



College of Engineering's 30th Anniversary Gala

**Given by Mark B. Rosenberg
on October 30, 2014**



This speech was presented to attendees of the FIU's 30th Engineering College Anniversary Gala on October 30, 2014.

Tonight, we celebrate the birth and maturation of a dream. 1984, a famous date in the literary world, and momentous by any other standard! You see, it was just three decades ago that our country was a leader in science and technology.

1984 is famous for:

- Transformers rolled out in the US with their Autobots, Decepticons, and Megatron figure.
- Who you gonna call, was the rage with Ghostbusters topping the charts.
- Springsteen released Born in the USA
- Steve Jobs unveiled the Apple MAC computer.
- Wendy's famous commercial asked "where's the beef"
- Doug Flutie launched his hailmary to defeat the U.
- And that year, we opened our own College of Engineering!

Then, we knew here at FIU, that we had a destiny to fulfill locally and regionally, if not nationally.

What a difference thirty years have seen. At FIU, we have grown and prospered. We have gone from 12,000 students to 54,000. We are a leader in the training and education of minority engineers. We are the source of great curiosity and interest nationally for our path-breaking work in the production of minority engineers. We should not be such a curiosity; we are a majority - minority institution, the largest in the United States. We celebrate our geography and our demography. We are who we are! People are our product.

- Just look at some of our successful alumni:
- Dr. Eugene Maximilian or Dr. Max (as he likes to be called) is like a lot of our students, who come from immigrant families. His family is from Haiti. He was one of our first NACME scholars. While pursuing his degree in computer engineering, he earned an internship with IBM. And today he's the chief architect for PaaS Innovation at IBM Cloud Labs!
- Maria Quintero is a Chrysler Engineer in Vehicle Integration of Fiat Chrysler Automobiles. A graduate of our Mechanical Engineering program, she was one of our team of graduates at Chrysler who made the Engineers on Wheels a reality.
- Irma Becerra-Fernandez, Provost at St. Thomas University is a graduate of Electrical Engineering.

- Sylvia Berenguer, Senior Associate Vice President of Design & Construction at Tulane University, is a graduate of Construction Management.
- Javier Rodriguez is a civil engineering graduate. Today he's the executive director of the Miami-Dade Expressway Authority. That makes him one of the highest level executives in the transportation industry in our region.

Many of our engineering graduates are entrepreneurs. They are not just taking good jobs. They are creating good jobs. Chad Moss and Mickey Cerra both graduated in 1995 from our construction management program. Chad Moss is owner and vice president of Moss and Associates, a construction firm. Mickey Cerra is owner of Link Construction. These companies have built a large number of construction projects in South Florida. These are businesses that are contributing to the prosperity of our region!

Whether it is cloud computing or transportation, our engineering alumni are hard at work finding solutions. They are innovators. Their work is changing our lives for the better.

We are proud of our ties to businesses:

- Ultimate Software is a company that has offered internships and hired a large number of our students. They have helped us and our community, by sponsoring the training of school teachers by FIU.
- FPL has hired more than 600 of our electrical and computer engineering students.

Our College of Engineering and Computing has also been the birthplace of businesses. C3TS was started by Professor LeRoy Thompson and three of his students. It grew to be a major engineering and design firm in Miami. It was then acquired by international design firm, Stantec.

We see our university as a solutions center for the community. We understand that we are a beacon of hope and opportunity for this community. We see ourselves as a force for good! As an anchor institution, we are willing to take responsibility for our community. Our College of Engineering and Computing, early on, understood this! We do not have the luxury of being passive recipients of students to our university! You see, as the community with the largest percent of foreign-born residents, we must actively prepare them and their sons and daughters for the rigor of the 21st century university classroom.

Let us salute Dr. Gustavo Roig who established the Center for Diversity. For the last two decades it has run a number of programs including the Department of Education's GEAR UP and ENLACE, supported by the Children's Trust. These are programs aimed at preparing K-12 students for higher education. These programs support students who, because of family income or other circumstances, might otherwise give up on their university dreams.

Engineers on Wheels is another innovative program. It brings engineering and computer science concepts into K-12 classrooms through hands-on activities designed to spark students' interest, and imagination. The idea is to inspire them to further explore STEM studies and careers. This program builds on the success of the FIU Engineering Expo, the college's premier outreach event. Each year, the Expo brings up to 1,700 K-12 students to the FIU Engineering Center to discover the endless possibilities of STEM.

An essential element of our efforts as a university relates to research. Under our first dean Gordon Hopkins, research was embraced as an engine of change, innovation and problem solving research for the entire university.

Dr. Arindam Gan Chowdhury leads state-of-the art research that is helping communities such as ours to better prepare for hurricanes. The 12-fan Wall of Wind at our Engineering Center, where Dr. Chowdhury conducts much of his research, is the largest and most powerful university research facility of its kind. Under his leadership, the Wall of Wind research team has had a significant impact in mitigating hurricane damage by enhancing building codes, validating innovative mitigation technologies and developing new materials.

Our College of Engineering and Computing has had a long and fruitful partnership with Miami Children's Hospital. Dr. Malek Adjouadi and his Center for Advanced Technology and Education, known as CATE, have worked for over a decade with the Brain Institute at Miami Children's Hospital. They are working on precise mapping of seizures in epileptic children. Mapping of the brain has implications for treatment of disorders that include Alzheimer's and Parkinson's. In the early part of his career at FIU, Dr. Wei-Chiang Lin also benefited from several years of funding as Miami Children's Hospital Professor in Biomedical Engineering. Dr. Jorge Riera in Biomedical Engineering is also working with clinicians and the Radiology Department at Miami Children's on EEG-triggered fMRI in drug-resistant epilepsy patients.

Other life-changing, impactful research by our Engineering faculty includes:

- The work of Dr. Ranu Jung, who is the Wallace H. Coulter Eminent Scholar and Chair of Biomedical Engineering. She is a leader and an entrepreneur in the rapidly expanding fields of Neural Engineering and Computational Neuroscience.
- Target drug delivery for ovarian cancer, by Dr. Sakhrat Khizroev.
- A retinal implant that could restore sight for the blind,
- by Dr. Kinzy Jones.
- And much more!

But is this enough? Should we be satisfied with where we are on this 30-year anniversary? Ladies and Gentlemen the answer is no! In the thirty years that we have existed, the US economy has shifted from industrial to service. This is driven by information, knowledge and innovation. Talent is a key driver of success today!

But, look what has happened nationally:

- On the National Assessment of Educational Progress (NAEP) US students fall behind on reading, mathematics, science, and writing.
- In problem solving as measured by PISA, US students ranked 29th out of 40 countries participating.

Of course we understand that some students have special challenges. Many coming from hard working

First Generation families who understand the value of a university education! This presents us with special challenges, but unprecedented opportunities! We also must do better in retaining and graduating prospective Engineering students!

Our attrition rate is too high. 17 percent of first year engineering majors drop out. The highest first year attrition is in Computer Engineering. Our graduation rate can be improved. Only 38% of freshman, graduate in six years. Our record in gender diversity can be improved. Only 21 percent of our graduates are women. At FIU, 58% of our students are women! Our philanthropy will need to go to the next level. We have been blessed with strong support from Coulter Foundation to jumpstart Biomedical Engineering. OHL, the Ware Foundation, the Moss Family and Titan America have been generous. We acknowledged gratefully support from Bentley, Kesaya, Operational Technology, and Vasant H. Surti.

But to get to the next level, to get where we know that you want us to go, we will need to do better. Particularly if we are to build a new facility at the site currently occupied by the Youth Fair. There are challenges! But the future looks bright. We cannot do it alone; you must find a way to help us! We built our engineering program from the ground up! From the ground up for you and with you! Now we reach for the sky. Just how high, and with what impact? That is what we must decide and do together! Congratulations for the first thirty. Help us make the next thirty even better!

And now it is my pleasure to introduce one of our most accomplished engineering alumni. Richard Blanco is the fifth inaugural poet in U.S. history. He is the youngest, first Latino, immigrant, and gay person to serve in such a role. Born in Madrid to Cuban exile parents and raised in Miami, the negotiation of cultural identity and place characterize his three collections of poetry: *City of a Hundred Fires*, *Directions to The Beach of the Dead*, and *Looking for The Gulf Motel*. His awards include the Agnes Starrett Poetry Prize from the University of Pittsburgh Press, the Beyond Margins Award from the PEN American Center, the Paterson Poetry Prize, and the Thom Gunn Award. He has been featured on CBS Sunday Morning and the National Public Radio's Fresh Air. A builder of cities as well as poems, Blanco holds a B.S. in Civil Engineering

and an M.F.A in Creative Writing, both from FIU! He is a Woodrow Wilson Visiting Fellow and has received honorary doctorates from Macalester College, Colby College, and the University of Rhode Island. He has taught at Central Connecticut State University, Georgetown University, and American University. His latest book is a memoir of his childhood in Miami, titled *The Prince of Los Cocuyos*.

Remember, this is a celebration of engineers this evening. But let me remind you that it is said that the scientists and engineers who are building the future need the poets to make sense of it.

So please welcome a genuine FIU Two-fer! Our engineer/poet, Richard Blanco!
Welcome home!