Welcome to the new Impact Centre at the University of Toronto

The Institute for Optical Sciences (IOS) was founded with a vision to become one of the leading academic institutions in optics research. Soon, a group of IOS faculty felt the need for transcending beyond academic excellence - to translate the knowledge generated into benefits to society. The IOS adapted two paths towards this goal: (1) working with existing industry as a receptor of knowledge to help improve their product offerings, and (2) helping students start new companies built on core knowledge developed during their academic research.

Since embarking on this path, the IOS has launched a variety of programs. In 2004, it launched a non-credit graduate seminar course, Introduction to Scientific Entrepreneurship, which has since evolved to one of the most popular programs - Entrepreneurship 101 - currently offered by MaRS. The annual Techno intensive workshop was launched in 2010 and trains groups of aspiring young entrepreneurs, mostly graduate students, to build new, high value, high technology start-ups based on the physical sciences. Having just completed its fourth year, Techno has helped launch dozens of companies commercializing a diverse range of technologies. In 2009, the Solid State Lighting Network (SSLNet) was launched as a grassroots cluster that brings academic researchers, industries, governmental agencies and end-users of energy efficient lighting together and fosters collaborative R&D, knowledge sharing and market acceleration.

The University of Toronto has since recognized the need for building on this unique model of entrepreneurial ecosystem and is now scaling up these IOS pilot projects as an independent unit within the university - the Impact Centre. Its mission will be to coordinate interdisciplinary industry clusters, provide graduate students appropriate training and infrastructure support to help start new high technology start-ups, and to become a leader in developing new models for academic-industry collaborations.

As the Impact Centre takes on its new mission, the IOS will continue to pursue its core mandate - excellence in optics research and education.

The Impact Centre will focus on accelerating the translation of fundamental scientific knowledge into benefits to society. It will expand the grassroots industry clusters to new areas, increase its offerings in entrepreneurship education to students and more closely interact with industry and researchers to proactively generate new knowledge based on industry needs. We plan to keep you informed of the Impact Centre through this newsletter. If you are not interested in receiving newsletters or other information from the Impact Centre, please unsubscribe using the link at the bottom of this newsletter.
Thank you for your continued support as we look forward to growing this new initiative.

**Academic/Research**

**Plants to build better solar cells**

The University of Toronto news site recently posted an article featuring an exciting research collaboration between a number of University of Toronto faculty that has been funded by the Connaught Global Challenge competition. Headed by Prof. Ted Sargent from the Department of Electrical and Computer Engineering in collaboration with a number of cross-disciplinary investigators, such as IOS faculty members Gregory Scholes, Dwight Seferos and Zheng-Hong Lu, the project will bring together investigators along with students and postdoctoral fellows from the disparate fields of photobiology and quantum biology to develop new, inexpensive, and highly effective solar cells. Also, a distinguished visitor component of the program will bring Sir Richard Friend of the University of Cambridge to campus.

The Global Challenge is the marquee program of U of T's Connaught Fund. Created from the 1972 sale of Connaught Laboratories, which first mass-produced U of T's Nobel award-winning discovery of insulin, the fund invests close to $4 million annually in emerging and established scholars at U of T.

**Submissions to Grand Challenges Canada Stars in Global Health program**

The latest round of proposals for the Grand Challenges Canada Stars in Global Health program are online and available to view until November 15. Each proposal includes a short video that can be viewed and voted on by the public. A number of current students, graduates, and companies from the IOS community have submitted proposals and we invite you to check out and support their ideas.

- **VisuFLUID - Computer Software for Sanitation and Wastewater Treatment Facility Design** - Hanif Montazeri - University of Toronto

- **Saving lives one closure at a time: A simple surgical kit for deep wound closure in low-resource settings** - Stanley Wong - University of Toronto

- **Surgery to go: A lifesaving, portable, reusable surgical kit for use in remote villages** - Petra Lucker - University of Toronto

- **A TelePathology System for Training and Diagnostic Support** - Anne Martel - PathCore Inc.

- **Low-cost and effective therapy for neurodegenerative disease** - Joost Schulte - Oxalys Pharmaceuticals, Inc.

- **Affordable and cloud-based ultrasound platform for obstetric care in developing countries** - Xingxing Xing - Sonola Inc.

**Entrepreneurship**

**The Honourable Gary Goodyear visits TechnoLabs**
On September 11th, we were very happy to host Minister of State for the Federal Economic Development Agency for Southern Ontario, Gary Goodyear during a tour of the university and some surrounding innovation centres. In addition to a tour of our facilities and a presentation by our director Prof. Cynthia Goh, four companies gave quick pitches for their new and developing companies. Lunanos, Pathcore, Lumentra and Sciencescape all showcased the diverse range of new and exciting work being done at the University of Toronto as well as throughout the city.

Vive Crop Protection receives $3.7 million investment from the Government of Canada through SDTC

Vive Crop Protection announced on September 18th that they had received an investment of $3.7 million from the Government of Canada through Sustainable Development Technology Canada (SDTC) to help develop an improved pesticide application distribution method based on their Allosperse technology. Vive was founded by Prof. Cynthia Goh and a group of researchers at the Department of Chemistry and makes innovative formulations for the crop protection industry, addressing patent expiry, lack of replacements and regulatory pressure to reduce organic solvents. Vive’s Allosperse system makes products more effective, replaces solvents with bio-inert polymers and coats plants more evenly. Highly Commended for Best Formulation Innovation at the 2012 Agrow Awards, Vive holds 31 patents with 33 patents pending. For more information on the company, check out their website.

Student Activities

IMC 200 Innovation and Entrepreneurship course takes off

Over the past few weeks our new course in innovation and entrepreneurship started the semester by discussing key issues that separate research and inventions. With 200 students from a wide range of departments, with 30% coming from non-science backgrounds, the initial feedback has been very positive. Students have said that the course is very different from their other courses in that they get to interact with students from other disciplines, think and discuss ideas beyond the textbook, and that it connects ideas they have been taught in school with their own experiences. In the coming weeks they will make the transition to the meaning of a corporation, how ideas are turned into products, reach the market and create value for those who use them.

Events

Prof. Cynthia Goh to speak at the Economic Club of Canada
On October 9th, the Economic Club of Canada is hosting an event called Entrepreneurship at Ontario Universities: Fueling Success. The discussion will feature our director, Prof. Cynthia Goh, Sean Wise, professor at the Ted Rogers School of Management at Ryerson University as well as Mike McAuley, founder of Buffer Box. A recent survey has shown that almost half of Canada’s post-secondary students see themselves starting a business after graduation, and this discussion will highlight many of the programs, opportunities, and challenges facing today’s student entrepreneurs. More information and tickets are available on the Economic Club of Canada website.