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## Profile of a Biomedical Engineer: Sue H. Abreu, Ft. Bragg, North Carolina

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### Occupation

Lieutenant Colonel, Medical Corps, United States Army  
Medical Director, Quality Assurance, Womack Army Medical Center

### Education

IDE (BSE, Biomedical Engineering), 1978  
MD, Uniformed Services University of the Health Sciences, 1982

### Studying Engineering

As I started college, I was planning to be a teacher. Because of taking an elective class in athletic training, I developed an interest in sports medicine. I ended up taking most of my classes in aeronautical engineering so I could study the lightweight structures and materials that could be used to design artificial limbs or protective equipment for sports. Late in college, I decided to go to medical school and ended up graduating from college with an interdisciplinary engineering degree.



### Career Life

After medical school, I specialized in nuclear medicine. In nuclear medicine we use small amounts of radioactive compounds to see how things work inside of people. By using special cameras that detect radiation and computers that help gather the data, we can watch how various organs function. We can do three-dimensional studies and quantify results. In nuclear medicine, I am a consultant to other physicians: I help them decide what tests might be helpful and discuss the meaning of the results of the nuclear medicine procedures we do for their patients.

I ended up in a field I never had heard of when I started college, but I found it as I kept exploring areas that intrigued me. I tried new classes and looked for opportunities that interested me, even if they didn't fit the paths most students followed. As a result, I found a specialty I enjoy, and I'm now doing a great deal of teaching within my specialty of nuclear medicine and in my current work in quality assurance.

So, be sure to follow your dreams—if you can take something you love doing and find a way to earn a living doing it, you will end up much happier than if you set money or prestige as your goals.

### Life Outside of Work

Outside of work I enjoy skydiving. I volunteer as the team doctor for the U.S. Parachute Team and have traveled all over the world with them. I currently live in a large house on six acres in the country, not far from an airport with a parachuting center. I share the house with an airline pilot and an artist—both expert skydivers—who help make it a great place to live. Although I was married, I chose not to have children; but the dog and cats help keep us company here.

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## Profile of a Mechanical Engineer: Linda G. Blevins, Gaithersburg, Maryland

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### Occupation

Mechanical Engineer, National Institute of Standards and Technology

### Education

BSME, 1989; MSME, 1992; PhD, 1996

### Studying Engineering

During high school I discovered that I enjoyed mathematics. I learned about engineering when I participated in a six-week summer honors program at the University of Alabama before my senior year in high school. I took college calculus that summer, and I was hooked. I chose to study mechanical engineering because the course subjects are diverse and the industrial demand for mechanical engineers remains steady. As a co-op at Eastman Chemical Co., I worked on engineering problems in power and chemical plants. The concepts that I learned in classes came to life during the alternate semesters that I worked, and the money I earned helped pay for school. After earning a BS degree from the University of Alabama, I obtained an MS degree from Virginia Tech, and a PhD degree from Purdue University. I never would have set or achieved these goals without encouragement and advice from faculty members. Because these mentors played such valuable roles in my life, I would advise college students to get to know their professors well. These personal investments will be rewarding for years to come.



### Career Life

I am a mechanical engineer in the Building and Fire Research Laboratory at the National Institute of Standards and Technology (NIST), a national research laboratory operated by the U.S. Department of Commerce, located in Gaithersburg, Maryland. Our goals are to study the ways that fires ignite, spread, and extinguish so that our nation can minimize the loss of lives and property to fires. My primary job function is to improve the accuracy of measurements made during fire research. A few things routinely measured are toxic gas concentration, temperature, and heat intensity. I spend my time developing laser-based instrumentation, devising computer (math) models of instrument behavior, designing laboratory equipment, tinkering with electronics, publishing papers, writing and reviewing research proposals, and presenting talks at conferences. In addition, I work on a project funded by the National Aeronautics and Space Administration (NASA) to study fires in space. Working in a research laboratory ensures that I am constantly learning and growing, and I realize every day how lucky I am to be here. My job is exciting, fun, and rewarding.

### Life Outside of Work

During my free time, I enjoy hiking, rollerblading, and reading. I participate in a weekly bowling league and I manage a softball team each summer. I also volunteer as a member of the Mechanical Engineering Advisory Board at the University of Alabama. This allows me to travel home to Alabama (and visit my family) several times a year. Finally, I volunteer regularly to educate children and community members about the excitement of engineering.

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## Profile of an Electrical Engineer: Timothy J. Bruns, St. Louis, Missouri

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### Occupation

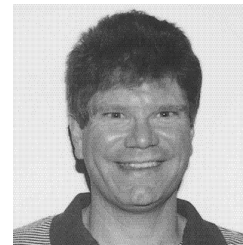
Software Manager at Boeing Co.

### Education

BSEE, 1983

### Studying Engineering

I became interested in electronics at a young age by building electronic kits from companies like Radio Shack and Heathkit. As a teenager, I became very active in local citizen's band (CB) radio groups. It was an easy decision for me to pursue a degree in engineering. The technology has changed so much since I graduated, and I have needed to stay current with the latest technology and to find ways to apply it to my line of work. If you are just starting out in engineering, I encourage you to apply yourself and do your very best in all your classes. When I arrived at Purdue I felt as if I was the least prepared of any of my classmates, but I worked hard and did very well. Some of the better-prepared students did not apply themselves from the beginning and suffered as a result. One thing I would have done differently is to get to know my professors and teaching assistants better. In large universities and organizations it is easy to get lost in the crowd, and I wish that I had formed better friendships and relationships with my instructors.



### Career Life

I am the software manager for a team of 15 developers that is creating a Windows NT application. This application uses the latest technologies such as MFC, COM and ActiveX. A typical day is spent reviewing the technical work of the team, along with reviewing schedules and making estimates for future work. I often meet with customers of our product and suppliers of our software development tools. Since our program is just getting started, I have been spending a lot of time interviewing people who would like to join our team. It is difficult to say how I apply my engineering training directly to my current job. I know that my engineering degree has given me the ability to plan and organize the work of our team, and to solve the many problems that come up. The thing I like best about my job is the wide variety of assignments I have had in my 15 years with Boeing. Working in a large company gives me the ability to have several "mini-careers," all while working for the same company. A significant accomplishment that I have made while working at Boeing is the introduction of new tools and technology into the software development process. One tool that we have introduced automatically produces source code from a graphical representation. This tool enables us to bypass much of the labor-intensive and error-prone aspects of software design.

### Life Outside of Work

In the engineering field, particularly in electrical and computer engineering, you will find that the technology changes very rapidly. In my case, I stay abreast of the latest technologies by enrolling in evening computer classes through the local universities. I enjoy home "engineering" projects such as designing a new deck. My wife, Donna, and I keep very busy raising our two sons, Garrett and Gavin.

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## Profile of an Agricultural Engineer: Bethany A. Elkin Fabin, Waterloo, Iowa

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### Occupation

Design Engineer, 8000 Chassis Design Team – John Deere Waterloo Works

### Education

BS, Agricultural and Biological engineering

### Studying Engineering

When I began to explore career options, I was told that an engineering degree was the ticket to achieving success in a variety of fields. I investigated the Agricultural and Biological Engineering program at Penn State and discovered therein the opportunity to examine many aspects of engineering and agriculture under one discipline. I found my niche. This major provided the chance to “sample” many engineering topics and thus make knowledgeable decisions on what areas I wanted to pursue in future jobs. My Business Management minor also afforded many opportunities, and I would recommend that every engineer take at least a few business classes. I would also recommend getting involved in professional societies whenever possible. They provide many networking opportunities and a good preview of the job market. If I were to start my schooling over, I would take more of the hands-on classes. Also, I cannot begin to convey the importance of an internship or some kind of related work experience. Having the opportunity to work for a variety of companies in a variety of positions has helped me greatly in my career.



### Career Life

In my current position as a chassis design engineer for John Deere, I work with others to design parts for tractor frames, coordinate homologation and standard reviews for update programs, and coordinate projects with supporting teams. In the latter role, I develop general specifications to ensure that we meet customer requirements and implement verification processes.

In a typical day of work, I spend a couple of hours working on Pro/E software designing and modeling parts. I also spend time working with suppliers and purchasing personnel to get parts quoted and ordered. In addition, I spend some time in our shop checking on prototype builds or test procedures, and some time in meetings working with different groups to keep people informed. The thing I like best about my job is the freedom I have to work on a variety of projects. It's nice to work for a company that has developed a strong name for itself and works diligently to stand behind their products.

### Life Outside of Work

Outside of work, I welcome every opportunity to travel with my husband and play host to out-of-state friends, relatives, and foreign exchange students. MBA classes are taking up much of my time off the job currently, but in my free time I find I enjoy music, sports, rowing, training my dog, remodeling my house, and gardening. My membership in the local chapter of the American Society of Agricultural Engineers also keeps me busy with meetings and seminars.

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## Profile of a Computer Engineer: Steven E. Fredrickson, Houston, Texas

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### Occupation

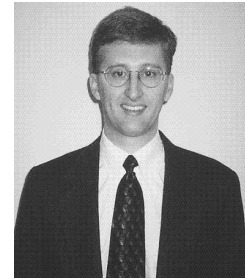
Project manager of the Autonomous Extravehicular Robotic Camera for NASA; Electronics Engineer, NASA Johnson Space Center, 1995 – present

### Education

BS, Computer and EE 1992; PhD, Engineering Science, 1995

### Studying Engineering

To prepare for a leadership role in the emerging information society, I studied electrical and computer engineering as an undergraduate. At Purdue I supplemented engineering studies with non-engineering courses and extracurricular activities, and sought experiences to develop practical business skills. One highlight was the Cooperative Education Program. Three “Co-op” tours at NASA introduced me to software design, robotic control systems, and neural networks. This early work experience intensified my interest in advanced study of electrical engineering and robotics. To simultaneously satisfy my desires to engage in advanced academic research and to gain personal international experience, I pursued an engineering doctorate program in the Robotics Research Group at Oxford University.



I am extremely pleased with the universities I attended and the fields of study I completed to prepare for my current career. I would offer three recommendations to anyone pursuing an engineering path: 1) participate in Co-op or similar programs, 2) develop effective oral and written communications skills, 3) explore opportunities to study abroad.

### Career Life

When I returned to NASA as a robotics research engineer, I transitioned from specialized research in artificial neural networks to broadly focused applied engineering. As project manager of the Autonomous Extravehicular Robotic Camera (AERCam) project, I have led a multidisciplinary team of engineers in development of a free-flyer robotic camera to provide “bird’s eye” views of the Space Shuttle or International Space Station. Despite this deliberate transition to a project leadership role, it has been imperative for me to maintain my core technical skills. To ensure continued technical proficiency, I participate in several training courses and technical conferences every year.

### Life Outside of Work

As much as I enjoy working at NASA, I believe it is essential to maintain outside interests. For me, that starts by spending time with my wife, Becky. Since Becky is pursuing a joint engineering and medical career, it can be demanding at times. The key for us has been to develop outside activities that we can enjoy together. Currently these include teaching Sunday school, participating in Bible study, attending concerts and plays, jogging, lifting weights, climbing at an indoor rock gym, and traveling. In addition, we allow each other time to pursue individual interests, which for me include reading, aviation, and golf.

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## Profile of an Industrial Engineer: Karen Jamison, Dayton, Ohio

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### Occupation

Operations Manager, Jamison Metal Supply, Inc.

### Education

BSIE, 1988; MBA, 2000

### Studying Engineering

I didn't grow up knowing I wanted to be an engineer, but luckily my high school guidance counselor recognized my science and math abilities and encouraged me to try engineering. I firmly believe that engineering is a wonderful career in and of itself, and that it can be an excellent stepping stone for any other career you may wish to pursue in the future.

I chose industrial engineering because I am highly interested in improving the processes people use to do their work. Industrial engineering provides both technical challenges and the opportunity to work with all kinds of people.

If you are just starting to think about engineering or are trying to choose a specific discipline, talk to as many practicing engineers and professors as you can. Become involved in organizations on campus that will let you interact with other engineering students and practicing engineers.

I also highly recommend the co-op program. I had over two years of work experience when I graduated, and I knew what types of work I would enjoy. It is definitely to your advantage during interviews to know what type of job will best suit you, and to be able to speak intelligently on that subject.

Finally, remember that grades aren't everything but that your education is invaluable. If I were to do one thing differently, I would study to truly learn and understand the content instead of with the goal of getting a good grade in the class.



### Career Life

Until last year, I was a consultant focusing on process improvement and business process re-engineering. Now I am learning to run Jamison Metal Supply, which is a business my parents founded 25 years ago. My job includes anything and everything that needs to be done. My primary responsibilities are overseeing operations to ensure quality products and timely deliveries, ordering steel for inventory and special orders, and pricing the material we sell.

I use my engineering training in all kinds of ways. I am working on updating our physical inventory system to better utilize warehouse floor space; I schedule customer orders to meet promised delivery times; and I am updating our computer system. Most importantly, engineering has taught me how to approach solving a problem and how to manage my time.

### Life Outside of Work

My time outside of work is concentrated on completing my MBA degree, but I do find time for having fun as well. One of my favorite hobbies is crewing for a hot air balloon. I also teach a sign language class at the University of Dayton, and am vice president of the Purdue Club of Greater Dayton, Ohio. I think engineering is a very flexible field that allows individuals to prioritize their lives any way they wish.

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## **Profile of a Mechanical Engineer: Beverly D. Johnson, Waterloo, Iowa**

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### **Occupation**

Supervisor in Wheel Operations at John Deere Waterloo Works

### **Education**

BSME; MS, Engineering Management

### **Studying Engineering**



My education includes a BS in Mechanical Engineering from the United States Military Academy, an MS in Engineering Management from the University of Missouri, Rolla, and my current study in the Executive Master's Degree Program at Northwestern University, Evanston, IL.

I think engineering is a very rewarding career because you can see the results of your effort every day. Engineering offers opportunities to create, build, design, and sometimes even destroy. Also, the analytical tools you develop in your engineering coursework make studying other subjects easier, and they are applicable to everyday life.

I truly enjoy my career in engineering. It is a dynamic career field that has taken me to many different jobs and many different places. I have done everything from constructing buildings and roads in Germany and the Hawaiian Islands to my current work as a supervisor in the wheel operations for the John Deere Waterloo Works.

### **Career Life**

I have been with the John Deere Waterloo Works for two years, working in various engineering assignments such as quality engineering, project management, and process redesign. My current assignment as a supervisor in Wheel Operations is focused in production. I am responsible for the assembly processes pertaining to the tires and wheels for the 7000 and 8000 series tractors. I am also responsible for the daily supervision of the wage department personnel. Although my job is sometimes hectic, it is also very rewarding as I watch what our department is able to accomplish every day.

Prior to joining John Deere I spent nine years as a military officer in the U.S. Army Corps of Engineers. My primary responsibilities included the construction of buildings and roads, and the development and training of other engineers. My work with the military allowed me to live in, and travel throughout, Europe and the Pacific Islands.

### **Life Outside of Work**

Although I chose engineering over journalism, my favorite pastimes are reading and writing. I also exercise regularly and compete in sports. I volunteer my time to the Boys and Girls Club of Waterloo, the American Red Cross, and a local university. However, my most important responsibility, and the most enjoyable, is the time I commit to the care and development of my two children, Colbert, 6, and Randy, 3.

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## Profile of an Industrial Engineer: Jeanne Mordarski, Albuquerque, NM

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### Occupation

Sales Manager, LightPath Technologies, Inc.

### Education

BSIE; MBA

### Studying Engineering

The engineering workload at Purdue was quite a shock to me. My first two years were a struggle and I was afraid to get involved in extracurricular activities. By my junior year, I became more concerned that I was missing out on the “college experience” than I was about my grades. I became an active member in several campus organizations—the best decision I ever made. I was forced to balance my studies and personal life. I broadened my network of friends, developed leadership skills, and learned to manage my time more effectively. As a bonus, my grades improved tremendously.



My emphasis within the IE curriculum was on Production and Manufacturing Systems. I accepted a production supervisor position with Corning Inc. after graduation. This role put me in the middle of the action, and taught me to think on my feet and make sound decisions. For eight years I worked at Corning in various engineering and manufacturing capacities. During this time, I was able to land a one-year tenure in Japan implementing Process Management Systems at our facility in Shizuoka.

For three years I took evening classes working toward an MBA from Syracuse University. In my course work, I realized how much I enjoyed the business side of things. Upon completion of my degree, I accepted a sales manager position at Corning in the telecommunications market.

### Career Life

I recently left Corning to work as a sales manager for a start-up company, LightPath Technologies, Inc. Working for a large company directly from college gave me invaluable experience. The structure enabled me to work more effectively. However, as I progressed through the ranks at Corning, I realized that this same structure was limiting my ability to contribute because of the many management layers. In my current role at LightPath, we are introducing new products to the telecommunications market.

### Life Outside of Work

I have an eclectic mix of interests outside of work. I truly enjoy exercise and the outdoors. On weekends, you'll find me skiing, camping, hiking, rock climbing, or biking. I love international travel and scuba diving, and take every opportunity I can to participate in both. I have recently taken up Latin social dance and kickboxing. I am also involved with the Purdue Alumni Association in Albuquerque. I like to keep busy and have worked very hard to strike a balance between my career and personal life. I seldom work more than 40 hours a week. I made it a goal to be more productive during work hours to minimize overtime and unnecessary stress. It usually works.



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## Profile of a Mechanical Engineer: Patrice Vanderbeck, Cedar Falls, Iowa

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### Occupation

Electronics systems engineer for the 6000 and 7000 series John Deere tractors

### Education

BSME, 1982

### Studying Engineering

I like to understand how things work. Math was my favorite subject in high school, followed closely by the sciences. Engineering seemed like the appropriate career for me, based on my interests. My college advisor recommended I study mechanical engineering after assessing my capabilities and interests. It sure was the right direction. The engineering curriculum can be difficult, but an engineering degree gives you many options. You can go into design, management, marketing, sales, law, manufacturing, or research, to name just a few areas. If you decide you want a change, it makes it easier for you to move on in a new direction. The engineering degree will open doors for you.

Given the opportunity, I would have changed two things about the path I took. First, I would have developed better study skills in high school, or earlier in college. I had to do some backtracking because of this. Also, I would have worked at a company that manufactures a product (like tractors) directly out of college instead of starting at a consulting firm. I learned it was important for me to work where a product is manufactured.



### Career Life

I have worked at three companies since graduating in 1982. I am currently the electronics systems engineer for the 6000 and 7000 series John Deere tractors. I make sure that the different engineering teams within the electronics and vehicle groups are communicating with each other. My job combines design, program management, negotiating, and communicating. I deal with current tractor-related issues and the designs for new tractor programs at the systems level. I love my job because it is never boring. I am always learning. I work with many talented, dedicated people. When I was in a previous position at John Deere, I had design responsibility for a device for left-hand control of the forward and reverse movement of a tractor. It had 38 subassemblies. Between the supplier and me, we designed these subassemblies into a very small package. It took a lot of development effort to get the assembly to work perfectly within the entire system of the tractor. In the end, the device was well received by our customers for its function and reliability.

### Life Outside of Work

I enjoy biking, skiing, weaving, entertaining, and reading. I belong to an investment club and a reading club. I am married to another engineer. We have a vacation home on the Mississippi River where we do a lot of boating and entertaining. We love to travel. My husband and I do volunteer work with Habitat for Humanity and with our church. Our engineering jobs allow us to live a comfortable life and to enjoy fun things like travel and boating.

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## Profile of a Chemical Engineer: Jack Welch, Fairfield, Connecticut

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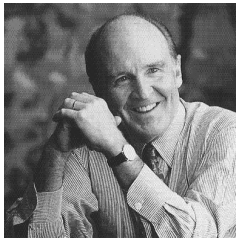
### Occupation

CEO of General Electric (Retired, 2002)

### Education

BSCHE; MSChE; PhD

### Career Life



The man called “CEO of the century” by the editor-in-chief of *Time* magazine is an engineer. Jack Welch, who led General Electric’s transformation over the past two decades into a global technology and services giant, started with the company as an engineer in Pittsfield, Mass. He had earned his BS ChE from the U of Mass in 1957, and followed that with an MS and PhD from the U of Illinois in 1958 and 1960.

In high school he had captained the hockey and golf teams and earned the distinction of being voted “Most Talkative and Noisiest Boy” by his classmates. “No one in my family had ever gone to college, but I had that ambition,” Welch recalls. “Of course, believe me, my mother had that ambition for both of us.”

“Life is a series of experiences, a series of steps if you will,” he continues. “Every time you’re reaffirmed, every time someone tells you you’re Okay, you can go on to the next step, the next challenge. Well, my teachers in the Engineering Department told me I was Okay. In fact, they told me I was really good. A couple of them practically adopted me, and told me I had what it took to go on to graduate school. I had never even thought of graduate school. But they really believed in me.”

After earning his PhD, Welch returned to Massachusetts and GE’s Chemicals Division for his first job as a development specialist. It was on that first job that he demonstrated many of the leadership traits that characterize him to this day.

“I was an entrepreneur in a small business outside the mainstream of GE—the plastics business. My technician and I were partners working on the same thing. We had two people, then four people, then eight people, then 12. Today, GE Plastics is a \$6 billion business. But it started that way. Everyone’s involved. Everyone knows. Everyone’s got a piece of the action. The organization’s flat. All these things are from when I was 26 years old.”

Welch’s rapid rise in GE continued, and in 1981 he became the eighth chairman and CEO of the company that was founded in 1892. Although he recently retired, the organization he led was named “Most Admired” by *Fortune* magazine and “Most Respected” by the *Financial Times*.

Yet he described his job running a company with 1998 revenues of approximately \$100 billion as “not rocket science.” Instead he saw his key role as allocating both human and financial resources in a way that will continue GE’s growth. “My job is allocating capital, human and financial, and transferring the best practices. That’s all. It’s transferring ideas, putting the right people in the right jobs and giving them the resources to win,” he says.

Welch, now the father of four and recently a grandfather for the fourth time, continues on the golf course his winning ways that began in high school. He’s twice won his club championship and has even bested well-known pros in friendly play.

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## Profile of an Electrical Engineer: Shawn D. Williams, Twinsburg, Ohio

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### Occupation

Product General Manager at GE Appliances

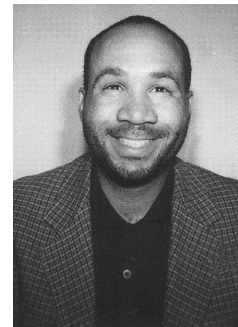
### Education

BSEE, 1985

### Studying Engineering

The opportunity to further my math and science abilities attracted me to engineering. I really enjoyed calculus, chemistry, and physics in high school, so I attended Marion Blalock's Target Cities Luncheon in Chicago. At the luncheon, Purdue engineering students spoke about engineering, and their comments opened my eyes to engineering as a possible career.

As a freshman in engineering at Purdue, I queried several juniors and seniors in various engineering disciplines on their course work. I concluded that electrical engineering would allow me to leverage my foundation in mathematics and physics. In addition, computers were becoming more popular, and I concluded that EE would provide insights into computers. My advice to students is that you remain persistent and disciplined in pursuing an engineering degree.



### Career Life

Currently, I am a regional sales manager for General Electric Industrial Systems. My primary job responsibilities include delivering top-line sales growth on an annual sales volume of \$130 million. I lead a team of 70 employees (mostly engineers) throughout six states in the Midwest as they execute business strategies in their local trading areas.

In the course of a day, I may do such things as interview for an open sales engineer position, review a trading area strategy with a general manager, expedite a delivery with a factory for a distributor principal, and provide coaching to a new sales engineer on a project. The best aspect of my job is the variety of strategic and tactical tasks in which I engage. My engineering degree provided the solid foundation for me to understand the technical nature of the products, but the ability to handle multiple tasks is key in executive management.

### Life Outside of Work

Obtaining an engineering degree has assisted me in providing a lifestyle for my family that I never thought possible while growing up. It is imperative for me to balance work and family life. My wife and my son and I spend weekends visiting the zoo, seeing friends, playing board games, and attending church.

On a personal note, I am the primary provider for my family, so keeping in shape physically, mentally, spiritually, and intellectually are keys to a successful life. I accomplish this by running 3 to 4 miles three times a week; consistently working on lowering my golf handicap of 13 by playing golf with customers and friends weekly; and incessantly learning about life through Bible reading, management books, and by mentoring and coaching employees, students and family members. I can honestly say that without my engineering experiences, the life I have now would still be just a dream!

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## Profile of a Mechanical Engineer: Dr. Adel A. Zakaria, Waterloo, Iowa

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### Occupation

Senior VP, Engineering and Manufacturing, Worldwide Agricultural Equipment Division

### Education

BSME, Egypt, 1967; MSIE, 1971; PhD, Industrial Engineering, 1973

### Studying Engineering



Growing up in a developing country, I viewed engineering as an instrument for making genuine progress. It has offered me an opportunity to be part of moving things forward in our generation. In particular, I was interested in how things are made. Manufacturing offered a unique way to work with three domains: things, people, and systems. In today's highly technical society, engineering will offer a student an ideal foundation for several careers. A co-op or summer job experience can be very helpful in getting early exposure and making one's study a lot more interesting and meaningful.

### Career Life

Within a \$7 billion Worldwide Agricultural Equipment Division, I guide the work of 20,000 employees who engineer, manufacture, and provide product support to our customers.

A typical day for me in the last year might include:

- visiting with key customers and their servicing dealer in Nebraska
- chairing a Worldwide Combine Product Council in Germany
- visiting a new joint venture site in India to review progress of the factory construction
- reviewing the results of a business improvement team

I enjoy the breadth of my job, working with a variety of people, the disciplines they represent, and the constant challenge of leading change. Not only have I been able to apply engineering training, but I have had to constantly augment it by learning and expanding my knowledge in new, evolving areas.

Significant accomplishments in my career include the early development of cellular manufacturing, the development of computer aided design and manufacturing tools (CAD/CAM), guiding the development and introduction of our company's first worldwide tractor product platform, and the breakthrough in forging a new win/win labor strategy with our unions.

### Life Outside of Work

My hobbies outside of work include racquetball and photography. Our family (including our two daughters) has traveled together in over 30 countries. We enjoy learning about the world's people and cultures. We also have camped in most of the U.S. and Canadian national parks. At various times I have been active in a number of national engineering societies. I also have participated in a number of community volunteer groups, including a hospital board, United Way, and the Boys & Girls Club.