SPIE. STUDENT CHAPTER
Czech Technical University in Prague

Annual report 2016

Officers (2016)

Adviser: Ladislav Pina
President: Viktoria Nefedova
Vice-President: Martina Zakova
Secretary: Karel Bohacek
Treasurer: Jiri Vyskocil

Current Chapter Members

Martin Albrecht, Karel Bohacek, Filip Grepl, Vojtech Horny, Petr Janout, Martin Jirka, Michal Kamradek, Tomas Kerepecky, Ragava Lokasani, Martin Matys, Viktoria Nefedova, Tomas Nemecek, Jan Vabek, Jiri Vyskocil, Martina Zakova

Introduction

The student chapter of Czech Technical University in Prague was established on 19th February 2016 by Ph.D. students of the Department of Physical Electronics and the Department of Physics of the Faculty of Nuclear Sciences and Physical Engineering as an ongoing effort to motivate the student community, show benefits of graduate and postgraduate programmes at the university and to . The members are invited to participate in events to popularize science among students and the general public, and to share their knowledge and experience with others.

Chapter Activities

8th March 2016 - Chapter officers election
A meeting of all chapter members was held to elect the first officers of the newly established student chapter. The duties of all officer positions were discussed. The election took place and the new officers began their term.
20th October 2016 - First Student Chapter Seminar
The first seminar was held at the university. An introduction to the student chapter was done by the president, Viktoria Nefedova, for new members of the chapter. Two presentations were done in order to deepen physics knowledge and to practice presenting skills of our members. The first presentation was done by Viktoria Nefedova on “High-order harmonics generation at PALS and ELI Beamlines”, followed by the second presentation by Vojtech Horny on “Numerical study of the temporal profile of the betatron radiation pulse in the wiggler regime”.

9th November 2016 - Second Student Chapter Seminar
The second seminar was held, where future plans were discussed. Two talks were given by Filip Grepl and Jiri Vyskocil.
14th December 2016 - Third Student Chapter Seminar + Christmas party
The last seminar of the year was held before the holidays. A presentation was done by Jan Vabek and teambuilding activities were discussed. Christmas party followed after the seminar in order to get into the holiday spirit.

October 2016 - February 2017 - Science classes at local elementary school
Members of our SPIE Student Chapter taught 12 science classes in total at the local elementary school in order to popularize science among children.

In October 2016, Jiri Vyskocil taught four science classes. During these classes, he performed experiments with a vacuum chamber borrowed by Pfeiffer Vacuum demonstrating the relations between pressure, temperature, and sound, and recreated the classical experiment with a marble and a feather falling in vacuum.
In November 2016, Martina Zakova taught four other science classes. During these classes she presented to pupils the simple theoretical background of sound waves, magnetism, gases and plasma, which was supported by many demonstrating experiments. Children with Martina built a gramophone, a loudspeaker, their own compass and a hovercraft. Moreover they saw a lot of experiments on optical illusions, magnetism and "tricks" with plasma ball and/or fluorescent tube.

In February 2017, last four science classes were taught by Karel Bohacek. He taught children about experiments on astrophysics that can be done in laboratory conditions. He explained fundamental principles of magnetism, material density and how planets in our solar system were formed and why they
have magnetic fields. In the last two classes, pupils measured focal lengths of lenses, chose the most suitable ones for building a telescope and built their own telescope using these lenses and a paper/plastic tube.

**Chapter officers election**

New Chapter officers were elected for 2017.

- President: Jiri Vyskocil
- Vice-president: Tomas Kerepecky
- Secretary: Martin Matys
- Treasurer: Martin Jirka

**Future activities for 2017**

- April 2017: SPIE Optics + Optoelectronics conference in Prague, the Czech Technical University in Prague Chapter stand will be present
- September - December 2017: Student Chapter Seminars
Financial report for period 02/2016 - 12/2016

Income:

SPIE Activity Grant 11609.78 CZK

Expenses:

Regular Chapter Seminars - October and November 3235.12 CZK
Christmas Chapter Seminar - December 2262.00 CZK

Balance:

Total balance by end of 2016 6112.66 CZK