Tec de Monterrey Student Chapter Bi-Annual Report from January to May 2005.

I. List of Members.

1. Raul Hernandez Aranda
2. Manuel Guizar-Sicairos
3. Carlos Lopez-Mariscal
4. Rodrigo Ponce
5. Martha Beatriz Alvarez Elizondo
6. Moises Jezzini de Anda
7. Juan Velarde
8. Javier Marcelo Pacheco Herrera
9. Mirna Maria Guadalupe Saldivar Rodriguez
10. Santiago Canales Gonzalez
11. Servando Lopez Aguayo
12. Gerardo Tadeo Martinez Alanis
13. Alejandro Villareal Yarto
14. Arturo Guardiola
15. Christian Romer Hernandez
16. Conrado Franco Villalobos
17. Daniel F. Casares D.
18. David Said Martinez
19. Derick Roman-de-Leon-Leal
20. Hector Alvaro Galue
21. Jesus Emmanuel Zamorano Castelo
22. Jorge Alberto Cantu
23. Jose Eduardo Luna Garza
24. Jose Perez-Robles
25. Jose Villatoro Lacouture
26. Juan Miguel Atkinson
27. Luis Barrera
28. Raul Patricio Herrera Rodriguez
29. Ricardo Lozano Garza
30. Rodolfo de la Garza Nuñez
31. Ruben Adrian Guzman de Anda
32. Sergio Alfredo Urista Vazquez
33. Shemra Rizzo Varela
34. Librado Garza Gutierrez
35. Peter Pfister
36. Mario Agustin Torres Oviedo
37. Diego Martinez Negrete
38. Teresita Marin Suarez
39. Diana Ramirez Rodriguez
40. Christian Alejandro Moran
41. Victor Guadalupe Pinto Rios
42. Luis Fernando Zuniga Felix
43. Ramiyro Isai Porras Vigil
44. Sergio Camacho
45. Jorge Elizondo-Martinez
II. Activities.

Summary:

-Promotional Stand at the beginning of semester
-Official Chapter Meetings (3)
-Participation at Photonics West/Electronic Imaging
-Visit of SPIE President Prof. Malgorzata Kujawiska
-Guest Lecturer: Prof. Leszek Salbut
-Student Chapter T-Shirts

Description:

Promotional Stand:
Every semester, the Student Chapter invites people to participate with the SPIE using a Promotional Stand at the beginning of the semester. In our university, it is common that the different student associations of campus put a stand to invite the students to participate with them. As a student association on campus, we also put a stand to promote the Chapter, but we also promote all the benefits of being a member of the SPIE. That is a real advantage for us to get people interested in the Society, because they can have access to many resources that not all the student associations may offer. We also are able to explain the Chapter activities and give the people a little curiosity about optics and all what can be made of it. We have this opportunity once a semester and it lasts three days.

Official Chapter Meetings
First Meeting of the year: After the 3-day promotional stand we organize an introductory meeting for all members. The old ones are happy to meet again after the vacations and the new ones are welcomed for the first time. During the meeting, we introduce ourselves and talk about our interest in optics and the Society. We also introduced the new officers and the president of the Chapter gave a presentation about the SPIE, its benefits, and the list of scheduled events for the whole year, so the members may be able to participate on the activities that are planned. There was also a time for new activities ideas that may be considered to do, too.

Photonics West/Electronic Imaging Experience Sharing Meeting: Three of our members participated in Photonics West on January. It was an enriching experience for them, but also for the Chapter. There was a Chapter meeting focused on a presentation of these members to share their experience and encourage people to participate in these SPIE activities. The meeting gave many good results. A lot of undergraduate students were interested and got compromised on working hard to be able to send some of their work. Our advisor got some more jobs to do, but he also was interested on guiding these motivated students. These kinds of meetings are very useful to show the members all the good experiences they may have by participating with the Chapter and with SPIE. It also helped the Chapter to get people more involved with the activities.
Activity planning meeting: The third meeting of the Chapter was in order to inform the activities planned for the SPIE President Visit and to check the availability of every member to help on this very important event. The decision of making the Chapter T-shirts was also taken.

Participation at Photonics West and Electronic Imaging.

Three of our members participated on Photonics West this year: Martha B. Alvarez-Elizondo, Manuel Guizar-Sicairos and Raul I. Hernández-Aranda. The three of them participated in the poster session and Manuel giving a conference also. They presented the following work:

Poster session:
"Wave and geometrical analysis of the unstable Bessel resonator” by Raul I. Hernández-Aranda, Sabino Chávez-Cerda and Julio C. Gutierrez-Vega.

Conference:
“Modeling of transverse-mode competition in unstable resonators with large discharge current using the exact cavity equations of motion with dynamic gain,” by Manuel Guizar-Sicairos and Julio C. Gutiérrez-Vega.

There was also participation on the Electronic Imaging Conference, with the research:

“Morphological segmentation and digital image processing to retrieve geometric characteristics of fabric filaments,” by Manuel Guizar-Sicairos, Raúl Hernández-Aranda, Ibrahim Serroukh and Alfonso Serrano,

It was a great experience for these members to be able to go to these meetings and get in contact with many other researchers. They told us that such an experience is very enriching and the work to go there is worth.

Manuel Guizar-Sicairos had the chance to get the Travel Grant for both meetings, Electronic Imaging and Photonics West. Raul I. Hernández-Aranda got it to go to Photonics West.

Visit of SPIE President Prof. Malgorzata Kujawinska
We feel very honoured to tell that the SPIE President Prof. Malgorzata Kujawinska visited our Chapter this year. It was a really motivating experience for all the members and it left us a lot of good ideas and desire to get more involved with the Society.

It was a two day very busy agenda starting with visits to the Physics Department, Mechatronics Department and Electrical Engineering
Department of our university. In the Physics Department, the President was able to see the research work we do, and she met some members that are more involved in optics research. Most of the student researchers of the Physics Department at our university are members of the SPIE Student Chapter. We were very glad to be able to show the President our work. She also visited the Mechatronics Department and the Electrical Engineering Department, where she was able to meet the Directors and speak of future possible agreements.

After the meetings we went to eat, where we could also speak with the President about the future plans she has about Student Chapters.

After some “fajitas”, we went back to the University to have an Extra-Official Chapter Meeting with the President. It was a meeting with most of the members, where the President gave us a presentation about SPIE, its benefits, and the plans she has for Student Chapters. After the presentation we had a discussion of the needs of our chapter, some ideas to make things work better for the students, like having access to download a certain number of SPIE papers for every chapter. It would definitely help to make the student research more valuable and well investigated. The President was very kind to hear us and to make this contact with the Chapter. We feel very honoured to have had this opportunity.

After the Chapter meeting there was the conference about Optical Metrology held by the President. It was very interesting to know the research she does, and all the new aspects of optics and how it is getting into the micro- and nano- world. The conference was full attended and after it, we had a little chocolate cake to share after a busy day.

In the night we went to have dinner in a very typical Mexican restaurant, where Prof. Kujawinska and his husband could taste some of our gastronomy, including the famous “grasshoppers with salt and lemon”. It was more informal and we had a really nice time.

The next day we had a Campus tour with the President, were we were able to show all the resources we have here. We went to the Virtual University, which uses internet and TV to give classes to many parts of Mexico and other countries in South America. It has equipment to make real time video conferences. This visit gave some ideas of the things that could be made in the future, like having a “two long-distance Chapter meeting” to share experiences, or giving some conferences.

After the tour we went to eat some salads and unfortunately the time of the visit got to its end. We did have a really nice time and we feel that this opportunity helped us to grow on our interest to get more involved with the Society and our commitment to optics will be stronger.

Guest Lecturer: Prof. Leszek Salbut

This semester we also had the opportunity to have Prof. Leszek Salbut, from the University of Warsaw with us. He was invited to the XX International Symposium of Electronics and Communications organized in our Campus. The topic this year of the Symposium was “BioMems”, and because of the relevance of Prof. Salbut’s research on this field, we were glad he could come to visit us. The SPIE Student Chapter was involved in
the organization of this event, and it helped to invite a specialist on the field. Prof. Salbut gave us a 4 hour seminar on "Optical Methods for MEMS/MOEMS Characterization", which was very interesting and considered as one of the best seminars in the Simposium. We were also able to give Prof. Salbut a little city tour and campus tour, and we were able to talk a lot with him about his work. He is a very nice person and we think this opportunity of having a specialist on the field talking about his work is very valuable. We thank the SPIE for giving us these opportunities.

Student Chapter T-shirts:
As a group of a university, we decided to make some Student Chapter T-shirts, so we would be able to be recognized inside campus. It was also a way to get the members more identified with the Chapter and with its activities. They also serve as “moving publicity”, because many people ask about the T-Shirt and the members are able to talk about the Chapter and the Society. They were also a good Chapter souvenir for important visits like Prof. Kujawinska and Prof. Salbut. As a starting point to make more group cohesion and create a feeling of community, the T-Shirts are a great way to achieve it.

III. Planned activities for the future.

Summary:
- Attendance to Annual Meeting
- 2º Scientific Photography Contest
- Visit to Optics related company

Description:

Attendance to Annual Meeting:
We are planning to go to the Annual Meeting this year. Fortunately, some of our members already have accepted work to present there, like Manual Guizar-Sicairos with
“Application of the two-dimensional Fourier transform scaling theorem to Dirac delta curves,” Manuel Guizar-Sicairos and Julio C. Gutiérrez-Vega.

And Carlos López-Mariscal with
Our member Martha B. Alvarez-Elizondo also got the Student Chapter Travel Grant to attend the meeting. At this moment, we are searching for more funds to bring the most of our members to the meeting. We are sure it will be an excellent experience to go there and celebrate the 50th Anniversary of the Society.

2º Scientific Photography Contest
This year we are planning to do the Scientific Photography Contest as we did last year. It was one of the most pleased activities and we want to continue with the tradition of this contest. We think it is a great opportunity to let our members and the whole community to participate in something related to optics and to science at the same time. We are planning to do it in contact with other campuses and invite other universities in Mexico. The promotional time will take place during the months of July and August and the contest will finish on September.

Visit to Optics Related Company
We are planning to do a visit to an Optics related Company in October, where we will be able to see how the principles of optics are applied to industry. The members of the Chapter also like this kind of activities, because many times it is possible to understand theoretical concepts better when their application is to be seen.

IV. Financial Information.
\textit{Note}: All the numbers were converted to US dollars currency.

Beginnig Balance: \textbf{65}

Outcomings:
- Stand and gifts for subscription: 50
- Snacks for meetings: 15
- Thanks gifts for visits: 30
- T-shirts: 160
\textit{Total outcomings: 225}

Incomings:
- SPIE 2005 Funding: 1100
- T-shirts members funding: 200
\textit{Total incomings: 1300}

Ending Balance: \textbf{1110}

V. Elected officers.
President: Gerardo Tadeo Martínez-Alanis \texttt{gtadeo@itesm.mx}
Vice-President: Rodrigo Ponce \texttt{rponce@itesm.mx}
Secretary: Carlos López-Mariscal \texttt{clmariscal@itesm.mx}
Treasurer: Martha B. Alvarez-Elizondo \texttt{mbae@itesm.mx}
VI. Photos!!!

Martha and Manuel at Photonics West

Raul at Photonics West
Bi-Annual Report: May

Manuel giving his lecture at Photonics West

Showing the President the non-diffractional CO₂ laser
During meeting with the SPIE President

The President will wear our T-shirt!!!
Who says Mexican grasshoppers don’t taste well??
During Campus tour...

In front of our main building.
(typical place to get your graduate photo)
Prof. Salbut giving his conference

Prof. Salbut will also wear our T-shirt!!!
Prof. Salbut with the Student Chapter (memorial photo)

Having some nice oysters and shrimps!