Power Engineering Alumni

Where are they now?

The electric power engineering group at ASU has a long history of producing outstanding alumni who have gone on to build successful careers in both academia and industry. In this issue, a small sample of our more recent alumni is highlighted.

"Several of the alumni from the power engineering program are faculty members at U.S. and international institutions and are making significant technical contributions in training the next generation of power engineers."

Other alumni from the program are playing a lead role in developing technologies that are essential to enhance and maintain a critical national infrastructure – the nation’s electric grid.

The power group continues to train students in advanced areas of power engineering. Our PhD students regularly publish their work in various IEEE transactions and participate in international conferences.

We hope to maintain the friendly, supportive atmosphere that is reflected in the recollections of our alumni members.

The electric power group

Saurabh Saksena
MS 2005, advised by Dr. George Karady

My journey at ASU, a journey worth pursuing, began in the fall of 2003. In the first semester, Dr. Karady chose me to work under him. This research assistantship made it easy for an international student like me to live in the U.S. My work with Dr. Karady gave me the opportunity to gain valuable knowledge in diverse fields ranging from voltage sags to underground cable ampacity. I was extremely fortunate to have Dr. Karady as my guide since, apart from my research, he also motivated me to keep a good GPA. I completed my MS with a 4.0.

I also participated in several paper and poster presentations. The most rewarding of these was an IEEE conference in San Francisco where I received a job offer from National Grid.

Presently, I am working as a power system protection engineer at National Grid, Massachusetts. My work profile includes designing the protection schemes for various substations, running coordination studies and analyzing disturbances in the system. I have been trying to create an impressive image of ASU at National Grid; the results of which can be seen by the selection of two ASU students for full-time positions."

As I look back, I would consider my education at ASU as my most rewarding experience. It helped me to grow intellectually and socially, and it also prepared me for the challenges of this competitive world.

Saurabh Saksena
MS 2005, advised by Dr. George Karady

Hongxia Wu
PhD 2004, advised by Dr. Gerald Heydt

Since graduating from ASU, I have been working as a R&D Power Systems Engineer at AREVA T&D in the Seattle area. I am now the main network application engineer working on the usage of PMU in State Estimation for Eastern Interconnection and Common Information Modeling for several million-dollar projects. I have been invited several times to give seminars and presentations at international conferences and universities. Last year, I won AREVA T&D Inc. Contributor Award Honorable Mention and was elected to be a full member of the Sigma Xi Society.

More recently, I gave birth to my daughter Emma Tingyu Di. I had a business trip at the ASU campus last March, and I found that the campus has really changed. I am glad to know that the ASU power engineering program has become one of the largest in the nation.

Other alumni from the program are playing a lead role in developing technologies that are essential to enhance and maintain a critical national infrastructure – the nation’s electric grid.

The electric power group

Message from the Department Chair

EE alums, The Department continues to grow in research with more than $15 million in new awards in the last year. The excellence of all of our degree programs has been recognized, resulting in a national ranking of 29 for two years in a row. We are proud of these accomplishments and believe that they increase the value of your degree. This semester’s newsletter highlights the accomplishments of several alumni from the Department’s electric power program. The power group has become among the most recognized in the country thanks to our outstanding students, alumni and especially the power faculty including Raja Ayyanar, Richard Farmer, Ravi Gorur, Gerald Heydt, Keith Holbert, George Karady, Daniel Tylavksy and Vijay Vittal.

EE alumnus Qi Huang........2
EE alumnus Qing He........ 2
EE alumnus Daniel James....2
EE alumnus Jun Gu..........2
EE alumnus Ahmed Dauod...3
EE alumnus Hui Ni..........3
EE alumnus Manuel Reta.....3
EE alumnus Michael Mattson..3
Dual Degree Program........3

Inside this edition
Qi Huang  
**PhD 2003, advised by Dr. George Karady**

I received my PhD degree from Arizona State University in 2003. Before that, I received my MS degree from Tsinghua University in 1999 and my BS degree from Fuzhou University in 1996.

My four years of experience at ASU is priceless to me. Beside the academically advanced atmosphere and campus culture, ASU has a powerful power program with world-wide prominence. The professors working in the group are giants in the field and highly successful educators. Dr. George Karady, Dr. Gerry Heydt and Professor Richard Farmer - those “Beautiful Minds” - affected me deeply by imparting the thought processes and methodology necessary for academic research.

After I received my PhD, I decided to go back to China to help develop a power program at the University of Electronic Science and Technology of China (UESTC). I founded a research center and an undergraduate program in power system automation, which cultivates students for advanced power system control and operation, digital instrumentation and control in nuclear power plants.

While at ASU, I was very active in community programs in an effort to promote the understanding between Chinese communities and local communities. As the president of Chinese Student & Scholar Friendship Association (CSSFA) at ASU, I organized many large activities in local Chinese communities to donate to 9/11. Later, as the co-chair of the fundraising committee, I collected donations from local Phoenix communities for SARS in China.

Although I left ASU three years ago, this memorable experience still emerges in my mind. It will be the source of life-long wealth in my career.

---

Qing He  
**PhD 2000, advised by Dr. Daniel Tylavsky**

I grew up in Wuhan, China and received my BSEE from Huazhong University of Science & Technology in Wuhan, China. I received my MSEE at Tsinghua University in Beijing, China and then worked as a lecturer at Tsinghua University for three years. During this time, I worked on the transient performance analysis of high voltage transformers. I joined ASU in August 1997 and earned my PhD in May 2000. After graduating, I worked for Philips Semiconductors for three years and then joined Texas Instruments in Tucson.

While pursuing my PhD at ASU, I worked under Dr. Dan Tylavsky as a research and teaching assistant. That was really a precious experience for me. Dr. Dan Tylavsky impressed me by his hard work, creative thinking and rich knowledge. He always encouraged me to try something new.

I also treasure the time I spent with Dr. Jenny Si. I was amazed by her sharpness and diligence. We co-authored several papers after I took her neural network class.

Currently I am enjoying my work at Texas Instruments as a design engineer. My main responsibility is to independently design a high speed operation amplifier (OPA). Since 2000 I’ve designed several products, which have gained good revenue for the company. I hold three patents in the area of analog integrated circuits.

---

Jun Gu  
**PhD 2004, advised by Dr. George Karady**

After graduating from ASU, I began working at Microchip. I was placed in the DSPIC division customer design group as an analog design engineer. My first team project was to design the microcontroller targeted for switched mode power supply. This product will enter the market soon.

I am really grateful to the staff and faculty in the Department of Electrical Engineering for their help and advice. I am especially grateful to my advisor, Dr. George Karady. His encouragement and support accompanied my whole journey at ASU. My precious experiences also helped me to land my current job. I also want to express my thanks to Professors Gerald Heydt and Richard Farmer. Without their sharp comments and suggestions, my research work would have been much bumpier.

---

Daniel James  
**MS 2003, advised by Dr. Gerald Heydt**

Following graduation, I became a senior engineer in the Battlefield Systems Integration group at Engineered Support Systems Inc. (ESSI), a defense contractor in St. Louis, Missouri. At ESSI (now DRS Sustainment Systems, Inc.), I have developed low and high voltage DC power distribution systems and power converters for vehicle and aircraft systems ranging from Bradley M1A2, F-5 fighter, Combat Talon and many others.

Recently, I have participated in a research group to improve communication systems for MSTAR perimeter surveillance radar systems and performed a fault and load flow analysis of a remote 3-phase power generation system, DPGDS.

Presently, I am working toward my MBA at Washington University in St. Louis.

---

"Dr. Dan Tylavsky impressed me by his hard work, creative thinking and rich knowledge. He always encouraged me to try something new."
Ahmed Daoud  
PhD, advised by Dr. George Karady

I spent two years as a visiting scholar at ASU. During that time, I worked toward my PhD under the supervision of Professor Karady. At ASU I enjoyed many experiences—both human and scientific. The people were so friendly that I felt at home.

After my two years, I returned to my home country, Egypt, and completed my PhD. Currently, I am a full-time assistant professor in the Department of Electrical Engineering at Suez Canal University. My research interests include power system stability, GA, network analysis and evolutionary techniques.

Hui Ni  
PhD 2002, advised by Dr. Gerald Heydt

I am currently with PJM Interconnection, LLC, a regional transmission organization for 13 northeastern states and Washington, D.C. I joined PJM four years ago as a senior engineer in Market Development. In my career, I have followed the advice: “A PhD degree means nothing if you sleep on it.” This was said by Professor Gerald Heydt, my supervisor, lifelong friend and teacher.

I started at my company as an application developer and tester. Through hard work, I have become a project manager who takes care of million-dollar projects that aim to improve PJM transmission system reliability and market efficiency.

Walking firmly down my career path, I can never forget what is behind me - ASU and its “A” mountain. During my three-year PhD study at ASU, I hiked on the mountain numerous times. Each time when I looked down at the ASU campus, I felt its beauty and strength. And this feeling will prevail throughout my life. God bless you, ASU!

Manuel Reta  
PhD 1998, advised by Dr. George Karady

I was working as an assistant professor at the Autonomous University of Nuevo Leon, Monterrey, Mexico when I was honored with a Fulbright scholarship to attend ASU. After receiving my PhD from ASU in 1998, I spent a couple of years working as a postdoc for my advisor, Dr. Karady, in power engineering.

My life at ASU was simply wonderful. Working as a postdoc visitor, I had the opportunity to learn from all of the power engineering faculty, my classmates and my undergraduate students in the electrical machines lab. Besides all the academic challenges, I also had the chance to know great people and to make lots of friends. I still maintain some collaboration with Dr. Karady today.

While studying at ASU, I was encouraged by my understanding wife and three beautiful children. Studying and raising children at the same time can be difficult, but it is absolutely more satisfying. My oldest daughter also attended ASU and received her bachelor's degree in supply chain management.

That is why my favorite maxima comes from Don Vito Corleone: “A man who does not spend time with his family can never be a real man.”

I am currently working as a professor at the Autonomous University of Zacatecas, Mexico. I encourage my student to keep pressing forward, just as my professors at ASU did with me. I am working on a project, sponsored by the National Council of Science and Technology in Mexico, that is related to wind and solar monitoring and the feasibility of hybrid (wind and solar) generators for rural areas in Zacatecas.

My eternal gratitude to ASU.

Keep in touch with EE. Please e-mail your career updates to eeinfo@asu.edu.

New Program:  
MBA/MSE EE  
(Dual Degree)

The Department of Electrical Engineering would like to announce a new dual degree program that allows students to receive two degrees: the W.P. Carey MBA and the MSE in Electrical Engineering from the Fulton School of Engineering. For more information, visit the MBA site at http://wpcarey.asu.edu/mba/online/mse.cfm or the Ira A. Fulton School of Engineering Center for Professional Development site at http://cpd.asu.edu/mbamse.

The deadline for applications for the January 2007 start period is November 15, 2006.

Michael D. Mattson  
BSE 2004

I am currently employed at Arizona Public Service Company (APS). My official title is electrical engineer, T&D Substation Predictive Maintenance.

I have the technical responsibility of test engineer, apparatus engineer and asset manager for one half of the substations in our network (over 200 subs). This includes testing, analysis, diagnosis and maintenance on all equipment in the substation. The testing and analysis are probably the best part. We use infrared technology, corona cameras, acoustic and vibration monitors, laser-leak detectors and, of course, DGA/oil analysis and Doble testing. Although I don’t perform the tests (which seem like fun), I do perform the trending and analysis of the test results and make recommendations as to the condition of the equipment and how to correct any problems that are found. It is a very busy job with an aging and constantly expanding system.

My wife is currently expecting our first child.