

Thank you Dean Guceri, President Papadakis, Trustees, members of the Faculty, Distinguished guests, the Class of 2004, L&G, and Editorial staff of the Triangle..... And in conclusion.....

[...you could've gotten Big Bird].

Thank you and good afternoon. I'm very proud to be here with you today and I thank you for the invitation and the honor. I'm an advocate of the right to the freedom of speech provision of the First Amendment to our Constitution and I compliment your newspaper on exercising it's right. I, in turn, exercised my right by responding and there then followed a continuing and healthy student debate via letters and emails, many to me directly. In addition to offering my thanks for those, and without sounding patronizing, I was truly impressed by the quality of those letters....feelings so brilliantly and articulately expressed that I rest easy knowing that this generation will reflect the effect of an education at a great academic institution and will consequently make a significant contribution to the improvement of our society.

I've always been a maverick and thrived on controversy. 49 years ago I chose to combine my 15 years of classical music training with 10 years of playing straight jazz into an uncategorizable form that worked for me. Having no frame of reference, reviewers couldn't figure out what I was doing. I still continue to do my thing and chuckle as they continue to struggle... attempting to define my work.

By way of educational background, having grown up in Brooklyn, NY to wonderful parents of very modest means, I attended Brooklyn College, then ranked 7th academically in the U.S. The tuition was a whopping zero. Previously, at 14, I attended the High School of Music and Art in NYC and was concurrently on a 4 year scholarship to the Juilliard School of Music. That routine was 6 days a week with 31 stops on the NY subway, twice a day, for 4 years; A total of 41,637 stops...in 4 years.

Back to the College days. While I was hell bent on doing music 24 hours a day, I was persuaded to pursue a Liberal Arts curriculum for 2 reasons: one practical; ("you can always get a Public School teaching license"), and the other for the obvious; a well-rounded education. I cannot tell you how important the latter was because every day of my professional life reflects that eclectic background. Musicians, in order to be successful, have to understand those with whom they are attempting to communicate. And I believe that's true for anyone in any career.

I quote now from one of the aforementioned letters to me: "There are definite significant parallels between music and engineering: Both rely heavily on mathematics. Rhythm, pitch and acoustics are every bit as complex as chemical processes or electrical circuits. Both fields encompass a unique blend of art and science. Just as music is far more than merely reproducing the notes on a printed page, engineering goes far beyond inserting numbers into equations. And furthermore, each field is inextricably linked to it's human component". Beautifully put. I couldn't have said it better myself. So, thank you candidate Todd Drennen.

When I was 15, trying to kill 3 hours a day on that beloved subway, jammed with Straphangers hovering over me, I designed an electric baseball game. It was powered by 2 D cells, had 32 3 volt bulbs, and 128 circuits. Today, I think that circuitry would be called a "chip" and probably take up the space of a flea. The prototype of that game is alive and well and rotting in my attic.

Also rotting in that attic is the first consumer PC, born in 1976, before most of you were born; the TRS 80 Model I..... The serial number on that machine is 26....which shows you how fast I jumped onto the tech bandwagon. ROM memory was 4K and data was stored on an audio cassette. I studied Basic programming 3 nights per week with a programmer who moonlighted. It was great fun!

I'm telling you all of this, not because I need to impress upon you my amateur status as an ersatz electronics expert; it's borne from the enthusiasm I have for the future of technology and my admiration and sometime envy for the fact that you will be leading the charge.

One of my college Professors had defined "Art" as being derived from the word artificial. Consider this: as musicians, we're trying to make you, the listener, feel something...happiness, sadness and all other emotions in between. But not by physically tickling your ribs or by smashing your toe with a hammer. So, how do we make someone laugh or cry? By ARTIFICIAL means, using melody, harmony and rhythm, the 3 basic elements of music, plus one indefinable element.

And what is that element? Going back in time again, when I began to record some 43 years ago, I asked my producer "how do you make a hit record?" He responded, "if we knew that, we wouldn't make the other kind". What differentiates a successful performance from the "other kind"? In rehearsal with an orchestra, after laboring for hours over every single detail, if the final product doesn't have that "indefinable quality" that makes the notes come to life, that glorious feeling achieved when knowing that you are "communicating" with your audience, then it's just a bunch of notes and not music. If you've ever been to a concert where you haven't been emotionally moved, don't blame it on the music; blame it on the musicians.....in my case, the conductor.

A true musician sets his sights on making the audience feel something...hopefully, feel better than when they entered the concert hall. What you as engineers do for humanity is a boon to Industry, to health, a better way of life made possible by your skill and ingenuity; the beauty and functionality of an architectural design coming to fruition. A musician's responsibility to humanity is to attend to the needs of the soul.

Creativity is essential in all endeavors...from the most menial of tasks to the most sophisticated. In all careers, there are too many robots out there. People who have stopped thinking and just do. You, as scientists and artists, have a wonderful opportunity to be creative...to awaken each day to a new challenge...to the prospect of conquering a new frontier...and hopefully make a lot of money in the process.

In conclusion, I thank you and the College of Engineering for this great honor and for allowing me to bend your collective ears with what I hope will inspire you to go out there and make the world a better place. Congratulations on making it through what appears to have been a grueling 5 years... a test of your mettle as you move on to the next phase of your life. If I've learned one thing from my experience, It's that the hard work never stops and the resulting satisfaction will keep you optimistic, active, successful, happy and alive.