University of Calgary
Student Chapter
2010-2011
Annual Report
Who We Are

Our student chapter situated on the University of Calgary campus consists of 14 members, a majority of which are University of Calgary graduate students. This past year, 2010-2011 was the second year for our SPIE student chapter. We are joint student chapter with the Optical Society of America which was founded in 2006. A majority of our members are graduate students in the Department of Physics and Astronomy at the University of Calgary. More specifically, we are members of the Institute of Quantum Information Science and experimentalists working in one of two state-of-the-art quantum optics labs at the UofC.

Chapter Officers

Ranjeet Kumar  
President  
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Ryan Thomas  
Treasurer  
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Pantita Palittapongarnpim  
Vice President  
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Erick Barrios  
Secretary  
ebbario@ucalgary.ca

Dr. Alexander Lvovsky  
Chapter Advisor  
lvov@ucalgary.ca
<table>
<thead>
<tr>
<th>Name</th>
<th>Expires</th>
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<tbody>
<tr>
<td>Shantanu Banik</td>
<td>13 December 2011</td>
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<tr>
<td>Erick Barrios Barocio</td>
<td>24 January 2012</td>
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<td>Kelly Goss</td>
<td>6 July 2011</td>
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<td>Christopher Healey</td>
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<td>Connor Kupchak</td>
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<td>Ben Lavoie</td>
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<td>Itzel Lucio Martinez</td>
<td>26 March 2011</td>
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<td>Andrew MacRae</td>
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<td>Trinh Nguyen</td>
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<td>Pantita Palittpongarnpim</td>
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<td>Conrad Rizal</td>
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<td>Ryan Thomas</td>
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<td>Ranjeet Kumar</td>
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<td>Md. Maruf Monwar</td>
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Activities in 2010-2011

1. Educational Outreach

Lab Tours
Past year we’ve had two groups of students come and visit our quantum optics labs. In March 2010, we hosted a class of grade nine science students from The Webber Academy School in Calgary. In April 2010, we gave lab tours for the final year physics undergraduate students.
2. Educational Activities

CQISC’10

The Canadian Quantum Information Students' Conference (CQISC) is the annual conference run by and for graduate students from Canada and around the world. Students from a variety of backgrounds including physics, computer science, mathematics, chemistry, and engineering were encouraged to attend. The conference was held over five days and all delegates were encouraged to present 20 minutes talk or contribute a poster on their area of expertise. CQISC increases and strengthens networking between quantum information research centres by bringing together students from a wide range of disciplines and universities.

The first conference was held in 2004 at l’Université de Montréal, and the second and third were hosted by the University of Calgary. The fourth conference occurred at the Perimeter Institute in Waterloo and the fifth held once again at l’Université de Montréal. Last year, the Fields Institute in Toronto hosted the sixth, and now the conference returned to the University of Calgary for the seventh annual.

This year, to enhance professional development, we invited two guest lecturers with established careers in the field of quantum information, Dr. Simon from university of Calgary and Dr. Rainer Iraschko the Vice-President of research for TRLabs, his office is based right here in Calgary. Their talks were directed on relaying personal experiences that lead to their current success in their respective career lines.

A portion of the CQISC'10 served as the second annual Alberta Quantum Nano-Optics (QuNO) 2010 meeting. QuNO is a student organized events focused on optics based research. The goal was to have a gathering of graduate students to communicate on theoretical and experimental technical tools with the intentions of sharing skills that would be constructive for day-to-day research. QuNO’10 was the second edition for QuNO’09

QuNO'10 was a daylong event integrated into CQISC'10, with the talks held on that day mostly relating to quantum and nano based optics research.

Brief highlights of the conference:

- The event featured four and half days of academic activities that included approximately 40 presentations and an evening of poster session.
- We started on Monday July 12, 2010 with a two hour registration and followed by some breakfast and introduction.
- Every day we had two session, morning and afternoon sessions and a lunch in between. Each session had two small coffee breaks.
• Wednesday; July 14, 2010 afternoon was an outing event and we went to for hiking to Banff national park. We organized free trip to all our participants followed by dinner in Banff.
• Thursday; July 15, 2010 afternoon was the poster session followed by banquet dinner night.
• Friday July 16, 2010 was the final day for the conference and after the last presentation, we took all the participants to the lab tour in our department.
• Free accommodation and meals to all our participants for the whole conference.

This event was sponsored by SPIE, OSA, and University of Calgary Faculty of Sciences, University of Calgary Department of Physics and Astronomy, and the Institute for Quantum Information Science, MITACS, CIFAR and Quantum works.

The whole conference was amazing. We had a really good time for a whole week and we hope to host another CQISC in future.
IQIS/ SPIE/ OSA Seminar

We as a part of University of Calgary chapter for SPIE and OSA, organized a seminar under Institute for Quantum Information Science (IQIS).

Our guest speaker was Christian Nölleke from Max Planck Institute of Quantum Optics, Garching, Germany. His presentation was based on his research on Quantum Information Processing. This gave us the opportunity to learn about his state-of-the art research work. He talked about the future and challenges of Quantum Information and presented his work such that he not only catered the other researchers in this area but also the general audience.
3. Recruitment Activities

**Pizza Information Session**

Our chapter held a recruitment and information session on October 13, 2010. Like we did last time, we booked a classroom from 12-1:30pm and provided free pizza and pop, with all chapter members in attendance to promote and inform all attendees about our OSA/SPIE chapter. The aim was to recruit more undergraduates into our student chapter, to advertise we went into 3rd and 4th year undergraduate classrooms to promote the event. We also distributed flyers postings in and around the science buildings and advertised directly in the physics undergraduate student association offices. This event was better than our last recruitment event. This time we attracted about 20 attendees outside of our chapter. But there were only few who showed interest in becoming a member. However, our chapter is discussing ways to improve and we will be talking about this in our next chapter meeting.
Our chapter participated in the annual edition for O+P in San Diego from July 31 till August 05, 2010.

The current president of our chapter, Ranjeet Kumar represented this chapter in the leadership meeting on 31st July. He had a chance to interact with people from other chapters across the globe and discuss the general issues like how to involve more members into the chapter through various outreach programs.

We as a chapter discussed the leadership meeting among all the members, especially the presentations about how to make a successful chapter from Alaina G. Levine, Dirk Fabian and Ben Lockwood were very resourceful.

On Sunday; August 01, our chapter participated in the very first “Optics Outreach Olympics” held at the San Diego Marriott Hotel & Marina. The theme of this event for our chapter was “Bridging the gap between Astronomy and Optics” and our chapter was one of the twelve chapters that took part in that event. That event was a big success and that gave all the participants an opportunity to get know about the outreach event from other chapters.
Upcoming Activities

1. Outreach Activities

We currently do not have any educational outreach activities planned in the near future. We will discuss about new ideas in the next chapter meeting in the first week of March.

2. Educational Activities

Unlike last two years, unfortunately at this point of time there is nothing planned for this summer but in our next meeting we will be talking about this in detail and we hope to have something this summer as well.

Guest Speaker

We hope to use one of our OSA or SPIE travelling lecturer grant to invite a speaker to Calgary this coming summer.

3. Recruitment Activities

Spring Recruitment Party

We are holding a second recruitment session with free pizza and pop in mid-April 2011. This time around we will once again enter upper year undergraduate offices and email and post notices to advertise the event. In addition we will hold lab tours for the third-year undergraduate optics class, followed by pizza lunch. We believe this will increase our recruitment probability because it is most likely students in this class who will be working in our quantum optics labs in the upcoming summer.
## 2010-2011 Financial Report

All values are in CND dollars

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<th>Expenses</th>
<th>Bank Balance</th>
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<td>Pop and Pizza(Lab tour and presentation)</td>
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**Balance as of March 1, 2011**

$1548.71

**Total Expense 2010-2011**

$263.66

**Total Revenue 2010-2011**

$0

* Starting balance consists of OSA chapter funds.

** We had $700 from SPIE to spend on CQISC’10 but our overall expense for the conference was less than the projected expense. So, we could not spend the money from SPIE and the final balance includes the $700 for CQISC’10 as well.