

# Opt!ons

Engineering Science... engineers for the world

## OPEN FOR DISCUSSION... A MESSAGE FROM THE CHAIR



William R. Cluett  
Professor and Chair

THIS YEAR marks the end of my term as Chair of the Division of Engineering Science that began

in 2005. The University has a practice of undertaking a review of an academic unit at the time that its Chair completes his or her term. A summary of the results of this review is provided to Governing Council and the purpose of the review is to facilitate the assessment of the academic unit and its program.

In this context, an external review of the Division of Engineering Science will be conducted in December of this year. A reflection on the past five years has been written and was offered to all students, faculty and alumni back in February for comment. Over 250 people responded to this offer and many provided feedback that was incorporated in the final document. If you would like a copy of this document as it will go to our external reviewers, please let me know ([cluett@ecf.utoronto.ca](mailto:cluett@ecf.utoronto.ca)).

You may notice when reading the article starting on page 10 that there is a gap between the contributions made by Professor Etkin and Professor Hooper as past Chairs. In this period, 1972-1977, Professor Boris Stoicheff served as Chair. Boris passed away in April of this year. He was in attendance at our Award Celebration in November, 2008 where we recognize our students who

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have won awards and the donors who have contributed to these awards. At this event, I asked him if he would say a few words and he initially declined but ended up taking me up on my offer at the last minute and spoke very fondly of his years as Chair. Below is a picture of Boris at the Award Celebration. I would like to dedicate this issue to him.



# EngSci Alumni Reception in Ottawa

Tuesday, November 9, 2010

7:00-9:00pm

The National Research Council of Canada, 1200 Montreal Road, Ottawa

Registration:

[www.alumni.utoronto.ca/EngSciOttawa2010](http://www.alumni.utoronto.ca/EngSciOttawa2010)



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# EngSci Year 1 Mentoring Program

To find out more about becoming a mentor to a Year 1 EngSci student, and hosting a student for a half or full-day at your place of work during Reading Week **February 22-25, 2011**, please contact our Year 1 & 2 counsellor Nicole Adoranti at

[nsci1\\_2@ecf.utoronto.ca](mailto:nsci1_2@ecf.utoronto.ca)



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# EngSci 11<sup>th</sup> Annual Alumni Dinner

**Friday, April 1, 2011**

6:00pm reception, 6:30pm dinner

**Hart House, Great Hall**

Keynote speaker: Stephen Georgas (7T1), Partner – Miller Thomson LLP

Tickets Sales and Registration:

[www.alumni.utoronto.ca/engscidinner](http://www.alumni.utoronto.ca/engscidinner)



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# EngSci Spring Reunion Luncheon

**Saturday, May 28, 2011**

12:00-2:00pm

Visit the Division's website at [engsci.utoronto.ca](http://engsci.utoronto.ca) in the New Year for an announcement regarding all Spring Reunion events, including this EngSci luncheon.



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## Nawaz Lakhani Manufacturing Option, 0T9+PEY



Back in first year, I envisioned myself pursuing the Nanoengineering Option and heading off to graduate school because I wanted to be on the cutting edge of technology and innovation. However, EngSci showed me that this is possible through any discipline; I completed my first two summer internships at small software firms and realized that grad school is not the only way to further my education. I then decided to minor in Economics and shifted my focus towards employment in innovative finance.

Having worked at RBC Capital Markets full time for the past two years, through PEY as well as through my final year of EngSci, I have gained a great deal of knowledge and experience in Electronic Trading. I have moved to New York to continue my role as Product Manager of Global Algorithmic Trading in the Global Equity division of RBC Capital Markets. With a strong technical background and keen interest in the growth of the business, I have been appointed as the bridge between business and technology, and am responsible for designing and delivering best-in-breed algorithms to financial institutions around the world. I see myself as an Engineer for the World (E4TW) because I have the desire for innovation and opportunity to make RBC's technology available globally.

EngSci's E4TW motto means that engineers add value to anything that requires problem solving anywhere in the world. It is important that we make this message clear to the world so that engineers are given opportunities to excel in non-traditional settings.

## Jeremy Scott Computer Option, 0T9+PEY



I am pursuing my Master's degree at MIT's Computer Science and Artificial Intelligence Lab at the intersection of artificial intelligence and human-computer interaction. I will be researching ways in which technology can adapt to our lives to allow us to express our ideas and interact with information more naturally.

Before EngSci I had never touched a programming language, but as soon as I began, I knew there was something in the logic behind the algorithms that I loved. I did my PEY with AMD in California creating design methodologies and writing software to build graphics chips. My fascination with computers has evolved, and I know I have the ability to apply software and hardware tools to interesting ideas that directly impact human lives.

In EngSci, the most important lesson I've learned is that if I set my mind to a task, I am capable of figuring out what I need to do and working hard to make it happen. Through my PEY and EngSci experience I have learned that it is important to reflect on what your education means for you long-term and what your career decisions might mean to the rest of society. I think the EngSci curriculum and the E4TW motto can inspire careers that mean both success and positive social impact.

## Rachel Tonelli-Zasarsky Biomedical Option 1T0



My dream is to facilitate the introduction of new biomedical technologies into the medical field. This feat will require that I understand the laws that govern health policy. To gain this understanding I am pursuing a law degree at McGill University beginning this fall.

Coming out of high school I was certain of my future - I wanted to be a doctor and had high hopes of becoming a

biomedical engineer who would revolutionize the medical field. Upon choosing the Biomedical Engineering Option I quickly learned that regenerative medicine is not being used to its full potential because of the moral, ethical, political, and financial obstacles that stand between doctors and patients. It is this realization that changed my focus to become a lawyer and work at the intersection of biomedical engineering and health policy, facilitating the transition of biomedical solutions from bench-top creations to life saving technologies.

I have learned how to push my limits because of the Engineering Science program, and have gained the confidence to accept the fact that nothing is too hard for me to learn. I will continue to work towards becoming an Engineer for the World. I hope to serve society by enabling accessibility to a higher standard of care.

## Dorian Tsai Aerospace Option, 0T9+PEY



From the start, I knew I wanted to do research in the field of aerospace. Fortunately, I was able to participate in various summer research experiences working with professors across the country at U of T, UBC and Carleton. I was also able to secure a PEY position at the National Research Council's Institute for Aerospace Research. All of these opportunities were extremely valuable to my development.

This fall I will begin research in space robotics within a rather unique graduate curriculum at the Erasmus Mundus

International SpaceMaster Program. This program will allow me to further my E4TW experience by studying space robotics for 6 months at each of the following universities, the Julius-Maximilians-University Wurzburg (Wurzburg, Germany), the Lulea University of Technology (Kiruna, Sweden), the Aalto University (Helsinki, Sweden), and the University of Tokyo (Tokyo, Japan) for a total of 2 years.

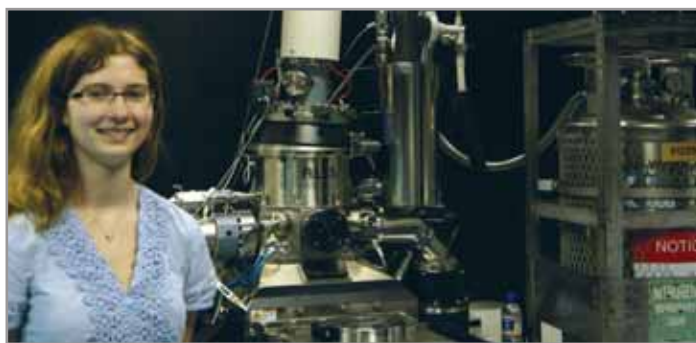
The motto "Engineers for the World" represents one who has a passion for engineering, is able to collaborate over cultural and social boundaries, and understands the impact of their work on both an individual and international (or planetary) scale. An engineer on the other side of the world may utilize the same fundamental principles of science and mathematics, but produce an entirely different solution to the problem. Engineering Science is my starting point and has given me the intellect that will allow me to travel around the world with the ability to challenge any problem and pursue any path with diligence and perseverance.

## Jessica Lovelock (1T3) NUS Summer Intern

In my research internship at the National University of Singapore (NUS) this past summer, I had the opportunity to work closely with a Helium Ion Microscope, one of only a handful in the world. This state-of-the-art tool is applicable in a wide variety of different fields ranging from bioimaging to nanolithography. The lab I worked in did a little bit of everything, and as such, each day brought a new project with its own unique challenges.

Since this microscope is still a relatively new technology, almost all the work being done here had never been done before. To this end, I felt like I had been placed at the forefront of some pioneering research, even if only for a short time. This was a nerve-racking, exciting and challenging experience, and it pushed me to accomplish more than I thought possible.

During the summer, I had the opportunity to work with and



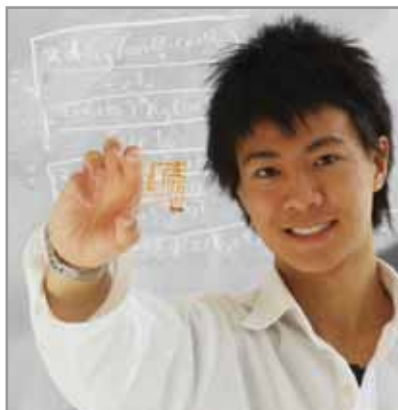
learn from many talented scientists and engineers, and was able to make some measurable contribution to their research. I was also the sole designer of a system to help automate the sample preparation process, which was an intimidating but also very rewarding experience.

Having had this opportunity so early in my academic career has been an inspiring and extremely worthwhile opportunity. I learned so much, not only academically, but also about myself and my goals for the future. I am so grateful to everyone in the Division of Engineering Science for affording me this chance; it truly was a once in a lifetime experience!

## Jonathan Yam (1T3) ESROP Fellow

As this past summer approached, my anticipation and excitement mounted; I was headed to Harvard to conduct research on microfluidics in Professor Robert Westervelt's lab and could sense that it was going to be unlike any other summer I have ever had.

Imagine having the ability to manipulate the flow and processes of hundreds of fluids in an area no larger than the palm of your hand. Such is the power of digital microfluidics, or "lab on a chip" technology. My project at Harvard involved designing and fabricating part of a microfluidic biosensor capable of extracting liquid from an aqueous environment and conducting biological assays. In essence, the device consists of patterned electrodes which selectively apply a voltage to a certain portion of the fluid, causing it to experience an imbalance in surface tension and begin to move. My challenge lay in engineering optimal solutions for facilitating these processes.



I was given a great degree of freedom with my project. I designed my devices using AutoCAD and fabricated them in the cleanroom at Harvard's Centre for Nanoscale Systems. The project was intellectually

stimulating, which made the evolution of my designs from sketches to reality truly exhilarating.

Between research in the lab, exploring Harvard and Boston, and making acquaintances with many amazing people, this summer was very memorable. The invaluable experience I have gained through the Engineering Science Research Opportunities Program (ESROP) has given me a great deal of exposure to engineering in a research context and has instilled in me an appreciation for an engineer's role in redefining the possible.

## Rishi Maharaj (1T2) E4TW Fellow

This summer I worked in the Citizen Lab at U of T's Munk School of Global Affairs. Citizen Lab is a



unique interdisciplinary endeavour headed by Professor Ron Deibert of the Department of Political Science that houses a variety of research projects at the intersection of technology and social science.

The project that I worked on, dubbed the OpenNet Initiative (ONI), is a collaborative effort between Citizen Lab and the Berkman Centre for Internet & Society at Harvard University which aims to systematically document the breadth and depth of Internet censorship across the globe. The empirical data compiled by ONI can then be used by researchers to better understand broader

questions in social and political science, such as why governments choose to filter certain content or how transparent they are about what is being blocked.

My task throughout the summer was to help build the software tools used by ONI researchers to collect and analyze data. Internet censorship analysis is a bit of a novel problem, so it was necessary for us to develop most of the tools we used from the ground up. While working at Citizen Lab certainly improved my programming skills, in my opinion the most valuable aspect of my experience was the opportunity to work in such a fluid, interdisciplinary environment. The novel research being done at Citizen Lab really illustrates the value of collaboration that reaches far across traditional disciplinary boundaries. I found that sometimes there is no better problem-solving aid than having someone with a different academic background at the table.

## Amanda Giang (1T1) and Amir Allana (1T2) Engineers Without Borders

*Amir and Amanda worked with Engineers Without Borders (EWB) for the summer in Ghana and Zambia, respectively. EWB operates in four African countries to find sustainable approaches to poverty alleviation. EWB's approach applies the creative problem solving skills inherent to the engineering profession to problems that are often non-technical in nature.*

**Amanda:** I worked in Zambia on a project promoting private sector development in agriculture, which engages with small-scale farmers, ensuring that they're not excluded by evolving value chains. I worked with pro-poor businesses on improving data management systems, ultimately to provide better services to rural farmers. My placement was also part of a larger goal of EWB, to convey insights about field-level realities of businesses which cater to small-scale farmers to the donor world, so they understand how to better support these businesses. I got a better sense of what "global engineering" can mean, and I'm excited to continue learning about it throughout my engineering career.



**Amir:** I worked at the district level of government in Ghana, part of an EWB initiative to produce strong data systems that will improve resource management and infrastructure planning processes. A part of my work involved creating a usable database that will eventually be scaled up to 20 districts. More importantly though, my job was to navigate through the system of donors, NGOs, politicians, and technocrats to develop processes that will work in-context. Building trust, understanding the challenges at the field level, as well as understanding the workers in the offices are all lynch pins to success. An engineering approach of systems thinking, creative methodologies, and testing new hypotheses is key; without incorporating social, cultural, and human factors into the work, things would fall apart.

# Highlights of EngSci's



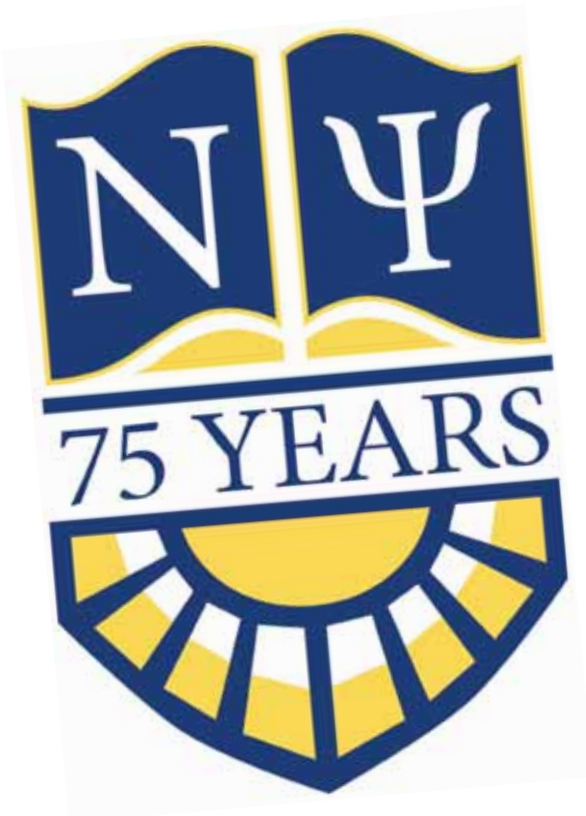
| Opera Star Isabel Bayrakdarian (9T6+PEY) and Maestro Julian Kuerti (9T9) performing with the Skule™ Orchestra as part of the 75th Anniversary Celebration held at Hart House on December 17, 2009.



| Skule™ Orchestra Manager Geoffrey Siu (0T9+PEY) and conductor Alex Ariza (0T8+PEY) post concert.



| Skule Idol winners Joe Likuski (8T2) and Anne Bornath (9T1) with Isabel and Julian.



| Kuerti, Bayrakdarian and Skule™ Orchestra in rehearsal.



# 75<sup>th</sup> Anniversary Year



| Dean Cristina Amon, Sarah Steed (concert producer), and Richard Hobson (5T4) at the 75th Anniversary Celebration.



| Mrs. Collins and University Professor Michael Collins at the 75th Anniversary Celebration.



| Professor Emeritus Ben Etkin (4T1) presents Xiaofan Jin (1T1) with the Etkin Medal for Excellence at the Spring Reunion Luncheon.

**Engineering Science 75<sup>th</sup> Anniversary**

## Lecture Series

**Theme of the Series: Engineers for the World**  
Three EngSci alumni will share their passion for three different career paths for current EngSci students to ponder as they prepare to become engineers of the world and for the world.

 <b>JOYCE POON</b> (EngSci 0T2) "Being an Engineering Scientist - Why I Love What I Do" <b>January 27</b> Bahen Centre 1130, 40 St. George Street	 <b>JAY CROSS</b> (EngSci 7T5) "Engineering Sports - How EngSci prepared me to Run a NFL Franchise" <b>March 1</b> Medical Sciences Building 3153, 1 King's College Circle	 <b>AV UTUKURI</b> (EngSci 9T6) "How EngSci Fostered Entrepreneurship in Me" <b>April 7</b> Bahen Centre 1130, 40 St. George Street
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**Format for all lectures:**  
 Reception: 6:00pm  
 Lecture: 6:30-8:00pm

For more information:  
[www.engsci.utoronto.ca](http://www.engsci.utoronto.ca)

Division of Engineering Science  
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| EngSci Spring Reunion Luncheon, May 29, 2010 (L to R) Carol Victor, Anthony Schafer (6T0), Robert Roden (6T0), Robert Noppe (6T1), Linda Noppe and Ted Davison (6T0).

# 75 Years of Vision and Leadership

As part of our 75th anniversary celebrations, we spoke to past Chairs of Engineering Science about their experience leading the Faculty's flagship program. Each Chair told us that the reputation of the program rests on the shoulders of the alumni. Extremely proud of each student that graduated during their tenure, their pride in the students brings out their modest side, but all have a strong sense of accomplishment in terms of what they achieved for EngSci.



Front row (L-R) Yu-Ling Cheng, Ben Etkin, Rod Tennyson, Cristina Amon (Dean), Zvonko Vranesic.  
Back row (L-R) Will Cluett, Keith Balmain, Carl Hamacher, David James.

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## **Bernard Etkin (4T1)** **1967 – 1972**

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*“EngSci is the search for new knowledge and its application for the benefit of humanity. When you graduate, you will be welcomed with open arms by the best graduate schools around the world. When you finish your education, you will be welcomed by industry, by government and by academes.”*

Etkin left his mark as Chair as the one who suggested the name Engineering Science when a Chemical Option was added to Engineering Physics, through the practice of routine student questionnaires for courses, and by the creation of the first common room for EngSci students. He also continued to be a strong supporter of EngSci when he served as Dean of the Faculty from 1973 to 1979. Etkin continues to interact with students and alumni at various events throughout the year and through his support of the Etkin Medal for Excellence, which celebrates outstanding performance in solid and fluid mechanics by a 3rd year EngSci student.

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## **Frank Hooper (4T6)** **1977 – 1983**

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Hooper took on the role of Chair during a period of adaptation and change. The program was drawing more international students, as well as students from across Canada, and students were increasingly interested in research as a career path.

*“Students contributed towards making significant research contributions in the field of engineering. The program continues to evolve and adapt to the changing world – it has to.”*

Ultimately, Hooper sees EngSci as a program that prepares students to take on new challenges, to adapt to new tools, analyze data, observe and interpret to predict and create.

As a graduate of the program, Hooper remembers the competitiveness and how bright his fellow classmates were. In fact, the basic characteristics and attitudes of the students seem much the same today as they were then.

*“EngSci students see themselves as contributors to the science of engineering. They want to contribute and lead.”*

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## **Roderick Tennyson (6T0)** **1983 – 1986**

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Tennyson, as an undergraduate, notes that EngSci had one office for then Chair K.B. Jackson, a secretary and a small library located in the old Skule™ house, with the library doubling as a common room. Introduced to the program on registration day for first year students, Tennyson was not exactly sure what he wanted to study. He overheard in the lineup that if you were interested in Aeronautical Engineering, you needed to take Engineering Physics.

Tennyson taught in the EngSci Aerospace Option throughout his Ph.D. studies and entire career. When he accepted the role of Chair of EngSci in 1983, Tennyson was surprised by the counseling role of the Chair to support the students.

*“The intensity of the program is beyond anything across campus. These students are challenged in ways others aren’t. My legacy is the students I helped.”*

Tennyson increased enrolment, maintaining the quality of the students, and created a CAD/CAM Option, a forward-thinking move, later renamed the Manufacturing Systems Option. Tennyson left his term as Chair in 1986 to accept the position of Director, University of Toronto Institute for Aerospace Studies. Subsequently, as head of U of T’s Government Research Infrastructure Program, Tennyson was instrumental in securing funds for the Bahen Centre, the current home of EngSci.

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## Keith Balmain (5T7) 1986 – 1988

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Although not himself an expert in the theory or practice of computers, within his first few months as Chair of EngSci, Balmain could see the great need for such expertise. With much input from knowledgeable others, he launched the Computer Engineering Option which then experienced rapid and sustained growth, eventually evolving into today's Option in Electrical and Computer Engineering.

His own specialty in electromagnetics made teaching the Electromagnetic Fields ECE357 course to EngSci students his favourite activity, a subject of special concern to students who had to be convinced that it was interesting in spite of its challenging complexity.

Balmain recalls the impact that a particular course had on him during his own days as an Engineering Physics student:

*“I vividly remember a third-year Math course in Partial Differential Equations that much later emerged as a key motivator for my own Ph.D. thesis.”*

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## Carl Hamacher 1988 – 1990

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Hamacher's initial impression of the program was the high quality of the students.

*“They were a tremendous joy to teach, my greatest responsibility was to ensure we continued to attract and recruit top quality students.”*

He notes that curriculum was also extremely important and that Chairs of EngSci must work closely with the Departments to ensure students are exposed to top faculty.

*“Professors were keen to teach, especially to fourth year students; it gave them an opportunity to look at potential graduate students for their research.”*

*Options are extremely important, attracting students that want to go into research and development, a Chair must anticipate emerging technologies.”*

Hamacher credits the students for EngSci's international reputation.

*“Those that went on to graduate study at preeminent U. S. schools paved the way for others.”*

Hamacher left his role as Chair before his term was completed to accept the position of Dean of Engineering at Queen's University, although he never forgot the tremendous students he taught in EngSci at U of T.

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## David James 1991 – 1995

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James's term is defined by a period of tremendous change, during which three Options were dropped and two new Options created, Biomedical and Environmental. James knew that EngSci must consist of leading-edge programs. James recalls the hardest part of dropping an Option was convincing its instructors of the necessity.

*“Instructors loved teaching EngSci students because the students, more than just doing well in a course, really wanted to understand the science.”*

James is uncomfortable with the word elite but admits that it fits the program. The biggest challenge faced by James after restructuring the program was attracting more students. He sought to promote EngSci nationally, as an MIT-type program right here in Canada.

*“We wanted to attract students seeking a challenge. We also wanted all-round students. EngSci students were remarkable; they were headliners at Skule™ Nite, they were involved in numerous extra-curricular activities, and they still succeeded in the classroom.”*

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## Zvonko Vranesic 1995 – 2000

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Vranesic graduated from electrical engineering and went to work for Northern Electric Co. on a project that involved building the first electronic telephone switching equipment installed in Canada. Realizing that he did not know enough about computers, an emerging industry, he returned to Skule™ as a graduate student, specialized in computer engineering and never looked back.

Vranesic taught many courses to EngSci students and had numerous graduate students from the program.

*“You can cover at least 30% more material with EngSci students. They expect to be pushed hard, but are happy only if they learn a lot.”*

During Vranesic’s term as Chair, the program was going through a period of lower enrolment. There was a feeling in the community that EngSci was difficult but not necessarily the best. Vranesic answered the critics by sending a message that resonated with high school students and their parents because he knew that the best students would never be afraid of a challenge.

*“EngSci is one of the best undergraduate engineering programs in North America. If you're afraid of a challenge, it's not the place for you.”*

Vranesic also spent a considerable amount of time connecting with high school students, starting a telephone campaign to talk to students who applied to the program. As a result, enrolment increased and so did the quality of the students. Not only was enrolment up, EngSci was acquiring more space and computer labs. Vranesic also started putting the wheels in motion for two new Options, Infrastructure and Nanoengineering.

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## Yu-Ling Cheng 2000 – 2005

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Like her predecessors, Cheng started teaching students in EngSci prior to taking on the role of Chair. Cheng was also heavily involved in planning for an Option in Biomedical Engineering with several EngSci students who had a desire to enter the field. Although many of the previous Chairs had to spend time focusing on building enrolments, Cheng had a slightly different challenge, how to deal with the double cohort.

*“The biggest concern with the double cohort was the pressure to increase enrolment while ensuring top quality students and maintaining the quality of the student experience. We had to re-examine our curriculum for the first two common years because students coming into the program no longer had as much math and science training. Options had also changed significantly over the years, which required a review of years one and two to ensure students are properly prepared.”*

Cheng’s passion for the program is tied to the students, referring to her time as Chair as being part of a family. Cheng’s other contributions to the program included the creation of the Engineering Science Research Opportunities Program (ESROP), which offers students completing first and second year the opportunity to work in a research lab during the summer.

*“EngSci students are serious about their education, they show a great deal of curiosity and their desire to learn is inspiring.”*

Each Chair expressed their admiration for the Chairs that came before and after. Their collective hope for the program is that it remains the destination for top students from Canada and around the world.

## Following in Footsteps.... Blazing Trails

Stephen Georgas (7T1)  
Partner, Miller Thomson LLP



Since 1955, five members of the Georgas family have graduated from Engineering Science. George (Aero 5T5) set the standard for both of his brothers, Angelo (EngSci 5T9) and Stephen (EngSci 7T1), followed by their cousin Jim (EngSci 7T6) and most recently, Stephen's son Michael (EngSci 0T7).

*"I didn't hesitate to recommend EngSci to my son."*

Stephen Georgas attributes his degree in EngSci to his successful technology and intellectual property law practice. When Stephen graduated from EngSci, technology law was just emerging.

*"My engineering background is vital. Clients want to know that you understand the technology".*

As Partner of one of Canada's most respected national business law firms, Stephen counsels clients on all matters relating to patents, trade marks, copyright, and industrial designs. He provides counsel to clients on the protection and enforcement of their intellectual property and technology, and assists them in commercialization through joint ventures, financing, and licensing.

Reflecting back on EngSci, Stephen remembers the challenges of first year, both the work it entailed and the reward of making it to second year. He also remembers the course on switching circuit theory that came in handy when helping a client solve a patent suit.

*"Studying engineering was logical. It's a cause and effect way of thinking, which is quite different from law. In law, you need to look at a situation from many different perspectives and create an argument for or against a particular perspective, so as to advance the client's position or point of view. Combining the two degrees, I am able to bring an in-depth practical and technical knowledge to understanding client problems".*

Stephen is also a loyal EngSci donor. His annual support has contributed to scholarship funds, and enabled more students to participate in both the ESROP and E4TW fellowship programs.

*"I just wanted to give back. It's high on my list of priorities. I owe a lot to EngSci; donating is a way of saying thank you."*

On behalf of EngSci and the Faculty, we would like to thank Stephen for his support and congratulate him on his many successes. We look forward to welcoming Stephen and his classmates back to Skule™ for their 40th spring reunion in 2011.

## Investing in the Future

Employers prize rational thought, problem solving, and innovation—abilities that every Engineering Science graduate possesses. One graduate of the program, Alvin Mok (OT3), is a Global Manager at Orbis Investment Management Limited, and his firm is always looking for exceptional students with EngSci backgrounds.

Orbis is generously supporting our new Capstone Design Course. This course allows Electrical & Computer Option students to engage in a culminating design experience based on the knowledge and skills they have gained in previous courses and on PEY work terms. The project will

reinforce the concepts of teamwork, project management, and documentation. Orbis will provide student teams with grants for the design projects. The two top teams will also receive prizes. Should students need advice, Mr. Mok has offered the Orbis team's support.

*"We only hire the best and we are always looking for students with backgrounds in software design. Supporting the 4th year design course is a great way for us to celebrate academic achievement while meeting top students in Engineering Science."*



## OFFICE OF THE CHAIR

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