



INSPIRING LEADERSHIP 2016/17

The Institute for Leadership Education in Engineering

CONTENTS

- 3 Director's welcome
- 6 Leadership courses
- 9 Co-curricular programs
- 14 Outreach & research highlights
- 18 Alumni spotlight
- 21 Looking forward

Inspiring Leadership is the annual review from the Institute for Leadership Education in Engineering (ILead), Faculty of Applied Science & Engineering, University of Toronto.

We thank Alan Wu (EngSci 1T5, MSc CompSci 1T7) for his photography. We will miss his incredible talent as he moves on to other endeavours.

Best of luck, Alan.

COVER: Mohammed Manek (IndE 1T8+PEY), Shannon Goulden (ChemE 1T6+PEY), Sami Alkanafani (MechE 1T6, MSc 1T8), Heather Kelsall (IndE 1T9)

INSIDE COVER: Madeleine Santia (IndE 1T7+PEY) at the Community of Practice on Engineering Leadership Conference, Apr 2017.



WELCOME

It's true what they say—change is the only constant. It's certainly true here at ILead. In 2010 when the Institute was established, many people believed engineering leadership education was just a fad. Seven years on, its value is being understood and its impact felt.

While our student programs continue to grow and evolve, this year is notable for growth in partnerships and research milestones.

I invite you to read on. As always, thank you for your interest.

Professor Doug Reeve, PhD, PEng
Director, Institute for Leadership Education in Engineering

ENGINEERS LEADING CHANGE TO BUILD A BETTER WORLD

“I’ve always known that driving change and personal growth are both very important to me. Even with technical work, *Why* should be the first question you answer, not the last.” —**Paul Seufert, EngSci 1T8+PEY**

“Being an engineer is about more than just being able to use the right equation. While we work tirelessly semester after semester, chasing after better grades, and trying to become better engineers, it’s easy to forget that our designs are meant to serve society.” —**Namya Syal, ChemE1T9**

**ENGINEERING CAN BE MORE:
PAUL AND NAMYA**

LEADERSHIP COURSES

After a growth spurt in academic course offerings and enrolment over the past few years, our curricular program stabilized this year, allowing us to focus on building our teaching roster and deepening our reach to students within non-leadership courses.



PROF. ALISON OLECHOWSKI



PROF. PATRICIA SHERIDAN

WE HIRED TWO LEADERSHIP PROFESSORS

To keep pace with the demand for our leadership courses, and to keep us on the forefront of pedagogy, we are proud to have hired two teaching stream faculty. Prof. Alison Olechowski, who is cross-appointed with the Department of Mechanical & Industrial Engineering, completed her PhD at MIT where she studied decision-making tools used in product creation. Prof. Patricia Sheridan completed her PhD at U of T, having made contributions to measuring and evaluating engineering team effectiveness. We look forward to having them join our team.

TEAM WORKS INTEGRATED INTO MORE CORE ENGINEERING COURSES

This year Team Works (formerly TELS) was integrated into 12 engineering courses, up from eight courses last year, with approximately 2600 participating students. Prof. Sheridan developed the technology over the course of her PhD with ILead to provide students with peer feedback on their team behaviours. We believe that as Team Works continues to be adopted by instructors who teach group-oriented courses, more students will understand how they, as individuals, function in teams and subsequently learn how to maximize their efficacy.

OPPOSITE: Students attend a panel talk on non-academic career and leadership opportunities for PhDs, Jan 2017.





CO-CURRICULAR PROGRAMS

We challenge ourselves every year to rethink how we deliver programs to students outside the classroom. This year our Leadership Labs entered their second run, our Summer Program expanded to be a Faculty-wide initiative, and we piloted our Summer Fellowship program for the Faculty's most experienced student leaders.

LEADERSHIP LABS EXPANDED

This year we partnered with Prof. Jason Bazylak and the First Year design course, *Engineering Strategies & Practice*, to offer students professional development (PD) points for attending our workshops. PD points is an initiative that gives credit to students who participate in career-oriented learning. This incentive boosted attendance from First Year students. We had 769 students—more than double last year—attend 23 labs. Over a third of those students attended multiple sessions.

SUMMER PROGRAM BECAME A CROSS-FACULTY OFFERING

Previously offered only through the Department of Chemical Engineering & Applied Chemistry, the Summer Program opened up to all students across the Faculty in 2016. Our field trips were always a crowd favourite, so we built more into the curriculum in addition to increasing the range of educators with whom we collaborated. The expanded program consisted of eight sessions held over eight weeks, five of which were workshops on campus and three were activities off campus. We had 53 participants, many of whom continued to engage with us through other programs after the summer.

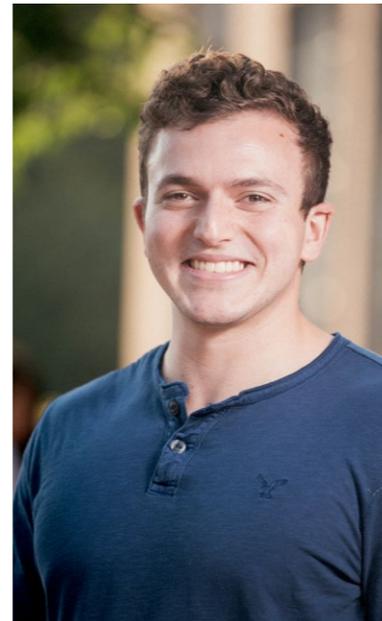
SUMMER FELLOWSHIP COMPLETED ITS FIRST COHORT

Many of ILead's programs are accessible to all students, regardless of their exposure to formal leadership training. We developed the Summer Fellowship this year for students who already have extensive leadership experience and need targeted learning and a network of like-minded peers to support their vision. Our inaugural run welcomed a cohort of 10 campus leaders. They participated in eight sessions over the course of 16 weeks during the Spring-Summer term. Our objective was to foster a community of influential students who share our philosophy of service-oriented leadership. Feedback has been very positive.

OPPOSITE: Students solving a team challenge at a Leadership Lab session, Mar 2017.



MEET OUR LEADERSHIP LAB FACILITATORS: KAREEM, DEBORAH, KATIE, AND JEREMY



“The ILead team recognizes that each student is unique and has their own aspirations and they do everything in their power to make sure each student is empowered to accomplish what they set out to do.”

Kareem El-Baradie, ChemE 1T7



“As engineers we consider all of the material resources we have available to us, but through ILead I have a greater appreciation for the most important resource we have as engineers: our team.”

Katie Marie Dritsas, ChemE 1T6



“ILead’s Club Leaders Roundtable taught me so much. Before, I had never developed a concrete vision for my non-profit organization. This pushed us towards developing new partnerships and an even wider reach.”

Deborah Raji, EngSci 1T8



“ILead plays a critical role in the sense of community and personal development of engineering students at U of T.”

Jeremy Chan-Hao Wang, EngSci 1T7+PEY

Summer Program participants learn about civic engagement during a field trip to Toronto's City Hall where they heard a presentation on "Engineering Leadership in a Municipal Setting." OPPOSITE: Students pose in front of the ever-popular Toronto sign at Nathan Phillips Square.



OUTREACH & RESEARCH HIGHLIGHTS

This year our outreach and research endeavors brought together scholars, engineers, and the ideas that drive them. We hosted the first NICKEL conference, expanded the CoP's membership, and completed a major study for the Ontario Government examining the engineering school to workplace transition.

NICKEL HELD FIRST CONFERENCE

NICKEL—the National Initiative on Capacity Building and Knowledge Creation for Engineering Leadership—held its inaugural conference at U of T in August 2016. This first gathering of engineering leadership educators from across the country was the result of months of collaboration with our Canadian colleagues. We are pleased to call it a success, having brought together scholars and teachers from 14 institutions who previously interacted only through email.

COMMUNITY OF PRACTICE ON ENGINEERING LEADERSHIP RECRUITED MORE COMPANIES

The Community of Practice on Engineering Leadership (CoP) completed its second year with eight partner enterprises. New members included Kijiji, Enwave, and RL Solutions. We held conferences focusing on university to work transitions, and workplace adjustment of early career engineers, respectively. Both received positive feedback. More recently, we've offered customized workshops for CoP partners through both face-to-face and virtual means.

RESEARCH UNEARTHED SCHOOL TO WORKPLACE TRANSITION EXPERIENCES

This year we completed our report to the Ontario Ministry of Advanced Education and Skills Development that details our findings on the transition from engineering school to work. We interviewed engineering graduates, managers, as well as human resource professionals and found that both universities and employers play important roles in the transition process. Students and young engineers who have greater access to social and cultural capital, including opportunities to develop soft skills, transition better than those with less access. Our report provides recommendations for how universities and employers can help achieve more successful and equitable transitions to the workplace.

OPPOSITE: Participants of our annual luncheon with business leaders at Massey College, Apr 2017. Front row from left: Prof. Doug Reeve, Professor and Director, ILead; Ave Lethbridge, Executive Vice President, Toronto Hydro; Cristina Amon, Professor and Dean, Faculty of Applied Science & Engineering; Peter Wallace, City Manager, City of Toronto; Anne Sado, President and CEO, George Brown College; Dennis Fotinos, Executive Chairman, Enwave Energy; Tom Woods, Vice Chairman (Retired), CIBC





Anamjit Singh Sivia (ElecE 1T7) engages with HR professionals and practicing engineers at CoP conference, Apr 2017.
OPPOSITE: Leadership Development Professor David Colcleugh speaking at inaugural NICKEL conference, Aug 2016.

ALUMNI SPOTLIGHT: JASON SUKHRAM

We always knew Jason Sukhram (MSE 1T2) was destined for big things. We first met him in 2009 when he took one of ILead's co-curricular programs, which was the beginning of his long engagement with us. Jason has since finished the Skoll BASc/MBA program, criss-crossed the globe, and moved to New York to work at the Clinton Foundation. We invited him back to Toronto to be a panelist for our Change the World talk in February. It was like a little homecoming.

What have you been up to since you graduated?

"I lived and worked in Southeast Asia, Latin America, and sub-Saharan Africa to learn about global development challenges. I also joined a research group that co-authored a paper on scaling health innovations in low and middle-income countries. I now live in New York City working for the Clinton Foundation's poverty alleviation initiative. I work on projects that support rural social enterprises and manage organizational development initiatives to help my team be more effective."

How have you used the leadership lessons you've learned?

"As engineers, we need to recognize that human factors are at the centre of every problem worth solving. People will always be the beneficiaries of innovative technologies. Whether I'm trying to generate buy-in from my teammates, or convince a farmer that we can help them achieve a better life for themselves, I recognize that I can't be successful unless those that have a stake in the work I do are convinced that I understand their situation, values, and aspirations—and that they also understand mine. Individualizing my approach to different people has allowed me to become a more supportive teammate and uplifting leader."

What's next for you?

"I'm fortunate to be pursuing a career that I find fascinating while making a positive impact on the world. I want to develop myself as an expert in impact investing and other market-driven solutions to development challenges. Of course, I want to continue to develop myself as a leader. I hope the next phase of my career leads me to opportunities that will let me grow the rate and scale at which I can help others, while inspiring others to want to do the same."

OPPOSITE: Jason Sukhram with Annie Simpson, ILead Assistant Director, Feb 2017.





LOOKING FORWARD

We see growth opportunities in the professional sphere. Next year we will be strengthening the career readiness of undergraduates, PhD students, as well as engineers in the workforce through new initiatives. Partnerships will be essential to our success.

PREPARING PHDS FOR CAREERS BEYOND ACADEMIA

There simply are not enough faculty positions to absorb the number of graduates with PhDs. Together with the Vice-Dean, Graduate Studies, ILead will be piloting the OPTIONS Program (Opportunities for PhDs: Transitions, Industry Options, Networking, and Skills) to support PhD students and post-doctoral fellows who wish to explore non-academic career paths. This will be an eleven-week, non-credit program that covers topics such as effective networking, workplace culture, and career planning.

PROFESSIONAL DEVELOPMENT FOR TORONTO HYDRO

Companies are increasingly looking to ILead as a source of expertise on engineering leadership education. We are proud to work with Toronto Hydro, Canada's largest municipal electricity distributor, to deliver a customized professional development program for their engineers. Spread over several months, the program will cover topics including self and team leadership, effective communication, as well as change management. We hope a successful run will spark more interest in private entities seeking customized leadership development programs.

PARTNERSHIPS TO ENHANCE PROFESSIONAL EXPERIENCE YEAR

Internships and co-ops provide valuable opportunities for students to gain skills and clarify career aspirations. ILead, along with the Engineering Career Centre and the Alumni Office, will be pooling expertise to improve the Professional Experience Year program with funding from the Dean's Strategic Fund. We will leverage the Career Centre's data, the Alumni office's access to PEY alumni, and our own program evaluation knowledge to recommend improvements that will strengthen U of T's work-integrated learning opportunities.

OPPOSITE: Students, staff, and faculty celebrate a year of learning and growth at ILead's Spring Fling event, Mar 2017.



**IT'S BEEN A BIG YEAR FOR US.
THANK YOU FOR SUPPORTING OUR WORK.**

SEE YOU NEXT YEAR!

On Sep 23, 2016 we held a pop-up booth in the Sanford Fleming basement where we encouraged students to share their hopes and aspirations. We gave them ice cream for their bravery.

ENGINEERS LEADING CHANGE TO BUILD A BETTER WORLD.



UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

Institute for Leadership Education in Engineering

INSTITUTE FOR LEADERSHIP EDUCATION IN ENGINEERING

Faculty of Applied Science & Engineering, University of Toronto
200 College Street, Suite 240, Toronto, Ontario M5S 3E5 Canada
ilead.engineering.utoronto.ca

