



# SPIE STUDENT CHAPTER of NATIONAL TECHNICAL UNIVERSITY OF UKRAINE "KIEV POLYTECHNIC INSTITUTE"

## Annual Report of activity in 2007

The goal of the SPIE student chapter is to involve student into activity in optics and photonics. Now the chapter activity is classified in 2 groups. The first one is when students do thing by their own hands: research, measurements, prototypes of instruments and systems, writing software and etc. The second one is when students participate in conferences, meetings and presentations organized be SPIE officers and professors. We put special attention to the first group activity as the most efficient way for SPIE mission. But the second group is also important for introduction of SPIE mission to students.

The first group of activity:

1. The SPIE student chapter WEB-site made and launched by students at [spie.ntu-kpi.kiev.ua](http://spie.ntu-kpi.kiev.ua). This site contains the detailed information about SPIE chapter members.
2. The students have organized by themselves a student section at the international conference "Instrument-making-2007". More than 10 students have presented their research, instruments or sensors at this section.
3. More than 10 student projects have been realized in form of working instruments, sensors, electro- optical systems and funny devices (see [spie.ntu-kpi.kiev.ua](http://spie.ntu-kpi.kiev.ua)).
4. Three student projects have been realized in form of the good software for optical calculations and image processing.
5. Oleksandr Muzichko has presented the system for measurement of LED illumination distribution in 3D space and the international conference "Optics and Photonics-2007".
6. The SPIE chapter team has won the third place (the second place in optical blitz- tour) at the Russian optical concourse "Optotetchica Olympiade-2008".

The second group of activity:

1. Organized lectures read by the leading scientists and engineers form "Arsenal" and "Kvant" optical companies. These lectures devoted to the perspectives of optical engineering in Ukraine.
2. Organized a SPIE lab where all books and SPIE proceedings assembled. All students have free access to these materials.
3. Participating in the scientific conferences - "Optics and high technology material science-2007" and "Instrument-making 2007" in Kiev, Ukraine.

4. On the constant base demonstration of video-courses using SPIE educational materials and materials of the National Technical University of Ukraine (see [ftp://public.ntu-kpi.kiev.ua/pub/video/2007\\_02\\_Optics\\_and\\_atomic\\_physics/](ftp://public.ntu-kpi.kiev.ua/pub/video/2007_02_Optics_and_atomic_physics/)).
5. Organization of visiting the 12 biggest Ukrainian exhibitions such as “Saloon of Optics-2007”, “Machinebuilding-2007”, “EnterX-2007”, “Illuminations-2007”, “Security-2007”, “Medical equipment-2007”, “Digital world-2007”, “Weapon & Defence-2007”, “Automatization-2007”, “Laboratory equipment-2007” and etc.
6. Organization of meetings of the SPIE student chapter on regular base.

It has to point out that SPIE grants played the very important role for the above-mentioned activity. The SPIE travel grant made possible the visit of Oleksandr Muzichko to “Optics and Photonics-2007” for presentation of its working precision instruments. The SPIE grant received in 2006 that had used for purchasing detectors, step motors, microcontrollers, CCD cameras and optical components made possible complicated student projects mentioned above and future ones.

Unfortunately, according with Ukrainian law the SPIE student chapter can not be registered as subject of financial activity such as collecting payments or funding, open bank account or transferring money. Only university faculties have this possibility at our university. It means that SPIE chapter officially can not operate with money and compose any financial balance. The payment of membership or other fees and receiving grant is possible only for individuals.

SPIE information support in form of news letters, invitations to the conference, exchange experience in SPIE chapter building and personal communications with SPIE officers help us in our activity very much.

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Dr., associated professor*

*Volodymyr Borovytsky*

*President of the SPIE Student Chapter  
at the National Technical University*

*Oleksandr Muzichko*



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## **Plan of activity in 2008**

In 2008 the efforts of SPIE student chapter will be concentrated on the first group of activity. It means to increase the number of student projects with covering much more fields in photonics – research, design and testing of optical instruments, optical component characterization and writing optical software and attempts to make videos about optical phenomenon. The second group would be enforced by possibility to see materials and to see working devices made by students at SPIE lab.

1. Support of student projects and research devoted to optics, photonics and imaging.
2. Participating in scientific conferences, in particular in student section of the “Instrument-making - 2008” conference. The best student work will be recommended for SPIE travel grant application.
3. Visiting the exhibitions devoted to optics, photonics, digital imaging. Organization of the lectures, discussions and presentation with leading scientists and engineers on the constant base.
4. Modernization of SPIE student WEB site as the engine where is accumulated the useful information about realized and potential student works in optics and photonics.
5. Organization of SPIE chapter student meetings and presentations on the constant base.

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