

SEMIANNUAL REPORT

(May-December, 2006)

TAURIDA NATIONAL V.VERNADSKY UNIVERSITY SPIE STUDENT CHAPTER

Adviser: Prof. Alexander Volyar
volyar@crimea.edu

Current Chapter officers:

President: Yana Izdebskaya
yana-simfer@yandex.ru

Vice President: Alexander Rubass
optical-vortex@narod.ru

Secretary: Nataliya Shostka
nataliya_shostka@mail.ru

Treasurer: Vyacheslav Mikhaylov
svartanian@mail.ru



Vyacheslav Mikhaylov (the treasurer), Kirilo Kotlyarov (SPIE member), is Prof. Alexander Volyar (the chapter advisor), Yana Izdebs'ka (the president), Aleksandr Rybas (the vice-president), Nataliya Shostka (the secretary).

	Customer ID	Name	Email	DuesPaidThru
1	684219	Izdebskaya, Yana Miss	yana-simfer@yandex.ru	03/31/2008
2	769556	Rubass, Alexander Mr.	optical-vortex@narod.ru	02/28/2008
3	827729	Ostovskiy, Ivan Mr.	ostovskiy@yandex.ru	03/31/2007
4	895248	Lagunov, Sergey Mr.	serega@menja.net	08/31/2007
5	3024916	Solodovnichenko, Dmitry Mr.	dsolod@yandex.ru	03/31/2008
6	3024931	Kachin, Yaroslav Mr.	mc-acetone@yandex.ru	03/31/2007
7	3024933	Hablenko, Sergey Mr.	hablenko@inbox.ru	03/31/2008
8	3024942	Shmelev, Dmitry Mr.	dmsmelev@yandex.ru	03/31/2008
9	3024943	Mavlutalieva, Luiza Ms.	mavlutalieva@mail.ru	03/31/2008

10	3024985	Romanova, Anna Ms.	romanova_05@bk.ru	03/31/2007
11	3059872	Shostka, Nataliya Miss	nataliya_shostka@mail.ru	12/31/2007
12	3059873	Semuk, Yevheniy Mr.	hunterspin@ukr.net	12/31/2007
13	3059875	Kotlyarov, Kirilo Mr.	k_kotlyarov@mail.ru	12/31/2007
14	-	Vyacheslav Mikhaylov	svartanian@mail.ru	01/31/2007
15	-	Sorokin, Arsenij Mr.	transhuman@ua.fm	31/05/2007
16	-	Markova Lidiya, Miss	markova_lida@mail.ru	01/31/2007



CHAPTER ACTIVITIES:

1) 26, June 2006

SPIE TNVU Students (Mr. Rubass Alexander, Mr. Kirilo Kotlyarov, Mr. Vyacheslav Mikhaylov, Miss Yana Izdebskaya) took part in **Young Researchers Career Development Workshop (YRCDW)**. It was held as a satellite meeting to the Electromagnetics and Photonics Week in Kharkov, Ukraine, on **June 26, 2006**. The event was organized by V. Karazin Kharkov National University (KNU) OSA Student Chapter and the Institute of Radiophysics & Electronics Young Scientists Council (IRE YSC) in cooperation with several other Ukrainian and overseas student chapters of international professional societies: *Taurida National V. Vernadsky University SPIE Student Chapters (Simferopol, Ukraine)*, *Taras Shevchenko National University of Kyiv SPIE Student Chapters (Kyiv, Ukraine)*, *Australian National University Student Chapter (Canberra, Australia)*, *Student Chapter (Norfolk, Virginia, USA)*.



Members of the participating Student Chapters from Kharkov, Kiev and Simferopol during coffee-break.



Workshop participants during the lectures.



2) June 29 – July 1, 2006

Ph.D. students (Alexander Rubass, Yana Izdebskaya) took part in the **8th International Conference On "Laser And Fiber-Optical Networks Modeling"** held in Kharkiv, Ukraine, June 29 – July 1, 2006. They gave their talks at this conference.



Chapter president Yana Izdebskaya to giving talk in LFNM'2006.

3) August, 2006

Nataliya Shostka took part in “Optics and Photonics 2006” conference in San Diego, California, USA due to SPIE financial support. She participated in the exhibition with the poster presentation on the activity of SPIE TNVU Student Chapter.



Nataliya Shostka for Leadership day in San Diego.

4) September 12, 2006

Our students created and demonstrated of two educational movies: “**Optical catastrophes**” and “**Vortices in nature and technology**” for foreign visitors of Taurida National V.Vernadsky University. The movies are multicolored and rich of bright pictures of nature and artificial optical phenomenons. We showed that the world of the superconductivity is a number of surprising mysterious processes. Nevertheless, many of them have much to do with the optical ones; in particular, we showed that optical vortices looked like an atmospheric swirl - the tornado.



Foreign visitors of TNVU Physical Faculty on the presentation our movies

Some picture area of our movies

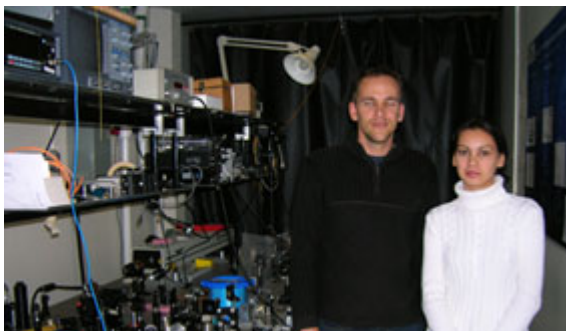
5) October 3-6, 2006

The visit of SPIE Student chapter Ecole Polytechnique de Montreal University and SPIE Student chapter Laval University.

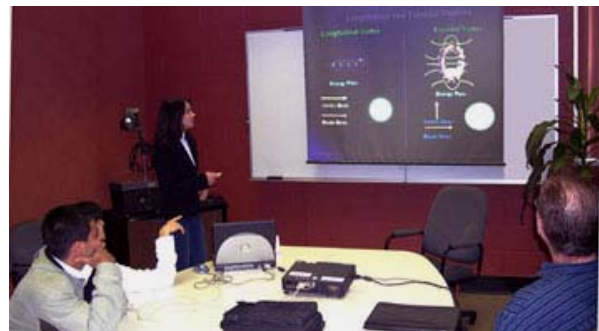
Yana Izdyebs'ka as leader of SPIE Student Chapter had got the invitation from Francois Busque, the President of Ecole Polytechnique de Montreal University to visit their SPIE Student Chapter on October 3-6, 2006. The purpose of this trip was to learn more about the research being conducted at Fiber Optics Laboratories in Ecole Polytechnique de Montreal (Montreal , Quebec, Canada) and Laval University (Quebec City, Quebec, Canada). Moreover, she gave the talk "Optical Vortices" about nature and artificial vortices and demonstrated well known and new researches of students of her chapter and herself. Also she talked about the trapping and transportation of microparticles by optical vortices generated by computer-generated holograms, optical wedges and crystals. Next, she visited the laboratories of Engineering Physics Department. Dr. Nicolas Godbout demonstrated equipment and talked about researches of his scientific group.

It was a great opportunity for the communication of leaders of different chapters and discussed about some problems and proposes both.

Then there was the trip to SPIE Student chapter of Laval University in Quebec. She with Dominic Faucher, SPIE member, visited Faculty of Sciences and Engineering and some laboratories of fiber optics group in Laval University.



Domenic Faucher and Yana Izdyebs'ka in the laboratory in Laval University



Yana Izdyebska's talk "Optical vortices" in Ecole Polytechnique de Montreal University

So, this trip reinforced cooperation between three SPIE Student chapters: Ecole Polytechnique de Montreal University Student Chapter, Laval University Student Chapter and Taurida National V.Vernadsky University Student chapter.

6) October, 2006

Participation in Laser Science and FiO held in Rochester, New York, USA, October 8-12, 2006 (Yana Izdebskaya).



Mr. Eric Van Stryland, the OSA president and Miss Yana Izdebskaya



Students at International conference "Laser Science and FiO" in Rochester, USA



The demonstrations of physical processes by Boris Zel'dovich in FiO



The visit of students of the planetarium in Rochester

7) September-December, 2006

This semester the student chapter participated in the following seminars:

June, 12th

Subject: “Polariton Vortices in a Transparent Medium”

Speaker: Dr. Igor Dzedolik, Ukraine

September, 6th

Subject: “The Problem of Electromagnetic Constants in Relaxed Optics”

Speaker: Dr. Alexander Bikov, Ukraine

November, 8th

Subject: “Influence of Laser Breakdown Area Time Evolution on Acoustic”

Speaker: Dr. Vladlen Shvedov, Ukraine

December, 12th

Subject: “Modeling of The Fiber-Optical Water Salinity Sensor”

Speaker: Dr. Vladimir Shostka, Ukraine.

7) Financial Information:

We received 700 dollars for chapter funding which we spend during the 6th Young Scientist Conference “Singular and Nonlinear Optics” which was place in Simferopol, Ukraine, on 17-22 April, 2006. This conference program included invited, oral and poster presentations on the two sections: “Laser and application”, “Nonlinear optics”. Students of our Chapter, students of other departments of TNU, young scientists (k/b”Domain”), students of the Sevastopol National Technical University and students of other high schools and Institutes of Ukraine took part in our Conference on Singular and Nonlinear Optics.

The SPIE Leadership Travel Grant of 1,250 dollars was obtained for Nataliya V. Shostka to attend the 51th SPIE Annual Meeting on 13-17 August 2006, San Diego,CA,USA.

The SPIE's Student Travel Contingency Grant of 250 dollars was obtained for Yana V. Izdebskaya to attend the conference “Photonics Europe” on 03-09 April, 2006 in Strasbourg, France and the SPIE Educational Scholarship in Optical Science and Engineering for educational expenses.

SPIE membership opened doors to all sorts of creativity for us: attending conferences, opportunity to take some short courses, organizing meetings with top scientists, visiting companies and universities, access to scientific books, etc. This stimulates us to do more and even better research and present our researches on conferences in order to be competitive with the very best scholars in optics and engineering all around the world. We are grateful to SPIE for help in subscription of a very important press and help in realization of our goals.