

INSPIRING LEADERSHIP 2013/14

The Institute for Leadership Education in Engineering



**WE BELIEVE IN THE POWER OF ENGINEERS
TO SHAPE THE WORLD, TO MAKE IT MORE
PROSPEROUS, SUSTAINABLE AND HUMANE.**

**WE BELIEVE IN THE POWER OF
ENGINEERING LEADERSHIP.**



WELCOME

It's a joy to watch bright young people emerge as confident, engaged leaders. This year I want to share with you four stories of recent engineering graduates we had the pleasure of supporting at the Institute for Leadership Education in Engineering (ILead). I hope you find them as inspiring as I do.

Whether they are budding entrepreneurs, researchers or agents of international development, the leadership skills that our students learned here will serve them throughout their lives.

Engineers are masterful shapers of our world. At ILead, we believe that when leadership skills empower technical expertise, breathtaking things happen.

Our vision is for *engineers leading change to build a better world*. These are our students.

A handwritten signature in black ink, appearing to read 'D. Reeve', with a long, sweeping horizontal line extending to the right.

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



ALBERTO PICARD-AMI

When we chatted with Alberto, he had just returned from backpacking in Europe, a well-earned adventure for someone so involved throughout his student career. He chaired the National Business and Technology Conference, was Sponsorship Director for the Engineering Society and President of the Nspire Innovation Network. Alberto also contributed enormously to ILead’s leadership development student groups.

Why did you want to be an engineer?

My ultimate goal in life is to eventually build and lead a company of my own. I studied engineering to hone the critical thinking and analytical abilities that are necessary for complex problem solving. Additionally, engineering taught me how to communicate and work effectively in multi-disciplinary teams, to design and to create high-impact solutions.

Looking back on your time at U of T Engineering, how would you describe yourself in First Year, compared to who you are today?

In First Year, I’d say I was a bit of an “innocent loose cannon.” I was incredibly excited to join clubs, work on cool things, “lead” others—but I had no idea what I was doing. I had an “act first, reflect later” mentality, which ended up being incredibly challenging. Now, I’m more self-aware of my strengths and ambitions, as well as better able to empathize with, and leverage the abilities of, my peers. The biggest lesson I’ve learned is that leadership begins with a foundational focus on your team, empowering your team members to realize their potential and supporting them in achieving their goals. Today I employ a “How can we best succeed together?” approach, which has made all the difference.

Why is leadership education so important right now?

Engineers are capable of solving some of the world’s most significant problems, from creating open education platforms

to delivering cost-effective universal healthcare. The thing is that engineers can’t do this alone. They’ll need to be able to communicate technical ideas effectively and collaborate with peers from other backgrounds. Leadership education is the bridge that will enable engineers to become changemakers in a global environment.

How has ILead supported you through your journey?

ILead gave me the opportunity to develop my leadership abilities in an academic and experiential environment. These abilities enabled me to lead a national non-profit as a Third Year student. They prepared me to lead a four-month North American supply chain initiative during my internship at Procter & Gamble. ILead has given me the tools to engage my peers to tackle the most significant challenges and excel each step of the way.

What’s the next stage of your journey?

I will be helping to build a technology startup in Panama City, Panama. My goal is to leverage technology to improve the quality of life in Latin America. I’m passionate about my hometown and want to use my engineering and leadership skills to make a difference there. Throughout my professional career, I plan to continue to seek opportunities to empower my peers and serve my community.

From: Panama
Program & Year: IndE 1T3+PEY



TAMEKA DEARE

A natural community-builder, Tameka's passion for international development and equity is infectious. She was part of a research team that examined the potential of clean cook stoves for improving the lives of millions in India, an executive in the National Society of Black Engineers and a project leader for the Great Canadian Shoreline Clean-up. Like Alberto, Tameka was also highly involved in ILead's leadership development student groups.

Why did you want to be an engineer?

I have always wanted to promote and enact the change that is necessary to have a positive impact on the lives of people in developing countries, particularly my native Trinidad and Tobago. I understood that science could improve the lives of disadvantaged people. Becoming an engineer for me meant embarking along the path of understanding how the principles of science and technology can do good for the world from a development perspective.

Describe a pivotal moment in your life where you learned to become a better leader.

This would have to be the moment when I believed my conscious leadership journey actually began, during the Institute for Leadership Education in Engineering's Appreciation Night dinner in 2011, an annual event that honours the hard work of students over food and fun. The sense of community I felt, where people were so invested in each other's success, impressed upon me two things. First, leadership cannot develop within a vacuum. It thrives in, and is shaped by, the environment in which you choose to nurture it, so I must choose the environment well. Second, becoming a better leader begins with one making the choice to do so. One must purposefully thrust oneself in new and sometimes uncomfortable circumstances that lead to personal development and leadership growth.

Why is leadership education so important right now?

Leadership training helps engineers navigate and position themselves in places where they can make the most impact. No engineer's toolbox is complete without it, especially now in a world that needs critical thinkers who see the microsystems as well as the bigger picture.

How has ILead supported you through your journey?

ILead has exposed me to opportunities that encouraged growth, both academically and personally. It has given me confidence to follow my passions because it has taught me how to pursue success and learn from my failures. More importantly, it has taught me that there is always room for improvement, always room for growth.

What's the next stage of your journey?

The next step in my leadership journey is learning to transition from being a leader in the structured student world to being a leader in the messy, complicated and uncertain "real" world. Figuring out what steps I need to take to realize my goals is proving trickier than I initially thought.

From: Trinidad & Tobago
Program & Year: ChemE 1T3+PEY



From: China
Program & Year: ChemE 1T3+PEY

BO ZHANG

A fiercely intelligent young man with a love for research, Bo exemplifies a quieter, gentler kind of leader-engineer. He's co-chaired the local chapter of the Canadian Society for Chemical Engineering and the Undergraduate Engineering Research Day ("UnERD"). Bo's also a basketball enthusiast and served as President of the Engineering Athletics Association. Bo took ILead's Organizational Leadership Certificate Program.

Why did you want to be an engineer?

Ever since high school, I have been interested in the study of nature and how to unravel its undiscovered secrets. Engineering focuses on applying those discoveries to build a better society. Becoming an engineer is a win-win situation for me because it allows me to pursue my passion for science and to help build a stronger community.

Looking back on your time at U of T Engineering, how would you describe yourself in First Year, compared to who you are today?

Like many of my classmates, I was very passionate and fearless in making changes through student organizations. However, the process of making those changes was quite a struggle, due to my lack of skills and experience to effectively influence those around me. I've since learned to be more patient, more modest and better at facing setbacks. No matter how good you think you are, or how much you feel you deserve something, there is always someone better and more deserving than you. I'm a much happier and appreciative person because I've learned to enjoy giving my best in the face of challenges, rather than simply in acquiring what I want.

Why is leadership education so important right now?

I believe these skills are necessary to complement engineers' technical expertise. Leadership training can help engineers at better realizing their weaknesses and strengths, and to better build and maintain meaningful connections with others.

How has ILead supported you through your journey?

During my five years at U of T Engineering, ILead has provided numerous opportunities for students like me to take up leadership roles. I have learned several concepts that helped me to better understand myself and others and to build better teams. The ILead staff are always available to provide support with the challenges I faced. I knew they were always there for me.

What's the next stage of your journey?

After completing my masters at Cornell University, I hope to pursue my PhD in the UK. My goal is to pursue a career in research and development to advance science in ways that could help us build a more sustainable global community.



From: Canada
Program & Year: EngSci OT5, ChemE MASc OT7, PhD 1T2

ANGELA TRAN KINGYENS

What does it take to succeed as a venture capitalist in Silicon Valley? Angela, who spends her time between Palo Alto and Toronto, will tell you self-awareness, a knack for spotting potential and a desire to help others go a long way. While at U of T Engineering, she co-founded the leadership development group for graduate students and was a teaching assistant for ILead's very first course titled "Leadership and Leading in Groups and Organizations."

Why did you want to be an engineer?

I absolutely love problem solving and thrive on figuring out creative ways to overcome challenges. I appreciate theory, but I love application. My mind constantly thinks of ways in which I can do things in a more efficient and effective manner. And my father is an engineer—he is my superhero.

Looking back on your time at U of T Engineering, how would you describe yourself in First Year, compared to who you are today?

In First Year, I was less self-aware. There is so little time to reflect in your undergraduate years when you have problem sets to complete and exams to study for. Now, I definitely know myself better and I make more *effective* decisions based on my values: compassion, continuous learning and freedom. ILead helped me identify these and it is something that I carry with me and communicate to others every day. Other important lessons that I learned include: (1) leadership can be learned and taught, and (2) everyone can be a leader, as this is defined as someone capable of positive change. These lessons have shaped my personal mission of wanting to help others recognize and reach their potential.

What would the world look like if more engineers developed their leadership capability?

I picture a world where every engineer feels empowered to change the world for the better *because s/he knows s/he can*. This is because every engineer has developed the leadership skills

required to be able to work more effectively in teams, and is not stifled by what position or job title s/he has. With more collaboration comes more innovation and a greater probability of creating lasting impact.

How has ILead supported you through your journey?

In so many ways. Mainly, however, they connected me to amazing role models who, to this day, continue to be incredible mentors, helping me with my personal and professional development. They know how to ask the right questions to inspire me to action.

What's the next stage of your journey?

I love being a venture capitalist because it aligns with my core values. Every day, I learn about new technologies and industries while working with entrepreneurs, helping them achieve their dreams. So the next stage of my journey is to keep doing what I'm doing, but to look for opportunities to broaden my reach, to find scalable ways to help others in the startup ecosystem, whether it be in Silicon Valley or Toronto or the rest of Canada, as well as to broadcast my message on how important self-leadership and leadership development are. I'm always looking for ways to give back to our community, as it was so instrumental in shaping the person I am today.



OUR YEAR AT-A-GLANCE

BRINGING SEASONED PROS TO CAMPUS

We had the privilege of welcoming 26 senior leaders from the private and public sectors to speaking engagements, working lunches and panel discussions. Our students often tell us how much they appreciate these opportunities to learn from those they see as role models.

ACADEMIC COURSES

This year we launched our new graduate course “Positive Psychology for Engineers: The Happy Engineer.” *Happily*, it earned positive student reviews for unconventional teaching and learning. In 2013–2014 we had total enrolment of 227 undergraduate and graduate students in six leadership courses.

ENGINEERING LEADERSHIP PROJECT

After a period of relentless analysis, we submitted our paper, “Engineering leadership: Grounding leadership theory in engineers’ professional identities” to the scholarly journal *Leadership*. In it, we identified three ways in which engineers lead in the workplace: technical mastery, collaborative optimization and organizational innovation.

TEACHING TEAM EFFECTIVENESS

Our PhD candidate Patricia Sheridan tested her Team Effectiveness Learning System in First Year Design teams this year. Her thesis project aims to enhance the way teams work together by using intelligent online software to provide feedback precisely when it’s needed.

NEW ACADEMIC CERTIFICATE

Reflecting our Faculty’s increasing commitment to leadership education, the Registrar’s Office announced that undergraduate students will be able to earn a new Academic Certificate in Engineering Leadership by taking at least three leadership courses. We hope this will provide students greater incentive to take our expanding suite of academic offerings.

RECOGNIZING STUDENT LEARNING

In 2013–2014 U of T launched the Co-Curricular Record (CCR) to recognize student learning outside the classroom. This year 191 students who took ILead’s co-curricular programming, such as our certificate programs and leadership development student groups, were recognized on their CCR.

AWARD-WINNING COLLABORATION

It was a cold Spring morning when the call came in at 9:30AM for Doug Reeve. Joy was about to spread like wildfire through the ILead office on Monday, April 28.

The person on the other line had called to inform us that our team had won the 2014 Alan Blizzard Award for distinguished collaboration in a Canadian university. The award's sponsoring body, the Society for Teaching and Learning in Higher Education, recognizes one team nationally for collaborative work to enhance student learning.

We were thrilled to win this award because it acknowledged years of hard work and commitment. Because we teach our students the importance of collaboration to good leadership, we want students to know that this is something we genuinely believe in and that we practice what we preach.

Our mission, to change the way people understand and value engineering leadership, is no easy task. But the Alan Blizzard Award gives us a boost that propels us forward.

Opposite: (back row from left) Estelle Oliva-Fisher, Deborah Peart, Patricia Sheridan, Amy Huynh, Robin Sacks, (front row from left) Annie Simpson, Greg Evans, Brian Tran, Doug Reeve, (not pictured) David Colcleugh, Nick Evans, Cecilia Konney, Alison McGuigan, Kristina Minnella, Cindy Rottmann, Wayne Stark.





CONNECT. ENGAGE. SUPPORT.

We believe that developing leadership skills is critical to a 21st century engineering education. The stakes have never been higher, because tomorrow's great challenges will undoubtedly be global in nature. Thankfully, engineers have always been up to the task.

Our graduating students, some of whom are profiled here, prove that giving young people the tools and the space needed to become skilled leaders strengthens the foundations of an engineering education.

The Institute for Leadership Education in Engineering invites you to learn more about our student programs, our research and our industry partnerships. With your engagement, we can support more exceptional students to answer the call of their profession.

Our vision is for *engineers leading change to build a better world*. Join us.

LEARN MORE

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ENGINEERS LEADING CHANGE TO BUILD A BETTER WORLD.



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