ANNUAL REPORTING
(2016-2017)

SPIE. STUDENT CHAPTER
UNIVERSITAT JAUME I, GOC

GOC (Group of Optics Castellón)
University Jaume I, Spain

www.grupodeoptica.com
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1. **Names, email addresses, and Member numbers of elected Officers. List of current Student Chapter Members.**

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<thead>
<tr>
<th>Name and surname of current Student Chapter Members</th>
<th>Email address</th>
<th>SPIE Member number</th>
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</table>

2. **Details of Chapter activities since last report.**

For this year the student chapter did not asked for any grant. The activities developed were done with the available material from last years and with the money from other funding resources.

**GOC-Quiz:**

15th of December we made a quiz competition in a famous bar of Castellón called “Nou Café del Carmen” with questions related with physics and optics, among many other issues. A set of funny and curious questions were prepared for this event. There were different types of queries, true or false, questions to join between multiple options and many more.
Most of the science activities are only focus to students or people normally involved in science. However, with this activity, we want to reach to all age ranges and social status. Moreover we explain the activities in science that occurs in the city and how can they be involved in these activities.
The activity reached up to 25 people, and the people from the bar offered us to add a dinner at their place as a prize in the next edition of the GOC-QUIZ. And, of course, at the end of the night the winners received the prize they deserved.

**Khet tournament:**

20th of February we celebrated a Khet tournament in “Nou Café del Carmen”, a popular bar of Castellón. Khet is a chess-like abstract strategy board game using lasers. Players get use to laser reflection and laser split in two beam by means of beam splitters.
During the afternoon, people had around 2 hours to practice and learn playing Khet. We explained them the rules and how the laser reflects to the mirrors. When they got used to the rules, the tournament of random pairs started. We had 5 Khet games, so we made several rounds and the tournament lasted around three hours.
About 10 participants started the night with the expectation of being able to take home the trophy, however, soon they began to break their hopes with the first defeats.

This activity was also sponsored by OSA, EPS-Young Minds and University Jaume I. The University provided us the prize for the semifinalist; OSA and EPS- Young Minds support also the buying of the Khet games and eye of Horus.

**FIRUJI-CIENCIA:**

On May took place an activity developed by UJI called FIRUJIÇIÈNCIA where students from high school and university had the chance to see science demonstrations in different stands. There we showed them some characteristics of light and its application.
We explained polarization by using two polarizers and allowing the students to cross them or to move them freely. We made a photoelasticity demonstration, with two crossed polarizers, we told them to add a transparent medium between both and they could see the effect of the material on light. They could also see refraction and reflection, with a glass of water and a coin we explained them the phenomenon of the total internal reflection and the critical angle. We cloaked the coin while it was under the glass, in air, and show them how depending on the angle of observation you can see it or not. Diffraction demonstration were also developed, we used diffraction gratings and lasers of different wavelength to make clear the dependence of the angle of the diffraction orders with that parameter. We had a model of the human eye and lenses to simulate image formation and to let them see the effect of myopia and hyperopia and how to correct them using lenses.

- **Visiting Lecturer:**

This year the student chapter did not ask for this grant.

- **Officer travel grant**

This year the student chapter did not ask for this grant.
3. **Financial information.**

As this year we did not ask for any grant, it is not shown the financial information of each activity separately. It should be noted that the activities where developed with funding from EPS-Young Minds and OSA.

4. **Details of planned activities for the future.**

- **Star Party:**

  We want to do astronomical observations this using the funds that we still have and funds from University Jaume I that we are in process to get.

- **Youth Education**

  **Optical Workshop:**

  Each year University Jaume I (UJI) of Castellón celebrates the days of dissemination called "Connecta amb la Ciència" (means “Connect with the Science”). These days have the objective of publicize the courses and degrees offered by the scientific area of the UJI. People (teachers, postdocs, students...) working in several areas from the university go to many places around the region of Castellón and offer workshops about chemistry, videogames, optics and photonics, renewable energies, etc. and many high school students attend these workshops. Taking advantage of the conference "Connecta amb la Ciència" the GOC members will travel through different towns of the province to bring science to high school students.

  We have prepared several micro workshops to show different physical properties and concepts related to optics (atmospheric scattering, refraction, diffraction on a CD, light absorption, polarization...) and also explain how works the human eye. In this way, students from all region will have the opportunity to learn science by having fun.

  We showed these workshops in 2016 and teachers from different high schools requested our workshops also for this scholar year 2017/2018 because the students enjoyed them. We have already planned visiting Vinaroz (28th September), Sagunto (18th October). We have some new material to improve our explanations, so we hope students learn more and enjoy very much!

  **First contact with the university**

  Some days of January 2018 we will offer to students in last high school year several seminars at the University Jaume I. Firstly, we will start the sessions with the presentation of our group
GOC and our ongoing and future activities. They will make a practical activity related with diffraction to guess if they have a DVD or a CD.