Annual report of Wroclaw University of Technology SPIE Student Chapter for the year 2010

I. Officers elected in the beginning of November 2010:

<table>
<thead>
<tr>
<th>Function</th>
<th>Name</th>
<th>SPIE ID</th>
<th>e-mail address</th>
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<tbody>
<tr>
<td>President</td>
<td>Igor Buzalewicz</td>
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<td>Vice-President</td>
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<td>Secretary</td>
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<tr>
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Advisor of our Chapter is prof. Waclaw Urbanczyk (waclaw.urbanczyk@pwr.wroc.pl)

II. List of Student Chapter members

1. Alicja Anuszkiewicz  
2. Igor Buzalewicz  
3. Monika Danielewska  
4. Agnieszka Jóźwik  
5. Katarzyna Kowal  
6. Małgorzata Kowalska  
7. Piotr Kowalski  
8. Wojciech Kordas  
9. Anna Maciejewska  
10. Maciej Napiórkowski  
11. Joanna Pucińska  
12. Agnieszka Suchwalko  
13. Marcin Szczyrowski  
14. Karol Tarnowski  
15. Remigiusz Wilmont  
16. Paweł Woźniak  
17. Rami Zakaria  
18. Adrian Zakrzewski

Total student members (state for the 9th December): 18
III. Details of Chapter Activities

1) SPIE Annual Meeting in San Diego 2010

The former president of our chapter – Alicja Anuszkiewicz has got the travel grant and represented our chapter at the last SPIE annual meeting in San Diego. She also has given an oral presentation “Rocking filter in microstructured birefringent fiber for hydrostatic pressure measurements” on Optics & Photonics 2010. It was a great experience for her. She has met many interesting people there, learned much about other Chapters activities and possibilities of improving chapter management as well as interchanged experience. We hope that these contacts will be promising for our chapter in the future.

2) Student Recruitment (Student Activity Days)

In last year our chapter was involved in recruiting new members. As in previous year our SPIE Chapter jointly with OSA Student Chapter participate in Student Activity Days organized by our University. In 2010 this event was in March and May.

This meeting has bilateral advantages: it gives Students the opportunity to knew and learn more about students organizations, their activities as well as young scientists to present their Organizations. Member of our Chapter participated in this event, because this was a good way to promote SPIE organization as well as Photonics and Optics for wide audience of Students from different Faculties and Universities from Wroclaw. As a
result of our participation the several new members joined to our Chapter. We prepared posters, brochures and other promotion materials about SPIE, SPIE Membership and our Chapter activities.

3) Student Activity Forum

In last year in March two our Members participated in Student Activity Forum. It took place in Szlarska Poreba, near the Wroclaw City. This meeting gathered many different Students Organizations from the Wroclaw to present their activity and discuss the most common problem with students organization management. Our chapter took this opportunity to present our activities, promote SPIE and SPIE founding grants.

4) Terrific Telescopes

Our Student Chapter (jointly with OSA Student Chapter) prepared new school demonstration about optical telescopes, which combines short theoretical introduction about refraction, reflection, optical lenses, major concepts of reflective and refractive telescopes as well as practical exercises including: finding the converging lenses focal length, presentation of simple magnifiers, building the refractive telescope and measuring its resolution. The first demonstration held in 11 March 2010 in one of the Wroclaw Secondary Schools. Our Group used a “Terrific telescopes” Kit based on Hands – On Optics Program, which is an educational collaboration of OSA, SPIE and NOAO, to teach over forty students fundamental principles of Optics, show them practical implementation of this theoretical concepts and perform experimental activities.

Such programs are the main interest of our Group, since we understand how important is to encourage young people to explore amazing world of Optics, help them in evolving
their knowledge and abilities as well as share enthusiasm of our work in field of Optics. Currently we attach this activity to our standard scientific programs for students.

5) Festival of Science

Every year Wroclaw University of Technology organizes Festival of Science. Students from our chapter are strongly involved in this event, which takes place at our University but also in primary and high schools. Our colleague Alicja Anuszkiewicz have presented there lecture “Optical Fibers of the Future”. Several Members (M. Kowalska, M. Danielewska, I. Buzalewicz, M. Sobon – Lewandowska, M. Napiorkowski etc.) presented demonstrations about “Magic Physics and Optics”, “Liquid Crystals” and “Terrific Telescopes” for students of primary and high schools from Wroclaw and surrounding. In our lecture and demonstrations participate more than 300 of Students.
6) XVIII popular science lectures for primary and high school students

During the XVIII popular science lectures our Members: M. Kowalska, W. Kordas and M. Danielewska prepared the lecture with practical demonstrations how to measure CD capacity by laser pointer. These series of lectures was directed to the students from primary and high schools.

7) 5th International Student Chapters Meeting and Opto –Meeting for Young Researchers

The biggest event that we have participated and partially organized in 2010 was the 5th International SPIE Students’ Chapters Meeting. This event took place at Nicolaus Copernicus University in Toruń (Poland) on May 12-15, 2010. Organizers of this meeting were students and PhD students from OSA and SPIE Chapters in Torun and in Wroclaw. The goal of the meeting was to exchange scientific experience by young researchers, moreover the participants came from Romania, Ukraine, Russia, Germany, France, India, China, France, Taiwan, Pakistan and Poland. During the conference, participants had the opportunity to listen to professional scientists, including for example:

- a OSA invited lecturer: Joanna Schmit. (University of Arizona, US),
- a SPIE invited lecturer: Jean-Luc Doumont,
- Konrad Banaszek (Warsaw University, Poland),
- Ireneusz Grulkowski (Nicolaus Copernicus University, Poland),
- Małgorzata Kujawinska (Warsaw University of Technology, Poland),
- Waclaw Urbanczyk (Wroclaw University of Technology, Poland),

Moreover the 28 students presented their lectures in eight technical sessions. One sessions was focused on SPIE and OSA chapter activities with a special online guest: Dirk Fabian from SPIE. He gave a short talk about Networking for Scientists. Several Members of our Chapter presented there results of their scientific researches. Our Collaborative grant was totally allocated to the Nicolaus Copernicus University SPIE Student Chapter for organization of this Conference.
8) Co-organization of other Conferences

We co-organized the International Students Workshop on Laser Application – ISWLA 2010 at Institute for Atomic Physics SPIE Student Chapter and INFPLR OSA Student Chapter, which will held in 25-28 May in Bran (ROMANIA). The major topics of this Conference were:

- Extreme Light Infrastructure
- Micro- and nano-technologies
- Advanced Materials (meta- and nano-materials)
- Lasers in life sciences
- Medical applications
- Lasers in Environment Research
- Laser measurements and control

9) Participations in other Scientific Conferences

Students from SPIE Student Chapter participated in different Students Conferences as well as in Professional Conferences. For example:


- On Optics and High Technology Material Science International Young Scientists Conference in Kijow (21-24 September 2010, Ukraine) our colleague Joanna Pucinska presented “Silver-doped silica nanoparticles increase the fluorescence intensity of photosensitizer”.

- On International Student Workshop on Laser Applications, 25-28 May 2010, Bran (Romania) two our Members presented results of their
research: Joanna Pucinska “Application of silver-doped nanomaterials for enhancing the efficiency of photodynamic diagnosis” and Wojciech Kordas: “Analysis of in-plane rotational dynamics for photoisomerisable (DCM) and nonphotoisomerisable (NR) molecules in PMA matrix”.

• On Frontiers in Optics in Rochester (24-28 October, NY, USA) our member Igor Buzalewicz presented results of his research: “Optical sensing of bacteria by means of light diffraction”.

If the food during the Conferences was not provided by Organizers, Our Chapter refunded some part of this costs.

10) Publications

Students from SPIE Student Chapter are strongly involved in scientific life of Wroclaw University of Technology. In 2010 few scientific papers have been published in most recognized optical journals.

IV. Details of planned activities for the future

• Magic of Physics:
  We would like to continue this program and add new activities for primary and high schools. We also want to buy some new equipment.

• Optical Suitcase
  We are planning to visit the primary and high schools with Optical Suitcase program from university of Rochester.

• Liquid Crystal lessons
  We are going to continue this project and offer a lecture for more schools.

• Terrific Telescopes
  We are going to continue this project and offer a lecture for more schools.

• We would like to prepare and print small brochures about all programs.

• We would like to prepare T-shirts and bags with our Chapter logo.

• Co-organization of 6th Student Chapters Meeting
  Once more the next meeting will take place in Torun, at Nicholas Copernicus University. Again we want to help SPIE Student Chapter from Torun in organization of this event.

• Promotion of the University
  We are going to promote our Faculty and SPIE Chapter. To do so we are planning to give some popular science lectures in the high schools

• Participating in the SPIE Annual Meeting

• Refunding some of the costs of food for our Members participating in Students Conferences.

• Participating in Forum of Students Activity
  We would like to present our achievements at meeting of scientific circles of Wroclaw University of Technology
V. Financial information

Beginning balance: 
*266,1 $ (3 December 2009)*

Funds raised: 
+ 700 $ (Chapter Activity Grant 2010)
= + 966,1 $

Funds expended: 
-104,20 $ (Printing of posters for Members participating in Students Conferences)
-205,40 $ (Printing of posters, brochures and promotion material about SPIE and our Chapter)
-420,40 $ (Refunding the costs of food for students representing our Chapter on conferences)
-182,85 $ (Foods served during our scientific seminars)
-53,25 $ (Materials for our demonstrations in schools: color filters, polarizing laminated films etc.)
= -966,1 $

Ending balance 966,1-966,1 = 0,00 $

Details of SPIE funding received: 
Officer Travel Grant
Chapter Activity Grant

Other sources: None