize our traditional open air chapter meeting.
## Financial Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPIE Activity Grant</td>
<td>$900</td>
</tr>
<tr>
<td>LT - PYRKAL</td>
<td>$100</td>
</tr>
<tr>
<td>IPR</td>
<td>$100</td>
</tr>
<tr>
<td>RAU</td>
<td>$100</td>
</tr>
<tr>
<td><strong>Beginning balance:</strong></td>
<td><strong>$1200</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snacks and beverages during lectures, seminars and meetings</td>
<td>$100</td>
</tr>
<tr>
<td><em>The Big world of Physics</em></td>
<td>$150</td>
</tr>
<tr>
<td>Award for the Best presentation during the Conference Optics and its applications 2014</td>
<td>$100</td>
</tr>
<tr>
<td>Coffee breaks during 2nd International Advanced School on Frontiers in Optics &amp; Photonics</td>
<td>$300</td>
</tr>
<tr>
<td>Registration &amp; Hosting of the chapter web page</td>
<td>$100</td>
</tr>
<tr>
<td>Open air chapter meeting and Christmas party</td>
<td>$200</td>
</tr>
<tr>
<td>Cancer party</td>
<td>$50</td>
</tr>
<tr>
<td>Support for students for participation in conferences:</td>
<td>$200</td>
</tr>
<tr>
<td></td>
<td><strong>$1200</strong></td>
</tr>
<tr>
<td><strong>Ending balance:</strong></td>
<td><strong>$0</strong></td>
</tr>
</tbody>
</table>

---

**Astghik Kuzanyan**  
*Chapter president up to December 31, 2014*

**Gagik Buniatyan**  
*Chapter advisor, Director of LT-PYRKAL*