



SPIE Student Chapter at Ivan Franko National University of Lviv



Annual Report May 2005-May 2006

Name of Chapter:

SPIE Student Chapter at Ivan Franko Lviv National University

Person Completing Form/Contact:

Rostyslav O. Bilyy, Chapter President

E-mail: bilyy@txnet.com

Number of members: 32

Chapter Officers elected for the next Academic year:

President: Rostyslav Bilyy bilyy@txnet.com

Vice President: Ivanna Yarynovska ivanka_82@rambler.ru

Secretary: Bohdan Tsop tsop_87@yahoo.com

Treasurer: Cristina Mayor c_mayor@ukr.net

Chapter activities:

1. Establishing the Chapter – organizing a workplace and meeting place for Chapter students. Formation of some shared informational recourses, both electronic and printed. Organization of cooperation between students in the Chapter, etc.
2. Development of Chapter's web-site: <http://www.electronics.wups.lviv.ua:8102/stchapter>
Support of the site. (Due to some specific port-readdressing by our University, some firewalls can block the site; some SPIE firewalls do, we hope to solve this in future).
3. Organizing the visit (in cooperation with Institute for Condensed Matter Physics) of SPIE President, Prof. Malgorzata Kujawinska to Lviv. Meeting with SPIE President and SPIE delegation. A lecture of Prof. Kujawinska "Cooperation and Networking Opportunities through SPIE - The International Society of Optical Engineering". See details at the end of report.
4. During this year our chapter was very successful in receiving SPIE grants and support:
 - ✓ 2006 SPIE Grant awarded to our Chapter
 - ✓ SPIE 2006 Scholarship awarded to Rosyslav Bilyy – Chapter President
 - ✓ SPIE Student Travel Contingency Grant awarded to Ivanna Yarynovska – Chapter Vice President
5. Chapter President, Rostyslav Bilyy, has presented an Invited Internet lecture at [Saratov Fall Meeting](#) (International School for Junior Scientists and Students on Optics, Laser Physics and Biophysics). The lecture is available here: <http://optics.sgu.ru/SFM/2005/internet/bilyy/> (~3Mb).
6. Participation in the SPIE Annual Meeting and Optics and Photonics Conference - 2005 in San Diego. Presentation of the Chapter - leaflets describing the Chapter.
7. Chapter Vice, President Ivanna Yarynovska, presented a poster during BIOS-2006 in San Jose, CA.
8. Chapter Bulletin Board was established and is constantly renewed.
9. Members – 12 new members in January 2006. Most of them 1st and 2nd year students. We expect new members soon.

10. Meetings with the students of Ivan Franko Lviv National University, Lviv Polytechnic University and Lviv Medical University with the aim to promote SPIE activities (Sep 27).
11. During reporting period there were 11 Chapter meeting. The meetings are usually arranged last Thursday of the month (regular), additional meetings are arranged when needed.
12. Publications of Chapter members:

- R.O. Bilyy, A.I. Bilyi, V.B.Getman, Yu.Ya. Kit, Ch.Ya. Mayor, V.O. Antonyuk, R.S. Stoika. Some new approaches to the detection of programmed cell death / **Proceedings of SPIE**, 2006, V. 6163-50., SFM-05, in press.
- R.S. Stoika, R.O. Bilyy, V.O. Antonyuk. Agglutination-based method for fast detection, isolation and quantification of apoptotic cells. **US Patent Application**, 67789-368.
- I.H. Yarynovska, A.I. Bilyi. Absorption spectra of sulfhemoglobin derivates of human blood. **Proceedings of SPIE**, 6094, 60940G (2006)
- R. Bilyy, Yu. Kit, U. Hellman, V. Tryndyak, V. Kaminsky, R. Stoika. In vivo expression and characteristics of novel α -D-mannose-rich glycoprotein markers of apoptotic cells / **Cell Biology International**, 2005. V. 29(11). P. 920-928
- R.O. Bilyy, A.I. Bilyi, V.B.Getman, Yu.Ya. Kit, V.O. Antonyuk, R.S. Stoika, some new approaches to the detection of programmed cell death. / Saratov Fall Meeting, SFM'05, International School for Junior Scientists and Students on Optics, Laser Physics and Biophysics, September 27-30, 2005, Saratov, Russia. **Internet Invited Lecture**.
- R.O. Bilyy, Yu.Ya. Kit, U. Hellman, R.S. Stoika, Mannose-rich glycoproteins - novel early markers of apoptotic cells: *in vivo* characteristics. 40th Meeting of the Polish Biochemical Society. Lublin, Poland, 19-23.09.2005, Acta biochimica polonica: v. 52 Sup. 1, 2005, p. 128. Poster presentation.
- Bilyy R.O., Kit Yu.Ya., Antonyuk V.O., Stoika R.S. Characteristics of specific membrane receptors of apoptotic cells. 5th Parnas Conferene. Kyiv, Ukraine, 26-29.04.2005, The Ukrainian Biochemical Journal: V. 77 (2), 2005, p. 96. Poster presentation.
- Drobchak Z.D., Drobchak O.Z. Simple method of sound measurement / Scientific-methodological digest on problems of physics learning.-Drohobych: Kolo, 2005-p.20-21
- Drobchak O.Z., Drozd G.E. The elements of physical interaction model / Scientific-methodological digest on problems of physics learning.-Drohobych: Kolo, 2005-p.12-15
- Dmytruk V., Kotsan J. Luminescence of $Pb_2Bi_6O_{11}$ ceramics /Heureka 2005. optics and Spectroscopy, P. 41-42.
- Bilyi O.I, Bordun O.M., Yarynovska I.G. Luminescent spectroscopy of dry urine tailings. / The sevent international conference "Correlation Optics 2005", Chernivtsi, Ukraine. September 6-9 2005.
- Bilyi O.I, Yarynovska I.G. Optical spectra of sulfhemoglobin derivates in human blood. / 6 International young scientists conference "Optics & High Technology Material Science SPO 2005". Abstracts - Ukraine, 27- 30 october 2005. Kyiv. – P. 56.

Other presentation in the conferences:

- ✓ IEP-2005, Uzhhorod, Ukraine, 18-20 May 2005 (poster presentation, Yarynovska I.)

- ✓ V-th Conference of Young Scientists in Chariv, Institute of Radiophysics and Electronics NAS of Ukraine, 14-16 December (poster presentation, Yarynovska I.)
- ✓ "[Optics and High Technology Material Science SPO 2005](#)" in Kyiv, Ukraine, October 2005.

Planned future activities:

1. In frames of Visiting Lecturer Program to organize a visit of [Prof. Tuchin](#) (Saratov, Russia) in 2006. It is planned that Prof. Tuchin will read a lecture "Biophotonics studies in Saratov State University" and short course "Tissue Optics and Controlling of Tissue and Blood Optical Properties". The visit was planned and arranged for April 2006, but at the last moment it was canceled because of the incident in Prof. Tuchin's family. We are sorry of this.
2. Chapter Advisor is going to prepare and read a course "Physical principles of biomedical optics for clinical diagnostics".
3. 2006 SPIE Chapter Grant and of 2006 Chapter Activity Grants will be partly used for purchasing computer equipment and presentation materials. Database of available in the Chapter electronic materials (SPIE papers, etc) will be developed.
2. Promotion of SPIE activities among 1st and 2nd year students.



During Chapter Meeting: Savaryn Victoria, Kobryn, Lesja, Rostyslav Bilyy, Levosyuk Lyuba, Yarynovska Ivanna (with SPIE Award Certificate), Partyka Maryan and Tsop Bogdan

Prof. Malgorzata Kujawinska, SPIE President in 2005, visited our Chapter!

SPIE delegation of 2005 SPIE President, Prof. Malgorzata Kujawinska, Prof. Pawel Kujawinski, Prof. Pierre Chavel, and Prof. Natalia Golnik has visited an ancient city of Lviv during the trip to the Conference on Correlation optics in Chernivtci, Ukraine.



SPIE Delegation at Rynok Square - the heart of Lviv, most of buildings here were built in 15-17th centuries.



Main building of Ivan Franko Lviv National University - The oldest university in Ukraine, founded 1661





The SPIE delegation arrived to Lviv in Sunday, September 4, 2005. The shiny summer whether was perfect for a city tour. A city of Lviv was founded in 1256, and has a long history, so there are lots of interesting places to see.



During the second day of the visit Prof. Kujawska has an exalted lecture "Cooperation and Networking Opportunities through SPIE - The International Society of Optical Engineering".





The lecture took place in the Large Astronomical Auditorium at the faculty of physics. And the Auditorium was almost full of interested students. The lecture was in English and was translated by the President of Student Chapter - Rostyslav Bilyi into Ukrainian.

After the lecture Prof. Kujawinska visited the office of SPIE Student Chapter at Ivan Franko National University of Lviv, Ukraine. During this short time we students of the Chapter) described our main activities. Dean of the Faculty of Electronics and Chapter advisor - Dr. Alexander Bilyi described scientific work of the Department of Physical and Biomedical Electronics.



Financial information:

Beginning balance - \$0.

Funds obtained from SPIE - \$900.

Funds expended: \$900

Details:

	\$
Computer equipment:	
HDD Hitachi 160 gb	110
DVD-RW Drive LG	75
Printer Samsung 1710P	162
scanner Mustek 2448 CU Plus	68
Deveopment, hosting and support of Chapter's web-site	200
Participation in the conferences by Chapter members	200
Establishing of Chapter Bulletin Board	65
Other expenses:	20
Total	900

Ending balance - \$0.