Annual Report
Institute for Atomic Physics Chapter
Romania

December 1st 2016
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National Institute for Laser, Plasma and Radiation Physics
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Chapter status

The status of the Institute for Atomic Physics Student Chapter is currently active, as it has been since April 2001. Our Chapter includes members from National Institute for Laser, Plasma and Radiation Physics and University of Bucharest. There have been some changes regarding membership status as following: recently new members have joined the Chapter, while several initial members renounced their membership status. We intend to attract more new members from our and other institutes and universities, therefore various outreach activities, concerning the current and next year, are going to be implemented.

The Chapter holds monthly meetings, where chapter related activities, recruitment of new members, future events and current issues are discussed.

On February 22nd 2016, elections regarding the Board of Chapter Officers took place, the selected officers being presented below.

2016 Chapter Officers

President: Mr. Alexandru STOICU alexandru.stoicu@inflpr.ro ID#: 3537291
Vice-President: Miss Ágota SIMON agota.simon@inflpr.ro ID#: 3536629
Secretary: Mr. Laurenţiu RUSEN laurentiu.rusen@inflpr.ro ID#: 772634
Treasurer: Ms. Tatiana TOZAR tatiana.alexandru@inflpr.ro ID#: 3632116
Advisor: Dr. Angela STAIČU angela.staicu@inflpr.ro ID#: 447912

Chapter web site: http://spie.inflpr.ro/

Facebook profile: https://www.facebook.com/SPIE.Romania

Discussion group: SPIE_RO@yahoogroups.com

Contact: phone/fax: +4.021.457.57.39
Chapter member list

Current members of the Institute for Atomic Physics Chapter.

Ms. Angela STAICU          Ms. Valentina MARASCU
Ms. Adriana SMARANDACHE     Mr. Popa Marian MARIO
Ms. Iulia ANGHEL            Ms. Felicia MIHAI
Ms. Anca BADOI              Ms. Andreea MIHAILESCU
Ms. Iulia BARBUT             Ms. Andreea MUNTEANU
Mr. Bogdan BITA             Mr. Viorel NASTASA
Mr. Mihai BONI              Mr. Andrei NITESCU
Ms. Simona BRAJNICOV        Ms. Amanda PREDA
Ms. Luiza Adelina CIUCU     Mr. Laurentiu RUSEN
Ms. Nicoleta DUMITRESCU     Ms. Agota SIMON
Ms. Petronela GHEORGHE      Mr. Eduard SIRJITA
Mr. Alexandru Gherghel LASCU Ms. Maria Antoaneta SMARANDACHE
Mr. Cristian IORGA          Mr. Alexandru STOICU
Mr. Cristian Nicolae ISTRATE Ms. Tatiana TOZAR
Ms. Irina NEGUT             Mr. Catalina ALBU
Ms. Andra DINACHE           Ms. Oana FUFA

We are pleased to report that our chapter has grown since our last annual report. This change in numbers is mainly due to the former presidents (Tatiana TOZAR and Agota SIMON) efforts to bring some of the newly enlisted students at the Faculty of Physics into the Chapter. We can also say that peoples’ awareness of our Chapter has increased due to the collaborations with the Physics Students Association at the Faculty of Physics - University of Bucharest and multiple outreach activities.
Chapter Activities since the Last Report

Attending the 14th SPIE Optics + Photonics Conference and the Student Leadership Workshop – August 2015, San Diego, USA

Ms. Ágota Simon, former president of the Institute for Atomic Physics SPIE Student Chapter in 2015, participated in August 2015 at the SPIE Optics + Photonics Conference and Student Leadership Workshop in San Diego, USA. Her participation was possible thanks to Officer Travel Grant received from SPIE.

The Student Leadership Workshop, held on the 8th of August 2015, brought together 230 students chapter leaders and facilitators from around the world for networking and leadership training. During the workshop SPIE Visiting Lecturer, Jean-luc Doumont, Principae, facilitated discussions about leadership and communication across cultures.

Sketch made during the Student Leadership Workshop.

Early career professionals helped to form small groups and made easy student discussions. The group which Ágota attended was facilitated by Sam Butler from Air Force Institute of Technology.
Ágota Simon and the group of students supervised during the workshop by early career professional, Sam Butler.

The official picture with the chapters’ leaders from all around the world.

In the same time, Ágota made new connections with her peers and promoted the Romanian Chapter and the National Institute for Laser, Plasma and Radiation Physics through her poster presentation about chapter activities. She also attended the Optics Outreach Games and the Student Lunch with the Experts, gaining a lot of new experiences.
Ágota Simon presenting the chapter’s activities performed during the period 2014-2015.

**SPIE Romania Photo Contest – March-July 2016**

After Ágota visited the Photo Contest at the SPIE Optics + Photonics Conference, organised with the occasion of the International Year of Light, the Institute for Atomic Physics SPIE Student Chapter took the initiative to run its own photo contest.

The SPIE Romania Photo Contest 2016 was committed to promote the International Year of Light 2015. The philosophy of the Photo Contest relied on “What light means to You?” with the “Use light to capture the Light!” motto. Therefore, our chapter wanted to envisage light through the eyes of young photographers. We asked them to celebrate light by capturing vibrant moments retrieved in people, cultures, landscapes, animals, abstract details, etc. They also could approach light from a technological point of view.

The jury was formed by professional and amateur photographers, as well as by chapter members. The contest was popularised in schools, faculties and on Facebook. The website of the contest can be accessed on [http://spiecontest.inflpr.ro/](http://spiecontest.inflpr.ro/)
Meet the jury of the SPIE Romania Photo Contest 2015.

The poster used to promote the SPIE Romania Photo Contest 2015.

After the entry period the jury have selected the first, second and third place winners. The people’s choice award was picked after a week of voting period on Facebook.
First place winner – *Heaven is open* by Cosmin-Ovidiu Stan

Second place winner – *Amber* by Ioan-Andrei Badea

Third place winner – *Fire Rings* by Cristina Dascălu
Chapter activities in 2015 - 2016

- Attending the SPIE Student Leadership Workshop and Optics+Photonics Conference in San Diego, 2016.

In August 2016, Mr. Alexandru Stoicu, president of the Institute for Atomic Physics Chapter (2016) received the SPIE Officer Travel Grant in order to participate at the SPIE Student Leadership Workshop and SPIE Optics+Photonics Conference in San Diego, California.

During the Student Leadership Workshop, Mr. Stoicu attended the lectures given by Dr. Jean-luc Dumont on presentations and the strategies for getting the most out of them, new and interesting ways of communicating scientific information using graphs and different approaches on structuring a research paper.

Thanks to the seating system that required participants to change tables often, Mr. Stoicu had the chance to meet a lot of interesting people and establish new connections with other chapters from around the world. One of the collaborations that we are pursuing now is with CCCC Laser Club Chapter from Lillington, North Carolina, USA via Courtney Jean Martin, Vice President (2016).

The chapter activity poster session gave us the chance to show and tell other SPIE members from around the world what our chapter has been up to during the last year. Our chapters’ poster featured all of the projects our members were involved in. Dr. Robert A. Lieberman, President of SPIE, took a couple of minutes to take a look and talk with our representative in San Diego.
LEFT: Mr. Alexandru Stoicu at one of Dr. Jean-luc Dumont's presentations;  
RIGHT: Mr. Alexandru Stoicu's scientific poster at SPIE Optics+Photonics 2016, titled „Modeling of molecular electronic structures of medicines used to fight MDR acquired by bacteria.”;

Dr. Robert A. Lieberman, president of SPIE and Mr. Alexandru Stoicu, president of Institute for Atomic Physics SPIE Student Chapter during the chapter activity poster session.
Official group photo with chapter members and leaders from all around the world participating at the 2016 SPIE Student Leadership Workshop.

Outreach activities

This year, during the „School in a different way: to know more, to be better” programme, our Chapter organized outreach activities including high school and primary school pupils visits at the National Institute for Lasers, Plasma and Radiation Physics, Măgurele, in different laboratories.

- Laboratory visits during „School in a different way: to know more, to be better” program at the National Institute for Lasers, Plasma and Radiation Physics – April 18th - 22nd, 2016.

It has become a custom to hold a full week of outreach activities and laboratory visits during the „School in a different way: to know more, to be better” program organized by the Romanian Ministry of Education. The program is devoted to educational extracurricular and non-academic activities and has been taking place once a year since 2012.

This year, between April 18th - 22nd, the National Institute for Laser, Plasma and Radiation Physics once again opened its doors for around 670 pupils and the teachers accompanying them in touring different laboratories and hearing the scientists talk about their experiments.

Our chapter was deeply involved in the program since the Institute for Atomic Physics Chapter members were responsible for organizing and managing the groups and activities during the whole program. Besides the laboratory visits, an outreach activities room was set up; the activities varied for each group, depending on the level of education.

We hope that their enthusiasm, after visiting our laboratories, will turn them into future physics students and researchers in the field of optics.

In the following are pictures taken during the visits.
Students of all ages visiting different laboratories at the Laser Department of the National Institute for Laser, Plasma and Radiation Physics.
• **PLANCKS2016, May 20\(^{th}\) - 23\(^{rd}\) 2016**

PLANCKS or Physics League Across Numerous Countries for Kick-Ass Students is an annual international physics contest for bachelor and master students organized by the International Association of Physics Students - {iaps} - with the help of local chapters. Participants in PLANCKS compete in teams consisting of three to four members and they have to answer difficult physics exercises.

The selection process consists of a preliminary for PLANCKS, in some countries, with the winners participating in the international contest or in other countries being selected by a random number generator. The intention of the competition is to increase international collaboration, social activities and personal development of individual contestants. By gathering physics students from different parts of the world, a setting to exchange ideas and experiences and to challenge each other is created.

It’s usually a three day event that includes, in addition to the competition itself, social events like symposiums, excursions, parties and the award ceremony.

Besides the support given by our members in organizing the event, our chapter also organized a laboratory visit at the National Institute for Laser, Plasma and Radiation Physics and at the Center for Advanced Laser Technologies (CETAL) located near the Faculty of Physics. The students were given a short introduction on PW laser technology and its applications by the researchers at CETAL; they also visited the laser material processing station where they witnessed a demonstration on robotic laser technology.

• **Sci+Fi Fest 2016**

At the end of September 2016, the first science and science fiction festival was held in Bucharest. The festival aims to bring scientists, researchers, inventors, professors, along with science fiction writers, critics and promoters of Romanian science fiction in the attention of the wider public. The event was organized by Science and Technology magazine in partnership with Sector 3 City Hall and the Romanian National Library.

The SPIE Institute for Atomic Physics Chapter joined hands with the Optical Society of America Student Chapter at the National Institute for Laser, Plasma and Radiation Physics and attended the event with multiple outreach activities.

Even though the event was the first of its kind held in Bucharest, it attracted a lot of media attention. The chapter president gave an interview for a national television and talked about the importance of outreach.
Some stills taken at the Sci+Fi Fest 2016:

*Children of all ages experiencing the “wonder” of light scattering.*

Although it was the first of its kind, the event attracted lots of media attention. Our chapters activity was featured on the morning news the following day.

*Khet 2.0 Laser Game is always an important attraction at our stands.*
Planned activities for the future

Our chapter is committed to continuing its collaboration with teachers and organizers involved in various national outreach programs such as “School in a different way” and “Researchers Night” programs, which is why, in 2017 our chapter will be deeply involved in these events again.

Another important activity for next year is the selection of the member(s) who will represent our chapter at the 2017 SPIE Student Leadership Workshop.

Also, we have started planning an international student conference on photonics (ISCP2017) which will be held between 17-22 July 2017 in Romania.

Financial information (July 2015 - December 2016)

I. Beginning balance: 0

II. Funds raised and expended (indicate amounts and source/destination):

Received from SPIE activity grant: 1100 $ (1025 €)

- we gave 300 euro for Planks 2016 awards;
- we spent about 100 euro for informal meetings of the chapter;
- material expenses for chapter advertising – 100 €;
- expenses with photocontest – 150 €;
- 100 euro for expenses in participation at ROMOPTO 2015.

III. Other sources (please specify): N/A

IV. Ending balance

475 euro will be used as input for advertising and material costs for the ISCP 2017 conference which we will organize on 17-22 July, 2017.