

2013 Science Convocation speech
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Chancellor Bloomberg, President Levy, Provost Lachemi, Dean Coe, other VIPs, members of the Faculty of Science—proud parents, family, and friends, and especially the graduating class of 2013, I am thrilled to be at convocation this year, and it is a great honour to speak to all of you.

First, I would like to congratulate all of you for a job well done. All the early morning lectures, late afternoon labs, all night study sessions, and gruelling final exams have culminated in today. In our knowledge-based economy, advanced degrees like those you receive today are critical, not only to your own career goals but to the growth and prosperity of Canada. You are now ready to face the world and face head-on the challenges and adventures that lie ahead.

I am a Mathematician. Mathematics is a word that seems to instil either fear or awe (or both) depending on who you talk to. When I meet someone at a party and they ask my profession and I tell them, they usually say one of two things: “I hated math in high school”, or “Interesting, so what kind of Mathematics do you study?” As you might imagine, I usually get along better with those who say the latter. I appreciate people with open minds. To me, an open mind is one of the greatest gifts of education. As the great Mathematician Paul Erdős would ask: “Is your brain open?”

My favourite professor Gunter Bruns during my BSc studies told us: “Education is a tapestry which you can use to put everything around you into context. It is not just memorizing facts and figures, but a manner of looking at world in a new and deeper way.” His remarks still resonate with me now, especially as I look out at all of you.

My passion for Mathematics did not begin at an early age. In fact, it was not my best subject in elementary school. Other kids excelled with multiplication tables, while I found them plain boring. When I entered high school, to my surprise I began to struggle in Grade 9 math. My oldest sister Paula, who just entered university to study math and CS, noticing my math problems, looked at my work and said: “Anthony, you are not approaching this in the right way. Mathematics is logical and precise. Every problem has a solution, you just have to find it.” She patiently solved a problem or two with me, explaining how to justify my work and proceed logically, and it changed my perspective right away. The clouds lifted. I started applying her advice, and again to my surprise scored 100% on the Math final exam.

As I went on through high school and then to university, I realized I loved mathematical abstraction, and the subtlety of mathematical truth and proofs. Maybe it was odd, but the more abstract, the better I liked Mathematics! That passion for Mathematics drove me to become a professor, and this ultimately brings me here today.

If I could give you any advice from my platform here it is this: **Be bold. Be curious. Be brilliant.** In a world obsessed with the latest fashion or new phone, we cannot lose sight of the importance of intellectual pursuits. Whatever your future career is, remember that it is *cool* to be smart. “Intellectual” is not a bad word! We should put our most brilliant minds on par with our best athletes or celebrities. Einstein is cooler than Lady Gaga. Jonas Salk will have a more lasting impact than Sidney Crosby, and Steven Hawking is more profound than Oprah.

It also important to remember that many of us come from humble beginnings and education is a fast-track to bigger and greater things in life. At a conference in India, I spoke to a bright young doctoral student there who said he was the first in his family to go to university. His family lived in a simple village outside town, and they spent all of their savings to educate him. This story profoundly resonated with me, as it paralleled my experience. My parents both immigrated from post-WWII Italy. My father Paulo moved first from Italy to Belgium, where he worked in the coal mines. As he liked to remind us, he came to Canada with 75 cents in his pocket; both my

parents had no education beyond grade 6. My mother Anna Maria was a keenly bright student, but came from an era where sons, not daughters, were sent to school.

Despite their lack of formal education, my parents started a successful business in Niagara Falls, and stressed the importance of education to their children. I remember coming home from school excited after I scored 95 on a test. Dad would say, that's good but why not 100? Although this was frustrating then, I realize now he did this out of a desire for me to achieve something greater than he had a chance to. My father passed away at 81 in 2011, but I know he would want me to tell you: don't let anybody tell you what you cannot do. You can do whatever you like, if you just work for it! Although Paolo never had the chance to go to University, I am so proud that each of his children went on to university degrees, and the first Paolo and Anna Maria Bonato scholarship has been set up in their honour here at Ryerson.

You all now have the opportunity to do something great. Whether it is your first full-time job, a graduate degree, or an internship, you all have the chance to write your own futures. **Be bold.** As Marie Curie said "Nothing in life is to be feared. It is only to be understood."

Do what interests you; follow your heart and passion. The greatest work in Mathematics is not done for money or glory. It is done for the love of it, to go deeper and answer big questions. I am lucky enough to know a few famous mathematicians. They all love what they do and don't consider it work. This is a secret I can share with you: if you love what you do, then work is fun!

So go out into the world and work hard and have fun. **Be curious.** Remember the lessons you learned here at Ryerson. Also remember that you have just begun your journey of learning. Mathematics teaches us that there are an endless number of problems and ideas just beyond our present reach. We must continually strive, therefore, to solve our problems and bring ideas within our grasp. Learning does not end with your degree; it continues on every day of your life. Keep your brains open. Take another class evenings or some weekend. Consider a Master's degree, or even a doctorate. Pick up a Scientific American and read it sometime, even if you only understand some of it. Watch PBS, the Discovery Channel, and TVO; browse Science blogs, and watch videos at Khan Academy.

Also consider now that you can inspire the next generation. What is it that you can teach a younger brother or sister, son or daughter, or niece or nephew? Can you inspire them to work a little harder or better in their studies, solve a math or physics problem, just as my sister did over 25 years ago? Instead of a movie, take them to the Science Centre, or zoo, or museum. A great thing about learning is that it is contagious. Now that you have your degree, pass on what you have learned to whoever will listen. **Be brilliant.**

In closing, remember that your degree is more than a piece of paper or a ceremony. Reflect about that today. It is now your turn to let your tapestry enfold the world. It is your time to see things in a new way. **Be bold. Be curious. Be brilliant.**

Thank you and best of luck.