

**TAURIDA NATIONAL V.VERNADKSY UNIVERSITY  
SPIE STUDENT CHAPTER REPORT**

(May 2011 – May 2010)

[www.spie-crimea.org](http://www.spie-crimea.org)

[www.singular-optics.org](http://www.singular-optics.org)



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**SPIE Student Chapter Officers**

All opportunities on use of rights of members SPIE in educational and scientific fields were shown. Elections of the most active members are executed for the organization of work of our Chapter. In 2012 we elected a new Members to our Chapter.

**Current Chapter officers:**

**President:** Bohdan Sokolenko  
[simplexx.87@gmail.com](mailto:simplexx.87@gmail.com)

**Vice President:** Maxim Ivanov  
[featheryworld@mail.ru](mailto:featheryworld@mail.ru)

**Secretary:** Rodion Alexandrov  
[optical-vortex@narod.ru](mailto:optical-vortex@narod.ru)

**Treasurer:** Maria Kudryavtseva  
[masha@spie-crimea.edu](mailto:masha@spie-crimea.edu)

## CHAPTER ACTIVITIES:

Every year we organize meetings and workshops for of our members and guests, especially the youngest researchers with the main goal: to improve their skills and organize fruitful research, educational and collaborative work, where they are having an opportunity to learn more about high level of scientific investigations on their work from prominent Lecturers and Professors of our faculty. The topics of the workshops are connected with SPIE activity: description of all opportunities for young scientists worldwide.

Also we entry new Internet resource which will be devoted to information and promotion of SPIE foundation programs worldwide. During student Activity they participated in collaborative research projects, attended conferences and discussions.

### **THE LIST OF MAIN ACTIVITIES AT THU SPIE CHSPTR**

**September – October** - Beginning of Educational process on General Physics Department.

**The 10th International Conference on Correlation Optics** which was held in Chernivtsi, Ukraine on **September 12-16, 2011**

The purpose of the conference is to provide a discussion of novel approaches and advances connected with optical correlation techniques for measurements of random optical fields, and object diagnostics in diverse applications.



Our students represented their reports in posters and oral presentations. Also, full texts of reports were published in Special Issue of SPIE Presiding.

During the Conference was organized Meeting of Student Chapters between Chernivtsi, Kharkov and Simferopol, were was discussed a plan of collaboration in scientific and educational aspects.



Students on Conference Sections



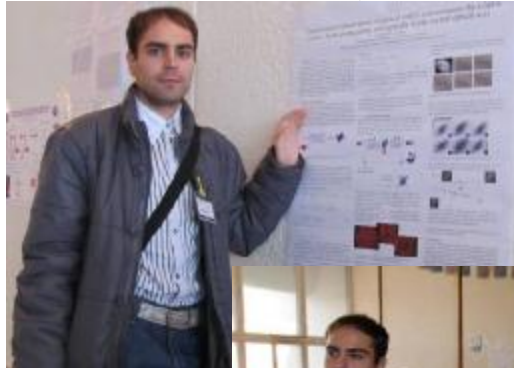
**October, 4** Introductory lecture for new SPIE members by Adviser of General Physics Student Chapter A. Volyar about SPIE and all opportunities for young scientists and students.

**October, 27-30 12th International Young Scientists Conference Optics and High Technology Material Science, Kyiv, Ukraine.**

The participants of the Conference from TNU SPIE Chapter (Maxim Ivanov and



Bohdan Sokolenko) had an opportunity to present results of their investigation on Poster section. Also they met new friends from another SPIE student Chapters.



(Bohdan Sokolenko)

(Maxim Ivanov)



**November, 10 Lecture for Students** Subject: “Bottle beams in crystals and microparticle trapping by Optical tweezers ”Speaker: V. Shvedov (INVITED) General Physics Department, Taurida National V.I. Vernadsky University, Simferopol, Crimea, Ukraine

**December, 27 Workshop for SPIE Members**

Subject: “The Spatial arrays of optical beams” Speaker: N. Shostka, General Physics Department, Taurida National V.I. Vernadsky University, Simferopol, Crimea, Ukraine

**February 8, Workshop for SPIE Members and students of Physical Faculty**

Subject: “The principles of spatial beam shaping and interaction with anisotropic media” Speaker: N. Shostka, General Physics Department, Taurida National V.I. Vernadsky University, Simferopol, Crimea, Ukraine

**March,** Has been started Project “Modern Optics” – Organizing workshops and lectures for high school and for students of our faculty that will promote optoelectronics and optics. This event includes demonstrations of various optical phenomena for High School students in the laboratories of Physical Department where they will be having an opportunity to know some practical advices about high level of scientific skills on their work. All experience of our Chapter was involved into organization of Physical K.I. Shchyolkin School which will take place at our University. It gave a chance for students to do all activities themselves, discuss problems and exchange ideas.

The main goal of our project is to help students motivate his first steps into the world of Optics and Laser Physics.

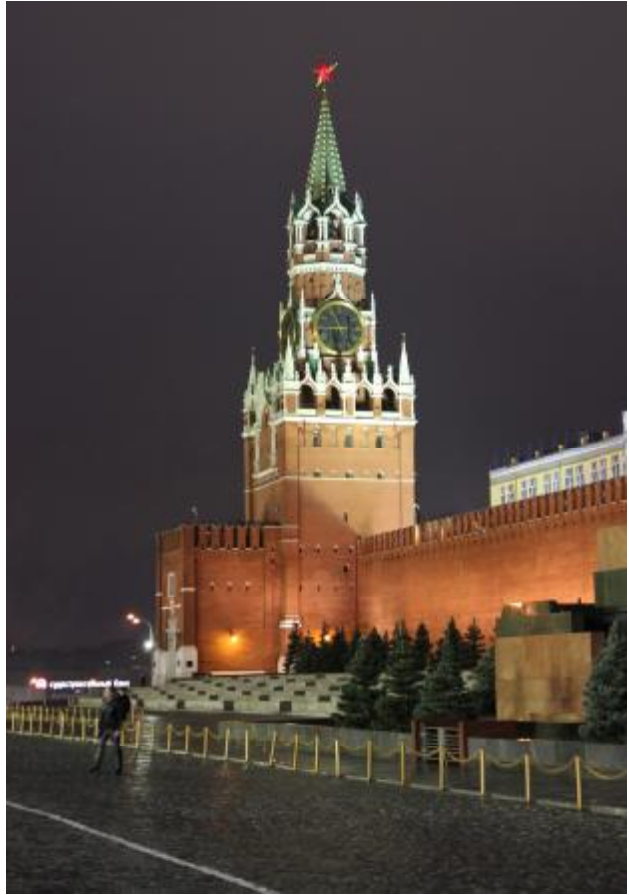


**March, 22**

SPIE Student chapter of General Physics Department organized demonstrations of various optical phenomena for schoolchildren from Secondary Schools.

It permitted to concentrate their attention on scientific and educational problems and to provide solving of different questions, to learn more about experimental research in Optics.

**April, 9-13** The participation of Members of TNU SPIE Chapter in International Conference “Lomonosov 2012” for Young Scientists and Students in Moscow, Russia.



**April, 21,** Project “Open Doors” started. The Meeting was focused on the field of optics and Laser Physics. Support the exchange of information practical experience between our members of SPIE Student Chapter and schoolchildren, students by means of workshop organization. As result, we obtain basically new type of relationships and educational process in University.



**April, 25,** We hosted a Professor Roberto Morandotti from Canada. As a visiting lecturer, he told us about his investigation on “Nonlinear frequency conversion in integrated devices” During the lecture we were learning about new possibilities and construction decisions for obtaining of nonlinear effects for frequency conversion. Also Prof. Morandotti spoke with students about novel investigations in Optics and Photonics, and



promising directions of engineering development.





**May, 1**

SPIE Student Chapter participated in scientific Exhibition which took part in Taurida National University. The most important achievements of General Physics Department were shown here.



## Upcoming Events



In September 12 – 16 our Chapter will organize The 5-th International Conference “Singular Optics 2012” (Sebastopol, Ukraine) and International Meeting on Optics and optical Engineering ([ooe.singular-optic.org](http://ooe.singular-optic.org)) for students and young researches. The goal of this meeting is to present and to discuss recent and future technologies on Optics and Technology, taking into attention most interesting branches of Optics development and innovative technologies. The possibilities, the results obtained so far, and new ideas will be discussed in detail.

***More than 200 presentations highlighting the latest research:***

- Imaging, Visualization, and Perception
- Lasers, Sources and Related Photonic Devices
- Advanced Optical Manufacturing Technologies
- Sensing Technologies

- Fundamentals and Applications of Optics
- Singular optics technique and metrology
- Fiber Laser Applications
- Photonics and Applications
- Advances in Laser Technology
- Generation of optical singularities

**At this time, there are 20 students listed in our SPIE Student Chapter.  
List of all current student members of SPIE Student Chapter of Taurida  
National V.I. Vernadsky University:**

<b>Name</b>	<b>Expires</b>
Rodion Alexandrov	9 March 2013
Igor Androsov	9 March 2013
Pavel Anishchenko	13 December 2012
Yulia Aralova	9 March 2013
Denis Avramenko	9 March 2013
Yuri Forys	9 March 2013
Alexey Golovin	9 March 2013
Artyom Gulyaev	9 March 2013
Maxim Ivanov	9 March 2013
Dmitry Kavatcenko	19 January 2013
Viktor Konovalenko	9 March 2013
Maria Kudryavtseva	9 March 2013
Kemal Minabilov	9 March 2013
Anna Prokopchuk	9 March 2013
Khrystyna Shvedova	9 March 2013
Bohdan Sokolenko	6 December 2012
Zera Suleymanova	9 March 2013
Eugeny Tonevitsky	18 March 2013
Alexander Zagrebelny	9 March 2013
Alexey Zinov'ev	9 March 2013
Rodion Alexandrov	9 March 2013

**Financial Information**

SPIE provides funding to our Student Chapter in 2011.  
In 2011 we got Activity grant (900 dollars)

**List of expenses associated with projects.**

Purchase of hosting for TNU SPIE Chapter Site.....	\$60
DVD disks with scientific movies and SPIE Logo for schoolchildren.....	\$100
Printing of event program and short information articles for each participant.....	\$125
Equipment (rent of hall for lectures and seminars, laptops, LCD projectors).....	\$100
Souvenirs for all participants with SPIE Logo.....	\$45
Purchase of demonstration materials and expendables (LED laser pointers, Lenses).....	\$55
Preparing informative posters, flyers and advertising material.....	\$145
Printing of colour informative materials, broadsheets with SPIE Logo.....	\$160
Conference fees (for two participants on SPO-2011, Kyiv).....	\$100
<b>Total.....</b>	<b>\$900</b>
<b>Balance on May, 2012.....</b>	<b>\$0</b>