Student Chapter Annual Report 2014

1. Chapter Officers:

Chapter Advisor: Sergey V. Kulakov svk25@mail.ru
Chapter Scientific Adviser: Oleg D. Moskaletz molegd@mail.ru

President: Vasily Kazakov vasilykazakov@mail.ru
Vice-President: Mikhail Salnikov M.salnikov16@yandex.ru
Secretary: Ruslan Khansuvarov ruslan.hansuvarov@gmail.com
Treasurer: Arseny Zhdanov arszhdanov@gmail.com

2. Current Student Chapter Member Roster:

1. Ekaterina Alexeeva 11. Georgy Korol
2. Igor Arkhipov 12. Ilya Mazurenko
3. Dmitry Borodin 13. Vadim Nenashev
5. Evgenij Dashkevich 15. Vladimir Pribilskiy
6. Irina Epikova 16. Mikhail Salnikov
7. Pavel Gordievskiy 17. Sergey Savelyev
9. Ruslan Khansuvarov 19. Mikhail Vaganov
10. Andrew Korenchuk 20. Arseny Zhdanov
3. Chapter activities:

In this year our members achieved good results to the following scientific directions:

- Development of explosion-proof fiber optical detector;
- Spectral devices based on acousto-optic tunable filter;
- Acousto-optic of gas analyses;
- Polarization properties of optical signals;
- Acousto-optic of new type crystals;
- The parallel analysis of optical signals;
- Sample spectra analysis;
- Application of the radio optic methods in the theory of diffraction optical spectral devices;
- Receiving and processing of spectroscopic information in optical range;
- Processing of optical information in multichannel fiber-optic systems;
- Investigation of generation and distribution of millimeter-wave signals over optical fiber;
- Acousto-optical methods of researching of frequency and phase spectra of signal;
- Researching of optical fiber quasi-distributed temperature sensors;
- Researching of femtosecond pulses;
- The computer simulation of optical devices.

Members of our Chapter took part in such conferences as:

- Conference on Optoelectronics, Photonics, Engineering and Nanostructures, St. Petersburg, 2014.
- SPIE Optics & Photonics 2014, San Diego, 2014

Grants and awards of chapter members:

- Vasily Kazakov: SPIE Scholarship in Optics and Photonics, 2014;
- Vasily Kazakov: The grant of Saint-Petersburg Government for students, postgraduate students, young scientists and specialists of St. Petersburg, 2014;
- Vasily Kazakov: The award for “The active scientific research work at the faculty”, SUAI, 2014;
Anna Vershinina: The first place in the X ISA European student paper competition ESPC-2014;


Arseny Zhdanov: SPIE Education Scholarship, 2014;

Arseny Zhdanov: Diploma for contribution to the Awards’ Committee activity (Wave electronics and Its Applications in the Information and Telecommunication Systems), 2014;

Arseny Zhdanov: University of South Florida Presidential Fellowship, 2014;

Ruslan Hansuvarov: The Russian Federation President’s Scholarship 2014/2015;


Georgy Korol: XVII International conference for young researchers. Wave Electronics and Its Applications in the Information and Telecommunication Systems, St. Petersburg. Diploma is awarded for best theoretical presentation;

Georgy Korol: SPIE Officer Travel Grant to attend Optics + Photonics and the Student Chapter Leadership Workshop;

Other achievements:

Education Outreach Grant 2014 - to continue working with a study group of optics and radiooptics to help increase knowledge in physics, mathematics and optics to pre-college students;

4. Details of planned activities for the future:

- Taking part in International Year of Light 2015;
- Organizing 3rd annual conferences for pre-college student “Lomonosov’s Readings”;
- Renew and increasing the number of chapter members by involving students from different departments;
- Taking part in conferences on optics;
- Development of relations with SPIE Chapters from Russia and other countries;
- Promoting optics in high schools;
- Attending annual SPIE Student Chapter Leadership Workshop at SPIE Optics and Photonics 2015 to develop collaboration with worldwide SPIE Chapters net;
- Organizing meetings for chapter members;
- Organizing an SPIE section on XVIII International conference for young researchers. Wave electronics and Its Applications in the Information and Telecommunication Systems, St. Petersburg;
- Cooperating with companies and production facilities in optical sphere;
5. Financial information:

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<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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<tbody>
<tr>
<td>SPIE Funding 2014</td>
<td>+900 USD</td>
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<tr>
<td>Organizing meetings of chapter members with high school students at high schools</td>
<td>-100 USD</td>
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<tr>
<td>Organizing chapter meetings</td>
<td>-100 USD</td>
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<td>Organizing SPIE chapter session on the XVII International conference for young researchers. Wave electronics and Its Applications in the Information and Telecommunication Systems, St. Petersburg</td>
<td>-300 USD</td>
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<td>Attending and participation in the &quot;Optics &amp; Photonics 2014&quot;</td>
<td>-100 USD</td>
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<td>Bowling party for SPIE chapter’s member</td>
<td>-200 USD</td>
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<td>Attending and participate in the Conference on Optoelectronics, Photonics, Engineering and Nanostructures.</td>
<td>-50 USD</td>
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<tr>
<td>Attending and participation in the &quot; SPIE Security + Defence &quot;</td>
<td>-50 USD</td>
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<td>Ending balance</td>
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6. Publications:


• **Arseny Zhdanov.** “Complex sample spectrum analysis in optical range”. Book of Abstracts - 1st International School and Conference on Optoelectronics, Photonics, Engineering and Nanostructures, St. Petersburg, Russia, March 25 27, 2014


• **Ruslan A. Khansuvarov, Oleg V. Shakin, Mikhail A. Vaganov, Arseny Zhdanov.** “Self-tuning acousto-optic deflectors with acoustic line made of NaBi(MoO4)2 crystal”. Proc. of SPIE Vol. 9200 920013

• **Arseny Zhdanov, Ruslan Khansuvarov, Georgy Korol.** “Simulation of time-dispersion spectral device with sample spectra accumulation” Proc. of SPIE Vol. 9216 92161N


• **Georgy Korol, Dmitry Moskaletz, Oleg Moskaletz.** “Effect of rate of change of frequency characteristics of the optical spectral device based on acousto-optic tunable filter” Proc. of SPIE Vol. 9216 92161F

7. Photo report:


Dean of faculty Radio engineering, Electronics and Communications Prof. Alexander Bestugin. Left: Prof. Oleg Shakin and Prof. Sergey Kulakov (SPIE Fellow)

Mikhail Vaganov present SPIE Student Chapter
Excursion in the Laboratory


Opening conference
Participants and TV-reporter

Science advisor Oleg Moskaletz sign diploma
Awarding and closing conference

Excursion
XVII International conference for young researchers “Wave electronics and Its Applications in the Information and Telecommunication Systems”
1 – 5 June 2014

Chapter Members with the chapter scientific advisor Oleg D. Moskaletz

Participants
The closing conference. Prizes and awards.
In this year 3 members of our chapter took part in this conference: Arseny Zhdanov, Georgy Korol and Ruslan Khansuvarov.

Ruslan Khansuvarov and Arseny Zhdanov, The winners SPIE Scholarship

Georgy Korol and Ruslan Khansuvarov present their report
Vasily Kazakov took part in Conference SPIE Security + Defence 2014, Amsterdam