



**ETA KAPPA NU**

*Electrical and Computer Engineering Honor Society*

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### **Career Synopsis**

I graduated in 1987 from Carnegie Mellon University, earning a B.S. in electrical engineering, computer engineering, and mathematics. In my first job after graduation I worked on defense and highway tolling projects. That position gave me the opportunity to attend night school and earn an M.S. in electrical engineering from Johns Hopkins University. In 1992 I joined an engineering consulting firm and began working on rail transit projects. For the past 15 years I have been with AECOM, where I have held increasingly responsible management positions on transit projects in Baltimore, Pittsburgh, and Atlanta. My engineering career has afforded me many fascinating international opportunities, including trips to London, Manila, Seoul, and Lima.

### **Career Highlights**

*What do you view as the highlights of your career? These can be in terms of greatest challenges, most satisfying achievements, or most enjoyable projects.*

Although I have worked on many enjoyable projects, serving as a systems designer for the Tren Urbano rail system in San Juan, Puerto Rico, was a pivotal project in my career. In addition to the challenges involved in designing a rail system from its inception, the project was memorable because I was under the direction of a senior engineer, Thomas Edwards, who was kind enough to take an interest in my technical and professional development. Having Tom as an informal mentor gave me the tools, encouragement, and knowledge I needed to seek greater challenges, and I am forever grateful for his time and effort.

One of the most fascinating assignments in my career is my current job: leading the engineering services consultant team for MARTA, the Metropolitan Atlanta Rapid Transit Authority. MARTA is confronting the same fiscal challenges that are now part of every transportation agency's landscape. And meeting the technical requirements of the system, while meticulously observing stringent budgetary limits, is a challenge that brings out the best in my engineering experts. My team takes great pride in designing cost-effective replacement systems and facilitating repairs to keep an aging but venerable electrical infrastructure working and in service.

### **Education and Career**

*Relate your education to your career and current responsibilities.*

As a program director, I am somewhat removed from the day-to-day design efforts. However, as the leader of a team, I am responsible for effectively communicating technical recommendations, results, and needs to the client. Senior client managers have to make very difficult decisions regarding scopes, schedules, and budgets. A big part of my job is communication—describing very complex systems and designs with sufficient clarity to help managers make informed decisions with confidence. My educational background in electrical and computer engineering equipped me to perform that important role, successfully conveying the complexities of the electrical designs and the opportunities to optimize those systems.



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*What part of your formal education has proven most useful to your professional success?*

The most important lessons I gained from college were how to function under stressful conditions, and how to operate as a member of a technical team. Designing in a collaborative way is not an intuitive skill; it requires both technical knowhow and the ability to get along with others. The undergraduate course that best exemplified this concept was titled "Analysis, Synthesis and Evaluation." As part of the coursework, the professor would describe a fictional product of great complexity; our team assignment was to investigate the underlying principles for this product and try to determine whether this product could even function. The course also required that we team up to invent an electrical product, and then successfully build and test it. The course taught the technical skills needed to achieve results under pressure, and the interpersonal skills required to work as a team.

### **Advice to Engineering Graduates**

*What specific advice would you offer to engineering students as they complete their education and prepare to launch their careers?*

First, please accept my sincere congratulations. Becoming an electrical engineer is a difficult and significant achievement, and I commend you for it.

While the pursuit of technical achievement is an exemplary goal for engineers, take the time to observe the equally subtle intricacies inherent in all levels of management you encounter along the way. And then give some consideration to management as a worthy career path. There is a shortage of effective managers in the engineering industry. Becoming an outstanding manager is not a matter of being the smartest person in the room; a manager's success derives from providing leadership to organizations, and motivating staff to contribute to the organization's mutual goals while pursuing their own career objectives. By leveraging their own technical and interpersonal skills, great managers can have an impact that is felt not only throughout an organization, but throughout society as a whole.

In my office, I have a small statue of a basketball with this inscription: "You'll miss 100% of the shots you don't take." Don't be passive. Seek out opportunities to lead. Volunteer in your profession and in your community. Help others to grow; the rewards are many. Help develop the next generation of engineers.