SPIE Student Chapter
Vrije Universiteit Brussel

Activity Report

Period:	June 2007 – April 2008
Advisor:	Prof. Hugo Thienpont
Officers:	Nathalie Vermeulen (President), Sara Van Overmeire (Vice-President), Virginia Gomez (Treasurer), Iñigo Artundo (Secretary), Jürgen Van Erps (Past President).

OUTLINE

I. ACTIVITY REPORT

NANO NU EXPO

1. GENERAL CONCEPT OF THIS OUTREACH ACTIVITY

On November 9 and 10, 2007, Nano Nu was organised at the Flemish Parliament in Brussels. The goal of this event was to introduce nanoscience and nanotechnology to undergraduate students and to increase the public awareness of the impact nanotechnology will have on our daily life. The event was coordinated by the Flemish Institute for Science and Technology Assessment (viWTA), an independent and autonomous institution associated with the Flemish Parliament, which investigates the social aspects of scientific and technological developments. To bring together all research and industry in Flanders on nanoscience and nanotechnology, the viWTA invited the Flemish universities, research institutes and some companies to present their research and work on the Nano-expo at the Nano Nu event. Also the Vrije Universiteit Brussel (VUB) was invited and three departments (Applied Physics and Photonics (TONA), Chemical Engineering (CHIS) and Laboratory for Micro- & Photonelectronics (ETRO-LAMI)) of our university participated in the Nano-expo and presented their expertise on our VUB-booth. Several members of our SPIE student chapter, all of them PhD students at the TONA-department, hosted the visitors of our booth, in collaboration with fellow researchers from the other departments.

On Friday, November 9, the target audience of the Nano Nu event was undergraduate students (17-18 years old) and their teachers. During the whole day, they could participate in lots of activities.

The Nano-expo with the booths of the universities and companies could be visited continuously and the students could attend courses given by professors of the different universities, teaching about their research and nanotechnology. Moreover they could try out Nano-dating: similar to the "student lunch with the experts" sessions at SPIE conferences, small groups of undergraduate students had the opportunity to meet PhD students and to ask everything they wanted to know about their research and about doing a PhD. One of our chapter members, Thomas Geernaert, who is doing a PhD on fiber bragg gratings, participated in one of the Nano-dating sessions.

In addition to the scientific and educational approaches to nanoscience, the nano-world was also illustrated by means of films (Minority Report, The Fly, …) and theater showing different aspects of nanotechnology. After every performance the audience could participate in a small discussion and the students could debate about what they think will be the impact of nanotechnology on our lives, the benefits and possible hazards. The students could also visit several expositions with art pieces of artists inspired by nanotechnology and pictures made in collaboration with EMAT "Electron Microscopy for Materials Science" and Agfa Graphics.

Figure 1: Students watching a theatre performance about nanotechnology.

Finally the laureates of an essay-contest were announced and received a price. Starting already from September, teachers could download information to prepare their visit with their students to the Nano Nu exhibition. For science teachers there were tutorials and didactical tools available to introduce the technical aspects of nanotechnology to their students. Not only science teachers, but also Dutch language teachers were encouraged to discuss nanoscience and its impact on daily life in the classroom and to stimulate their students to participate in the essay-contest. For this contest students had to write a small essay reflecting their ideas and fantasies about nano-life. The submitted essays were extremely diverse and original as shown by some of the titles of the winning essays: "Mmm, nanolicious!", "Memories of a cyborg" and "House, garden and kitchennano".

On Saturday, November 10, the exhibition was open for the general public. The program was similar: people could attend the Nano-expo, watch films and theater and visit the expositions.

2. DESCRIPTION OF A TYPICAL TOUR AT THE "VRIJE UNIVERSITEIT BRUSSEL" – BOOTH: "PHOTONS AND ELECTRONS: FROM MACRO TO NANO"

The general idea of our booth was to introduce the meaning of the word "nano" to the visitors. For students it is not easy to grasp the connotation of micro and nano and to understand the opportunities and difficulties in these research areas. We wanted to give them a clear idea of the physical meaning of milli, micro and nano and to introduce them some topics in photonics, electronics and chemical engineering at micro and nano-level.

The booth consisted of different small desks, which were continuously hosted by one or two researchers, and at which certain topics in photonics, electronics or chemical engineering were introduced. The students visited our booth according to a fixed pattern: they started at the desk where macro principles were explained, and while going further in the sequence, the applications that were introduced became smaller (micro-world) until they reached the nano-level. When they had finished the complete tour and visited all the desks in the correct order, they had a good view on the meaning of micro- and

nano-technology and the applications in photonics and electronics, which we tackle at our university.

Figure 2: Going from macro (guided by our president Nathalie Vermeulen) to micro and nano. As shown in the picture at the left side, also the SPIE Macro-Micro-Nano poster was used for illustrating dimension differences.

At the macro-desk, we introduced some basic aspects of light and lenses to the students. They could play with telescopes and see hidden marks on their credit cards or bank notes by means of UV light. The next desks introduced micro-optics by means of the NEMO educational kit and the fabrication technology "Deep Proton Writing" used at our department to prototype plastic micro-optical and micro-mechanical components. Then they moved on to the applications of micro and nano in biophotonics, lab-on-a-chip, chemical engineering and sensing. Students could examine insect eyes and diffraction gratings under a microscope and see the effect of pressure on a fiber bragg grating.

Figure 3: Students visiting the macrodesk.

Figure 4: Our student chapter members introducing the NEMO education kit and the principle and applications of fiber bragg gratings to the visitors.

3. VISIBILITY OF THIS EVENT

As the exhibition was organised in the Flemish parliament, a special session was organised for the parliamentarians to visit the Nano-expo. As such the people responsible for the science policy in Belgium could also meet the researchers.

The event was also announced in national press and a website was set up where people could subscribe and download didactical information to prepare their visit. Already weeks in advance, the available places on Friday for schools were fully booked. Around 1.200 of the 1.700 students that were present on Friday visited the booth of our university. On Saturday roughly 800 visitors visited our booth. On Saturday, November 10, the Nano Nu event was discussed and our booth was presented in the public broadcast television news at lunchtime.

Figure 5: Our department and student chapter members, with our adviser Prof. Hugo Thienpont, who guided the visitors at the Nano-expo.

ACTIVITIES AT SPIE PHOTONICS EUROPE 2008

1. WORKSHOP ON ENTREPRENEURSHIP IN PHOTONICS

Together with Dirk Fabian from SPIE, our chapter has organised a workshop on Entrepreneurship in Photonics for students and young professionals which took place on Monday April 7, 2008, at the SPIE Photonics Europe symposium. While SPIE had arranged the logistics for this event (e.g. nice gift packages were provided for the attendees of the workshop), our chapter's president Nathalie Vermeulen and vice-president Sara Van Overmeire had taken care of setting up the workshop program and of the invitation of the speakers, and this with the help of our chapter's advisor Prof. Hugo Thienpont. Furthermore, Nathalie and Sara had also given their input to Dirk Fabian regarding e.g. the preregistration and publicity strategies for the workshop, and they exchanged ideas with him on their "moderator" role during the workshop.

And the workshop turned out to be a great success! The four speakers whom we had invited gave four very different presentations which were well aligned and which were all of a very high level. Furthermore, the audience, which consisted of 70 attendees, was truly interested and asked numerous questions in between the presentations. The first speaker, Dr. Kathleen Perkins (formerly CEO of Breault Research Organisation), gave a talk about "The Business of Optics - Pitfalls & Opportunities" during which she emphasized that photonics engineers are very well suited for finding a solution for today's environmental problems that affect our entire world. Next, Prof. Frank Wyrowski (CEO of LightTrans and professor at University of Jena) discussed the topic of "Customized Product Development - The Real Challenge" and pointed out amongst others that the timing of product development is strongly linked to the amount of resources one has available. Then, after the coffee break, Prof. Marc Goldchstein (member of several start-ups and professor at Vrije Universiteit Brussel) gave a talk about "There is More to Life than Engineering: Success Skills for Life Outside the Lab". Hereby, he addressed the necessity of educating engineering students in the business aspects of research and industry. Finally, Dr. Gary Colquhoun (CEO of Fibre Photonics and Industry Development responsible at SPIE Europe) talked about "Photonics Innovation and the Trials of Being Born Global" and pointed out amongst others that today's globalization has both advantages and disadvantages for the competitiveness of a start-up company.

(a)

(b)

(c)

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(f)

(g)

(h)

Figure 1: (a)-(d) Dr. Kathleen Perkins, Prof. Frank Wyrowski, Prof. Marc Goldchstein, and Dr. Gary Colquhoun, respectively, talking about their experiences in entrepreneurship. (e) After each presentation, the attendees had the opportunity to ask questions. (f) Our chapter's president Nathalie Vermeulen (at right side) and vice-president Sara Van Overmeire (at left side) were the chairs of this workshop. (g) Dirk Fabian, taking care of the registrations for the workshop dinner. (h) After the presentations, Dirk Fabian and our chapter thanked the

speakers for their contributions by offering them an SPIE pen and a box of Belgian chocolates.

After the workshop, the attendees could join for a tasty dinner offered by SPIE. That way, they had the opportunity to have a more in depth discussion with the speakers, and also to relax a bit after a busy but fruitful day.

2. LUNCH WITH THE EXPERTS

Almost all members of our chapter joined for this networking lunch which was offered by SPIE and which was organized just before the start of the entrepreneurship workshop. Since we had invited the speakers of the entrepreneurship workshop to also take part in this networking event, students had the opportunity to ask them questions on entrepreneurship and other fields of interest even before the workshop had begun. Of course, also several other experts in photonics were present at the lunch and people talked about a wide variety of topics while enjoying the pasta and pizza dishes.

3. PHOTONICS INNOVATION VILLAGE

Two of our chapter members participated in the third edition of the Photonics Innovation Village, an event organised at the SPIE Photonics Europe conference by Rhenaphotonics Alsace and SPIE Europe, under the patronage of the Photonics Unit of the European Commission.

The Photonics Innovation Village was established for the first time in 2004 to spotlight research teams from universities, non-profit institutions, and research centres from around the world, showcasing their transfer of research and technology into new applications. The aim of the innovation village is to provide free exhibition space at the conference site together with broad exposure and publicity to young innovators who are developing novel photonics based products. The village is open to all attendees to Photonics Europe and the Photonics Europe exhibition plus press and other officials.

This year 12 teams where selected to demonstrate a prototype of their photonics based product. The teams were judged by an international jury, which was chaired by Gustav Kalbe (European Commission, Photonics Unit, Belgium). Among the 12 prototypes, the jury selected 5 teams and bestowed 5 prices. Both our chapter members were awarded a price: our chapter member Thomas Geernaert won the "Best Design Award" for his research on "Flexible Artificial Optical Robotic Skins" and our vice-president Sara Van Overmeire received the "Best Application Award" for her work on "Micro-optical detection units for lab-on-a-chip applications". A short summary of their work and the prototype they demonstrated at the Photonics Innovation Village can be found below.

Figure 2: Our student chapter members Thomas Geernaert and Sara Van Overmeire who were awarded a prize at the Photonics Innovation Village.

Flexible Artificial Optical Robotic Skins

Department of Applied Physics and Photonics (VUB-TONA) and Robotics & Multibody Mechanics Research Group (VUB-R&MM) of the Vrije Universiteit Brussel, Belgium; Thin Film Components Group (UG-TFCG) and Polymer Chemistry & Biomaterials Research Group (UG-PBM) of the Universiteit Gent, Belgium

We present a paradigm shifting application for optical fibre sensors in the domain of robotics. We propose fibre Bragg gratings (FBGs) written in highly-birefringent microstructured optical fibres integrated in a flexible skin-like foil to provide a touch capability to a social pet-type robot for hospitalized children named "Probo". The touch information is complementary to vision analysis and audio analysis and will be used to detect where Probo is being touched and to differentiate between different types of affective touches such as tickling, poking, slapping, petting, etc.

Micro-optical detection unit for lab-on-a-chip

Department of Applied Physics and Photonics (VUB-TONA) of the Vrije Universiteit Brussel, Belgium

We present a detection unit for fluorescence and UV-VIS absorbance analysis in capillaries, which can be used for chromatography. By using a micro-fabrication technology (Deep Proton Writing) the optics are directly aligned onto the micro-fluidic channel. This integration enables the development of portable and ultimately disposable lab-on-a-chip systems for point-of-care diagnosis. At the innovation village we explain the working principle of our detection system in a proof-of-concept demonstration set-up while focusing on some specific applications of micro-fluidics in low-cost lab-on-a-chip systems.

4. NEMO BOOTH

In the Exhibition Hall of SPIE Photonics Europe, the Brussels student chapter was involved in setting up and staffing the booth of the European Network of Excellence on Micro Optics (NEMO). NEMO's main objective is to structure and integrate the expertise and core-competences of its partners while strengthening their R&D activities in the emerging field of micro-optics. It has been the networking platform for 30 European partners since 2004, coordinated by Prof. Hugo Thienpont from the Vrije Universiteit Brussel, Belgium, by Prof. Malgorzata Kujawinska from Warsaw University of Technology, Poland, and by Dr. Juergen Mohr from ForschungsZentrum Karlsruhe, Germany.

Our task there was helping in the installation of the entire booth with the posters and all the pieces of furniture and computers, as well as explaining the objectives of NEMO to visitors of the booth.

Figure 3: NEMO booth at the Exhibition Hall of SPIE Photonics Europe.

5. ORAL AND POSTER PRESENTATIONS BY CHAPTER MEMBERS

The following presentations and posters exposed on the SPIE Photonics Europe conference were authored or co-authored by members of our student chapter:

1. Reliable simulation of optical bridge system by exchanging optical field data, Youri Meuret, Vrije Univ. Brussel (Belgium); Norbert Lindlein, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); Ingo Sieber, Forschungszentrum Karlsruhe (Germany); Inigo Artundo, Christof Debaes, Vrije Univ. Brussel (Belgium); Wojciech Grabowski, Ryszard Buczynski, Univ. Warszawski (Poland); Andrew Waddie, Heriot-Watt Univ. (United Kingdom); Frank Wyrowski, Friedrich Schiller Univ. (Germany); Hugo Thienpont, Vrije Univ. Brussel (Belgium)

2. Impact of large-scale reconfigurable optical interconnection networks in multiprocessor systems, Inigo Artundo, Lieven Desmet, Vrije Univ. Brussel (Belgium); Wim Heirman, Univ. Gent (Belgium); Christof Debaes, Vrije Univ. Brussel (Belgium); Joni Dambre, Jan M. Van Campenhout, Univ. Gent (Belgium); Hugo Thienpont, Vrije Univ. Brussel (Belgium)

3. A low loss 180° coupling fiber socket making use of low bending loss hole-assisted fiber, Jurgen Van Erps, Christof Debaes, Tomasz A. Nasilowski, Vrije Univ. Brussel (Belgium); Jan Wojcik, Pawel Mergo, Univ. Marii Curie-Sklodowskiej (Poland); Tim Aerts, Herman Terryn, Vrije Univ. Brussel (Belgium); Jan Watté, Tyco Electronics Corp. (Belgium); Hugo Thienpont, Vrije Univ. Brussel (Belgium)

4. Replication of deep micro-optical components prototyped by deep proton writing, Jurgen Van Erps, Vrije Univ. Brussel (Belgium); Markus Wissmann, Markus Guttmann, Michael Hartmann, Forschungszentrum Karlsruhe (Germany); Lieven Desmet, Christof Debaes, Vrije Univ. Brussel (Belgium); Jürgen Mohr, Forschungszentrum Karlsruhe (Germany); Hugo Thienpont, Vrije Univ. Brussel (Belgium)

5. Characterization of the optical parameters of high aspect ratio polymer micro-optical components, Rafal G. Krajewski, Politechnika Warszawska (Poland) and Vrije Univ. Brussel (Belgium); Jurgen Van Erps, Vrije Univ. Brussel (Belgium); Markus Wissmann, Forschungszentrum Karlsruhe (Germany); Malgorzata Kujawinska, Politechnika Warszawska (Poland); Olivier M. Parriaux, Svetlen Tonchev, Univ. Jean Monnet Saint-Etienne (France); Jurgen Mohr, Forschungszentrum Karlsruhe (Germany); Hugo Thienpont, Vrije Univ. Brussel (Belgium)

6. Coupling structures for out-of-plane coupling in optical PCBs, Nina Hendrickx, Univ. Gent (Belgium); Jurgen Van Erps, Vrije Univ. Brussel (Belgium); Erwin Bosman, Univ. Gent (Belgium); Hugo Thienpont, Vrije Univ. Brussel (Belgium); Peter Van Daele, Univ. Gent (Belgium)

7. Enhanced pluggable out-of-plane coupling components for printed circuit board-level optical interconnections, Jurgen Van Erps, Vrije Univ. Brussel (Belgium); Nina Hendrickx, Univ. Gent (Belgium); Christof Debaes, Bart Van Giel, Vrije Univ. Brussel (Belgium); Peter Van Daele, Univ. Gent (Belgium); Hugo Thienpont, Vrije Univ. Brussel (Belgium)

8. Fabrication methods to create high-aspect ratio pillars for photonic coupling of board level interconnects, Christof Debaes, Vrije Univ. Brussel (Belgium); Mikko Karppinen, VTT Elektroniikka (Finland); Jurgen Van Erps, Vrije Univ. Brussel (Belgium); Jussi Hiltunen, VTT Elektroniikka (Finland); Himanshu Suyal, Heriot-Watt Univ. (United Kingdom); Arndt Last, Forschungszentrum Karlsruhe
(Germany); Michael G. Lee, Fujitsu Labs. of America; Mohammad R. Taghizadeh, Heriot-Watt Univ.; Jürgen Mohr, Forschungszentrum Karlsruhe (Germany); Pentti Karioja, VTT Elektroniikka (Finland); Alexei L. Glebov, Fujitsu Labs. of America; Hugo Thienpont, Vrije Univ. Brussel (Belgium)

9. Realistic opto-mechanical modelling of plastic optical fiber coupling systems, Els Moens, Michael Vervaeke, Youri Meuret, Heidi Ottevaere, Vrije Univ. Brussel (Belgium); Carl Van Buggenhout, Piet De Pauw, Melexis Microelectronic Systems (Belgium); Hugo Thienpont, Vrije Univ. Brussel (Belgium)

10. LED-based stereoscopic projection display using LCOS panels, Lawrence P. Bogaert, Youri Meuret, Bart Van Giel, Hugo Thienpont, Vrije Univ. Brussel (Belgium)

11. Optical design of compact LED illumination in projection displays, Bart Van Giel, Youri Meuret, Lawrence P. Bogaert, Hugo Thienpont, Vrije Univ. Brussel (Belgium)

12. Miniaturized detection system for fluorescence and absorbance measurements in chromatographic applications, Sara Van Overmeire, Heidi Ottevaere, Gert Desmet, Hugo Thienpont, Vrije Univ. Brussel (Belgium)

13. Si moulds for glass and polymer microlenses replication, Jorge Albero, Lukasz Nieradko, Christophe Gorecki, Univ. de Franche-Comté (France); Heidi Ottevaere, Virginia Gomez, Vrije Univ. Brussel (Belgium); Juha Pietarinen, Joensuu Yliopisto (Finland)

14. Real-time and in situ monitoring of microlenses fabricated with deep proton writing, Virginia Gomez, Heidi Ottevaere, Hugo Thienpont, Vrije Univ. Brussel (Belgium)

15. The fabrication and characterization of fiber Bragg gratings in high birefringent photonic crystal fi bers for sensing applications, Thomas Geernaert, Karima Chah, Tomasz A. Nasilowski, Francis Berghmans, Hugo Thienpont, Vrije Univ. Brussel (Belgium); Martin Becker, Manfred Rothhardt, Hartmut Bartelt, IPHT Jena (Germany); Marcin Szpulak, Jacek Olszewski, Waclaw Urbanczyk, Politechnika Wroclawska (Poland); Krzysztof Poturaj, Jan Wojcik, Univ. Marii Curie-Sklodowskiej (Poland)

16. Sub-diffraction-limited localized structures: influence of linear nonlocal interactions, Lendert Gelens, Guy Van der Sande, Philippe Tassin, Vrije Univ. Brussel (Belgium); Damia Gomila, Pere Colet, Manuel A. Matías, Instituto de Fisica Interdisciplinar y Sistemas Complejos (Spain); Mustapha Tlidi, Pascal Kockaert, Univ. Libre de Bruxelles (Belgium); Irina Verettenicoff, Jan Danckaert, Vrije Univ. Brussel (Belgium)

17. The dynamical behaviour of a semiconductor ring laser, Guy Van der Sande, Lendert Gelens, Philippe Tassin, Vrije Univ. Brussel (Belgium); Alessandro Scirè, Univ. de les Illes Balears (Spain); Jan Danckaert, Vrije Univ. Brussel (Belgium)

18. Coherence radius and mode size of a broad-area vertical-cavity surface-emitting laser in the incoherent emission regime, Gordon M.Craggs, Guy Verschaffelt, Ingo Fischer, Michael L.Peeters, Vrije Univ. Brussel (Belgium); Shyam K. Mandre, Technische Univ. Darmstadt (Germany)

19. Sub-wavelength waveguide structures, Philippe Tassin, Xavier Sahyoun, Irina Veretennicoff, Vrije Univ. Brussel (Belgium)

T-SHIRT DESIGN CONTEST

Since we liked the idea of having our own SPIE Brussels student chapter T-shirt, we launched at the end of 2007 a T-shirt design contest where all our members were invited to submit a design (illustration, photocomposition or whatever they wanted). The winning design would then be used for the official SPIE Brussels student chapter T-shirt; a T-shirt that we could wear whenever we attend an SPIE event. The rules were sent out to all students, with clarifications about the official SPIE guidelines concerning the logo and the corporative image usage. We received several submissions, and the winning design was selected through an open but anonymous voting amongst our members. The price for the winner was 4 cinema tickets. Here are some of the designs proposed, the one at the left side being the winning design:

Figure 1: Proposed T-shirt designs.

We already ordered a proof print of a few T-shirts at a local store and we used these brand new T-shirts for our activities during SPIE Photonics Europe, like the Entrepreneurship in Photonics workshop and the Student Breakfast. We intend to order more T-shirts later on.

Figure 2: Our chapter's secretary Iñigo Artundo, wearing the official SPIE Brussels student chapter T-shirt (proof print).

JOB EVENT

At the end of March 2008, our student chapter and the department of Applied Physics and Photonics (TONA) of the Vrije Universiteit Brussel organized for the first time a mini job event for the students who are doing a Master in Photonics, Master in Electronics or who are in the Erasmus Mundus in Photonics program at our university.

We organized this event by request of some of the companies the TONA-department is collaborating with in industry-related research projects. Many photonics companies have a lot of job offers and career opportunities in Flanders for engineers but apparently they are having difficulties in finding the people with the right skills in optics and photonics for their jobs. To give them the opportunity to meet our students and vice versa, we invited several companies on a small photonics job event.

ICOS, Siemens ADB, Melexis, Barco, Belgian Electronic Sorting Technology (BEST) and Umicore accepted this invitation and came to present themselves to our students. They explained briefly who they are, what they do, why they need engineers,... We finished with a reception for everybody where the students had the opportunity to talk individually with the representatives of the different companies. The students could also write their names and addresses on a mailing list, which was afterwards distributed amongst the companies, in order to give them the opportunity to contact and update our students in the future. We have received a lot of positive reactions from both the students and the companies afterwards, so the job event will certainly be repeated in the future.

Figure 1: (left) Our master students watching a presentation of Umicore at the job event and (right) students and representatives of the companies at the reception.

SOCIAL ACTIVITIES

1. RECEPTION AND QUIZ AT THE START OF THE ACADEMIC YEAR 2007-2008

On October 11, 2007, shortly after the start of the new academic year, we organized an SPIE Brussels student chapter reception and quiz. The goal was to welcome the Belgian, Erasmus and Erasmus Mundus master students at our department and to give them the opportunity to get to know each other as well as SPIE. We introduced our student chapter and our research topics. To liven up the reception, our chapter's vice-president Sara Van Overmeire and treasurer Virginia Gomez had organized a small competition: a quiz with scientific and daily life questions about the department, the university, Belgium and the world. The winning group shared the prize (a box of Belgian pralines) with the rest of the participants, so that we could all enjoy some delicious chocolates. Below you can find some pictures taken during the quiz and the reception.

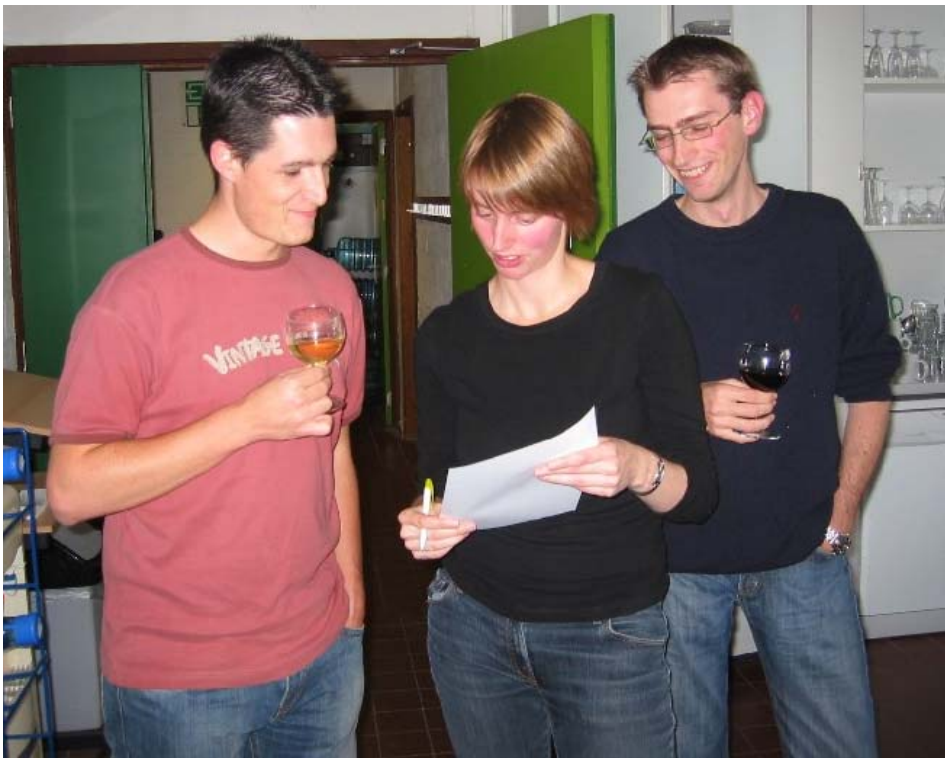

Figure 1: Some of our chapter's members (from left to right: Thomas Geernaert, our president Nathalie Vermeulen, and our former president Jürgen Van Erps), trying to figure out the correct answers to the questions posed during the quiz.

Figure 2: Some of the participating master students, enjoying the quiz ànd a glass of wine.

2. CHRISTMAS DINNER

Like every year, also in 2007 a Christmas dinner was organized for our department members, and this event was sponsored both by the Brussels student chapter and the department. This time we had chosen a Greek restaurant. It was a pleasant event where we could strengthen bonds with our colleagues in a warm atmosphere.

ACCESS TO THE SPIE DIGITAL LIBRARY

The SPIE Brussels student chapter continues to devote part of its budget to provide access to the SPIE Digital Library for the chapter members. The members of the student chapter have access to the SPIE Digital Library through the personal subscription of one student chapter officer. For a request, the students should send an email to the officer

with the complete reference of the paper. A list of the already downloaded papers is kept to avoid duplicate downloads. We will evaluate this approach later on.

II. OVERVIEW OF PLANNED ACTIVITIES

We intend to explore new ways of collaboration with amongst others the student chapter of Wroclaw. This chapter has invited us to a networking event in May, but unfortunately we will not be able to attend due to other obligations (e.g. our chapter's president and past president will have their public PhD defenses around that time). Nevertheless, we would like to get together with the student chapter of Wroclaw in the near future.

Furthermore, we would like to bring the dissemination of NEMO's Edukit to a higher level, if possible with the help of SPIE. The Edukit is a free educational optics kit developed by NEMO for giving school children the opportunity to get acquainted with optics and photonics already from secondary school level onwards, and our chapter has already provided several training sessions on the Edukit to students and teachers of Belgian schools. Together with SPIE, we could give this project a truly international dimension. Our advisor Prof. Hugo Thienpont has already discussed this topic with Dirk Fabian from SPIE, and we will soon contact Dirk with some concrete proposals.

In addition, we will organize during the "Science Week" (a yearly outreach event for high school students, that is sponsored by our university) a big audio-visual "photonics show" where we will inform the students on the importance of photonics and entertain them with all kinds of experiments. This one hour show will be given 3 times in a large auditorium so that we can reach many students, and we intend to make the show both educative and spectacular to increase as much as possible the students' interest in photonics.

III. FINANCIAL STATEMENT

The SPIE Brussels Student Chapter was established in April 2006, and the table below shows its actual financial situation.

Previous balance (June 2007)	$1135.30
Reception + quiz	- $64.83
SPIE Digital Library subscription	- $95
Christmas dinner	- $223.07
SPIE student membership for 3 master students (*)	- $60
Chocolates given as present at Entrepreneurship Workshop	- $87.03
Proof print of student chapter T-shirt	- $125.04
Cinema tickets given as present for winner T-shirt design contest	- $35.64
Student Chapter financial account cost	- $45.06
Balance	$399.63

(*) We paid for the SPIE student membership of 3 master students, since they did not belong to the category of students whose membership is covered by our department.

We will soon apply for the SPIE student chapter funding-2008. It should also be mentioned that our chapter advisor, Prof. Hugo Thienpont, has matched the expenses for some of our activities.
Our president, Nathalie Vermeulen, received an SPIE Officer Travel Grant to represent our chapter at the Leadership Workshop at SPIE Optics & Photonics 2007 in San Diego, CA.

IV. MEMBER LISTING

Our current list of members looks as follows:

1. Miss Nathalie Vermeulen, President
2. Miss Sara Van Overmeire, Vice-President
3. Miss Virginia Gomez, Treasurer
4. Mr. Iñigo Artundo, Secretary
5. Mr. Jürgen Van Erps, Past President
6. Mr. Syed Md Abdullah
7. Mr. Lennert Appeltant
8. Mr. Lawrence Bogaert
9. Mr. Werner Coomans
10. Mr. Gordon Craggs
11. Miss Otti D'Huys
12. Mr. Thomas Geernaert
13. Mr. Lendert Gelens
14. Mr. Tom Guldemont
15. Mr. Akhil Gupta
16. Mr. Stefaan Heyvaert
17. Miss Hiep Luong
18. Miss Els Moens
19. Mr. Stijn Roelandt
20. Mr. Philippe Tassin
21. Mr. Bart Van Giel
22. Miss Jana Vanderheijden
23. Mr. Arnout Vetsuypens