Proud To Be an Engineer!
Faculty and Staff
Dr. Rajab Challoo, Chair and Professor
Dr. Mohamed Abdelrahman, Professor
Dr. Robert J. Dietersing, Professor
Dr. Wei-Da Hao, Assistant Professor
Dr. Young Lee, Assistant Professor
Dr. Chung S. Leung, Associate Professor
Dr. Lifford Mclauchlan, Associate Professor
Dr. Claudio Montiel, Assistant Professor
Dr. Reza Nekovei, Professor
Dr. Mais Nijim, Assistant Professor
Dr. Syed Iqbal Omar, Professor
Dr. Sung-won Park, Professor
Dr. Amit Verma, Associate Professor
Ms. Jeong Yang, Lecturer
Dr. Muhittin Yilmaz, Assistant Professor
Dr. Nuri Yilmazer, Assistant Professor
Ms. Cynthia Cortez, Administrative Assistant
Mr. G.R. Benavides, EE/CS Lab Coordinator

Newsletter Committee
Ms. Jeong Yang
Dr. Chung S. Leung
Dr. Lifford Mclauchlan
Dr. Reza Nekovei
Dr. Amit Verma
Message From Chairman

This first edition of our EECS newsletter offers you a sampling of the activities of our dedicated faculty and students and their exceptional work. Our department has the potential to be one of the most active and the largest departments in the Frank H. Dotterweich College of Engineering at Texas A&M University-Kingsville in a short few years.

If you are a parent or a prospective student, our department has made a commitment to create an exciting and caring environment and provide the best possible and the state-of-the-art education to our students. Our department is fortunate to have a highly competent faculty with excellent academic training and diverse backgrounds. Our faculty members have international recognition, expertise and research in a broad spectrum of fundamental areas of electrical and computer engineering and computer science. Coupled with our state-of-the-art laboratories and funded research, our students are provided with opportunities to experience, perform and publish leading-edge research. Our national and international reputation attracts a high number of applications from well-qualified students all over the world. The successful placement of our graduates in high profile companies has enhanced the reputation of our programs. Our student organizations are stronger than ever with many on and off campus activities to get you excited and help you feel at home. I look forward to meeting you in person and showing you how exciting and rewarding it is to be a part of our engineering family.

If you are an alumni or supporter of our EE and/or CS programs, I would like to thank you for your past support and will be extremely grateful for your generous future support of our programs. This support is extremely crucial to help build and maintain our programs at a higher level. I will actively seek your support to identify new opportunities, develop scholarship funds and acquire cutting-edge equipment to continuously upgrade and maintain our infrastructure. Your contributions of ideas, time and financial support will make a great difference in the lives of our aspiring students. Together, we will help them reach their potential to be the future leaders of our society, our industries and of this great nation.

Enjoy reading the first edition of our newsletter and please feel free to contact me if you have any comments or questions. I look forward to hearing from you!

Rajab Challoo
Chair and Professor
Electrical Engineering and Computer Science
Faculty Research Grants Excel Student’s Research Opportunities

National Priorities Research Program Grant from Qatar National Research Fund

Faculty members Reza Nekovei (Lead PI) and Amit Verma (Co-PI) have been awarded a National Priorities Research Program (NPRP) grant of Qatar National Research Fund (QNRF) for their project, “Comprehensive Investigation and Development of Silicon Nanowire Based Photovoltaic Technology” in the amount of $1,041,562.55.

As in demand for alternate and green energy increases, solar power has emerged as a front contender towards meeting those demands. Two issues with solar energy are limited efficiency of solar cells, as well as costs. The last few years has seen a serious worldwide effort to solve those issues through the utilization of nanomaterials. The proposed work will involve a strong experimental aspect, which will be led by Qatar University, with an equally strong theoretical support provided by the University of Washington and Texas A & M University-Kingsville.

Broader impact: The work aims for a multi-disciplinary project and multi-institutional project in small diameter silicon nanowire based photovoltaic devices. It brings together scientists and engineers with diverse expertise. It will train a team of postdoctoral scholars, and graduate and undergraduate students in cutting-edge research.

Intellectual Merit: This work is a first attempt towards a systematic exploration of silicon nanowires for solar power applications. The project addresses multiple challenges involving quantum mechanical based material change carrier transport and device modeling, system development and circuit behavior analysis, knowledge of nano- and micro-based fabrication technology, and experimental characterization.

National Science Foundation Grant for Robert Noyce Scholarship Program

Faculty members Young Lee (PI), Sung Park (Co-PI), and Mais Njim (Co-PI) have been awarded a National Science Foundation (NSF) grant for their project, “Robert Noyce Teacher Scholarship Program Capacity Building: Future STEM Teachers in South Texas (F(ST)²)” in the amount of $291,352.

The project is targeted at Capacity Building of Robert Noyce Teacher Scholarship Program, and it addresses the needs of the South Texas school districts and aims at alleviating the shortage of certified K-12 mathematics, technology, and science teachers. The overarching goal of this project is to create the Future STEM Teachers in South focused on encouraging talented undergraduate students in Texas A&M University-Kingsville (TAMUK) majoring in Computer Science, Mathematics, Chemistry, Biology, Geoscience, and Physics to become certified K-12 STEM teachers in South Texas. Hispanic high school students in South Texas ultimately will be the beneficiaries who are academically prepared and inspired to embark on careers that involve Computer Science, Mathematics, Biology, Chemistry, Geosciences, and Physics.

Dr. Young Lee is a principal investigator to facilitate meetings and develop application materials, Dr. Sung Park will be overseeing all aspects of the program as a program director, Dr. Mais Nijim will be recruiting and outreaching to college and school district partners, and Ms. Jeong Yang will be developing a cyber social community system for the stakeholders involved in this project.
Recent Electrical Engineering and Computer Science External Research Grants

- “Comprehensive Investigation and Development of Small Diameter Silicon Nanowire Based Photovoltaic Technology”, Reza Nekovei (Lead PI), Manjeri Anantram (Co-PI), Amit Verma (Co-PI), Mahmoud Khader (Co-Lead PI), NPRP Qatar Research Foundation, Jan 2013 – December 2015, $1,041,562.55.

- “Robert Noyce Teacher Scholarship Program Capacity Building: Future STEM Teachers in South Texas (F(ST)²)”, Young Lee (PI), Sung Won Park (Co-PI), Monica Wong-Ratcliff (Co-PI), Reza A. Ahangar (Co-PI), Mais Nijim (Co-PI), Cheng C. Chen (Evaluator), Jeong Yang (Senior Programmer), National Science Foundation (NSF), October 1, 2012 – September 30, 2014, $291,352.


- “Javelina STEM Summer Program”, Muhittin Yilmaz (PI), Nuri Yilmazer (Co-PI), Carlos Garcia (Co-PI), Texas Workforce Commission (TWC), Summer 2012, $124,683.


- “Cloud Computing Using Amazon EC2”, Wei-Da Hao (PI), Amazon Web Services Education Coursework Grant, 8/2012 – 7/2013, $4,000.

- “Measuring and Visualizing the Uncertainty on Internet Packet Delay Variation”, Wei-Da Hao (PI), Keesook Han (Mentor), US Air Force Visiting Research Faculty Program, 6/2012 – 8/2012, $25,000.

- “Emotionally Driven Text-to-Speech Facial Animation for Avatar”, Wei-Da Hao (PI), Homeland Security Summer Research Team Program for Minority Serving Institutions, 5/2012 – 8/2012, $30,000.

- “Development of Texas Animal Control Association Membership Management System”, Young Lee (PI) and Jeong Yang (PI), Texas Animal Control Association (TACA), March 1, 2012 – August 31, 2013, $7,522.


- “NUE: Nanoengineering Education in an Under-Represented Minority University”, Syed Omar (PI), Reza Nekovei (Co-PI), Amit Verma (Co-PI), Douglas Holton (Co-PI), David Stollberg (Co-PI), National Science Foundation, 2011-2012, $ 199,868.

Recent Electrical Engineering and Computer Science Internal Research Grants

- “Development of a Real-time Air Pollution Alert System Using Smart Phones”, Nuri Yilmazer (PI), Kou-Jen Liao (Co-PI), Young Lee (Co-PI), University Research Award Grant, Texas A&M University-Kingsville, 2012- 2013, $14,997.

- “RF/Microwave/Wireless Research for Intelligent Wireless Sensors”, Claudio Montiel (PI), Lifford McLauchlan (Co-PI), TAMUK University Research Award Competition, 2012-2013, $15,000.


- “Immune System Based Artificial Intelligence for Multiple”, Collaborating Mobile Robots, Selahattin Ozcelik (PI), Lifford McLauchlan (Co-PI), Dr. Muhittin Yilmaz (Co-PI), TAMUK College of Engineering, 2011-2013, approx. $20,000.00.

- “Mobile Device Programming Laboratory in Support of Graduate Education and Economic Development”, Young Lee (PI), Robert Diersing (PI), University College/Office of Title V Program/PPOHA Internal Equipment Grant, 2011, $16,980.
Department of Homeland Security Sponsored
Security Engineering Minor Program

In line with the mission of the Department of Homeland Security (DHS), Texas A&M University-Kingsville (TAMUK) will develop a multidisciplinary curriculum within the college of engineering in support of preparing engineering and science students for careers in areas related to our nation’s security. This multidisciplinary minor in Security Engineering will offer courses within the Departments of Mechanical Engineering, Electrical Engineering and Computer Science and will be fostered by research activities relevant to DHS-STEM area of interest.

This minor program will be open to all engineering, math, and science students who, are interested in this field. This program will focus on integrated study of Unmanned Aerial Vehicles (UAV), image processing, data mining, optimization, and information analysis and modeling. Selected students for this program will receive $7000 scholarship in academic year, 10 weeks fully paid internship or summer research at DHS facility or DHS centers of Excellence, and earn a certificate in Security Engineering.

Dr. Nuri Yilmazer will be offering a course, ‘Wireless Sensor Networks’, and Dr. Mais Nijim will be offering a course, ‘Data Mining’. In the Wireless Sensor Networks course, students will participate in developing image processing techniques to enhance the images. They will conduct the simulations by using MATLAB programming and learn the spatial filtering techniques and edge and line detection techniques which are widely used in image processing field. In the Data Mining course, students will participate in developing image and data mining techniques that will help in the image mining algorithms. They will be able to learn the current related theoretical algorithms and conduct simulations. They will learn feature extractions and predictions that could be used in other computer science or engineering related fields.

What is the true ‘Essence of Digital Signal Processing’?


Without knowing some important digital signal processing (DSP) algorithms, no aforementioned systems can be explained or understood. DSP has become an integral part of everyday life. This book introduces and explains every important aspect of the DSP. The book is an outgrowth of class notes used in the undergraduate and graduate signal processing courses at Texas A&M University-Kingsville.

The book begins with review of complex exponentials, convolutions, Laplace and Fourier transforms in Chapter 1. In Chapter 2, the sampling process of an analog signal is explained. Then the discrete Fourier transform is defined by deriving it from the Fourier transform of a discrete-time signal that is expressed in terms of a train of weighted and delayed impulses. In Chapter 3, the z-transform is defined by deriving it from the Laplace transform of a sampled signal. Digital filters, mainly the finite impulse response (FIR) filters, are explained. The fast Fourier transform (FFT) that speeds up the computation of discrete Fourier transform is explained in Chapter 4 along with discrete Cosine transform (DCT). The DCT is used in JPEG and MPEG formats. Filter banks and subband coding in conjunction with the wavelet transform is explained in Chapter 5. The wavelet transform is selected for newer JPEG2000 format. In Chapter 6, quantization of a discrete-time signal is explained and various quantization techniques are explained. Especially sigma-delta modulation is explained in details. In Chapter 7, speech processing including linear prediction model of speech production is explained. Finally, adaptive signal processing with examples of noise cancellation is explained in Chapter 8. Also the parameter estimation of the infinite impulse response (IIR) system is explained.
Recent Journal Papers

Department’s Faculty Publication Productivity Has Its Own Reputation

Recent Conference Papers


- J.A. Ortega-Saenz, Hua Li, and Mohamed Abdelrahman, "Study of the behavior of Shape Memory Polymers in the Active Disassembly Process," ASEE Conference, San Antonio, TX, June 2012.


Recent Conference Papers


Faculty’s Research Work Leads Patentable Results


Students Visited Georgia Institute of Technology

The Electrical Engineering senior students attended the Georgia Institute of Technology to use fabrication facilities for their senior design project under supervision of Drs. Amit Verma, Reza Nekovei, and Syed Iqbal Omar.

- Veneranda Castro, Oscar Hernandez, and Jorge Figueroa, Developing a Split-Gate Carbon Nanotube Solar Cell
Faculty Research Labs and Facilities

**CRISS: Controls, Robotics, Intelligent Systems and Sensors Research Laboratory**

CRISS Research Laboratory aims at supporting and nurturing innovative research and development of products and services in the field of Intelligent Systems, Sensors, Controls and Robotics. It is committed to creating a stimulating and supportive environment for innovative research.

CRISS is a multi-disciplinary Laboratory combining Mechanical and Electrical Engineering and Computer Science Departments, and it can be considered to be made up of four basic tiers researching in; Intelligent Systems, Sensors, Controls and Robotics.

The directors are Dr. Rajab Challoo and Dr. Selahattin Ozcelik, advisor is Dr. Mohamed Abdelrahman, and associate directors are Dr. Liford McLauchlan for Robotics Track, Dr. Dazhi Sun for Systems Track, Dr. Muhittin Yilmaz for Controls Track, and Dr. Nuri Yilmazer for Sensors Track.

**NanoElectronics**

NanoElectronics research group is lead by Drs. Reza Nekovei, Amit Verma, Syed Iqbal Omar, and David Stollberg. This lab has a current project titled “Nanotechnology Education in an under-represented minority institution” sponsored by National Science Foundation (NSF). Research lab offers a course “Introduction to NanoElectronics” to teach the following:

- The Characterization as well as fabrication of materials at the nanoscale.
- The simulation of materials and devices at the nanoscale.
- The principles of the design of devices at the nanoscale.
- The principles of the design of logic systems using nanoelectronic devices.

[www.tamuk.edu/engineering/research/nano/](http://www.tamuk.edu/engineering/research/nano/)
Student Research beyond the Classroom

Two Computer Science undergraduate students, William Webb and Juan Mora, participated in the research project, “Development of an Air Pollution Alert System: Integrating Air Quality Forecasting Frameworks and Location-aware Mobile Devices”, granted by AT&T Technology and Environment Award Program (2011). These students developed a real-time Environmental Alert System (EAS) on the Apple iOS and Google Android platforms, as they have gained the major market share of smartphones.

They used EAS to improve current air pollution alert systems: Air quality is simulated using atmospheric photochemical models and updated every hour. EAS identifies and updates locations of users of mobile devices, and alerts are sent to users in forecasted pollution areas. The work was guided by Drs. Kuo-Jen Liao, Nuri Yilmazer, and Young Lee.

Computer Science senior student Sara Munoz and faculty Dr. Wei-Da Hao joined the Air Force Research Laboratory’s Information Directorate (AFRL/RI) in summer 2012 for a project titled ‘Network Traffic Classification using 3D Visualization’. In this project 3D globe is used as the medium for visualizing the network traffic from different locations. This summer research program was sponsored by the Air Force Office of Scientific Research (AFOSR). In this program, TAMUK faculty and students will have research opportunities in AFRL/RI for 8-12 week during the May-September period. AFRL/RI’s goal is to provide a rewarding experience to the candidates from the academic research communities.
Students Build Skills in Organizations

Computer Science Association (CSA)

Computer Science Association (CSA) received a “Because You Care Award” sponsored by Keep Kingsville Beautiful (KKB) for their excellent community service, October 8, 2012. They were taken a picture with the KKB board and presented the award by the Mayor, Sam Fugate. CSA was established to develop a better understanding of the theoretical foundations of information, computation, implementation, and application in digital systems, to network with like-minded individuals towards a common goal in the field of Computer Science and Software Engineering, and to be involved in the local community.

CSA occasionally conducts a short workshop to cover a range of topics from Computer Science related to Mathematics related. They are currently preparing for the Collegiate Cyber Defense Competition (CCDC) to be held in Spring 2013. The CSA officers are Niki Arevalo (President), Miguel Rodriguez (Vice President), Mark Martinez (Secretary), Gaylon Taylor (Treasurer), and Richard Almaraz (Historian), and their faculty advisor is Dr. Young Lee. [http://tamukcsa.weebly.com/]

Eta Kappa Nu (HKN)

Eta Kappa Nu (HKN) is the Electrical Engineering Honors Society at TAMUK. Last year they inducted 10 new members and this year they are proud to have six potential members. They are currently involved in the Javelina Engineering Student Success Center’s transfer student mentoring program.

The members are serving as mentors to new transfer students that are currently enrolled in the disciplines of electrical, mechanical, and chemical engineering. As mentors, members are making sure the mentees know about all the services our university has to offer, student organizations available, and offer tutoring services if needed. HKN recently participated in providing lab tours to High School and community college students from all across the valley. HKN will be participating in the Can You Build Food Drive, where they are collecting cans to donate to those in need and building a structure with our donated cans to compete with other organizations.

The HKN officers are Sixto Almazan (President), Florent Fotue (Vice President), Dollie Molina (Recording Secretary), Eric Wineman (Corresponding Secretary), and John Solis (Treasurer), and their faculty advisor is Dr. Muhittin Yilmaz. [https://tamuk.collegiatelink.net/organization/eta-kappa-nu-electrical-comp-eng]
Students Build Skills in Organizations

Robotics Club  https://tamuk.collegiatelink.net/organization/robotics

The purpose of the Robotics Club is to create among students a general interest in robotics. The Robotics Club has been very involved, both in the community and at the university level. In the past, the Robotics Club has participated in events, such as “The Bigger Event,” which is a community-wide community service event in Kingsville. They helped out at the unveiling of the Dotterweich statue. They have also participated in several beach clean-ups and have traveled to various high schools to talk to their robotics clubs. The club has also participated in Preview Days, where the club was showcased to get more students interested in engineering.

Robotics Club has mentored high school students to prepare for the BEST robotics competition, as well as actually helping out at the event. The club will continue to do this. Robotics has also helped out in the past Engineering Days that were put together by the university. Robotics has had various fundraising events to raise money for the organization and its members. Some past fundraisers include selling root-beer floats at the Spring Fling and selling T-shirts. The club sold non-alcoholic margaritas at this year’s Fall Carnival event for homecoming, which was a great success. Robotics also participates in the Region V competition at the IEEE conference. At last years’ competition, TAMUK teams placed 3rd, 4th, 5th, and 6th. The competition is very competitive and the other teams that participated were very impressed with the robots from the TAMUK teams. The club plans to participate in a community-wide canned food collection competition, as well as the community-wide Christmas parade.  The Robotics Club officers are Dollie Molina (President), Dulce Barrera (Vice President), Razil Garbacz (Secretary), Ashish Reddy (Treasurer), Reshard Asmore (Historian), and Justin Ochoa (Webmaster), and their faculty advisor is Dr. Reza Nekovei.

Society of Women Engineers (SWE)  http://swe-tamuk.weebly.com/

Society of Women Engineers (SWE) is dedicated to supporting women in engineering and technology. SWE got a donation of a TI-Inspire CX calculator by Dr. Mary E Green who is an assistant professor and graduate coordinator of Instructional Technology at TAMUK. Dr. Green won the calculator from Texas Instruments while she was attending an event where their new spokesperson, actress Dr. Mayim Bialik who plays Dr. Amy Farrah Fowler in Big Bang Theory on CBS, talked about engaging students and especially girls in STEM fields. The calculator is autographed by Dr. Mayim Bialik, and she was nominated for an Emmy for her role in July, 2012. SWE is preparing the raffle tickets to sell the calculator to raise money for scholarships for SWE members.

The current SWE officers are Diane Flores (President), Josephine Gaona (Vice President), Gisela Alfaro (Secretary), Caitlin Fetterly (Treasurer), Jina Balogh (Historian), and Karina J. Perez (Webmaster), and their faculty advisor is Ms. Jeong Yang.
The Texas A&M University Kingsville Student Chapter of IEEE seeks to unite Electrical Engineering and Computer Science majors for the purpose of promoting the engineering profession. Institute of electrical and electronics engineers have been very involved in the community for the past couple of years. Every year two of the main community service projects this organization is involved in is the BEACH REACH CLEAN-UP and the BIGGER event. They believe that the community has helped our organization grow and supported us, so volunteering at these major events are some of the many ways that IEEE gives back to the community. We have fundraisers to allow us to attend the IEEE Region 5 conference that is held at different locations every year where they participate in various design competitions. IEEE is an internationally known organization on both a student and professional level. The student branch also gives back to the members as well as the community. If it weren’t for the members, the student chapter of IEEE would be nonexistent. Socials are held during the regular year for our members. We also present our members the opportunity to attend career fairs and other conferences. For instance, every fall there is the career fair at college station where over 250 companies attend for our members to possibly obtain intern or co-op positions. This is always a good opportunity for our members to network and get to know different engineers and recruiters of different companies. IEEE is a great well-rounded organization for electrical engineers and computer science majors. The TAMUK student branch of IEEE grows every year with prospective students of Texas A&M University-Kingsville. https://tamuk.collegiatelink.net/organization/ieee

The IEEE officers are Daniel Cavazos (President), Tiffany Custodio (Vice President), Matthew Burke (Secretary), Sixto Almazan (Treasurer), Dulce Barrera (Historian), and Daniel Lopez (Webmaster), and their faculty advisor is Dr. Lifford McLaulcan.
The robotics program which is a combined effort of the Departments of Mechanical and Electrical Engineering and Computer Science at the Texas A&M University-Kingsville (TAMUK) prepares undergraduate students for the current robotics field through a two semester curriculum. The program is mentored by Dr. Selahattin Ozcelik, Dr. Reza Nekovei, Dr. Nuri Yilmazer and Dr. Muhittin Yilmaz. The objective of this program is to develop multi-disciplinary robotic projects which have practical importance and also increase students’ ability, competency and teamwork skills on dealing with real-life engineering problems. This program achieves learning objectives for students with weaker science and mathematics background in an interdisciplinary course through hands-on interactive laboratory based approach. It also integrates college and high school level peer mentoring activities to attract under represented students to engineering fields. The students of this program developed a robot which is completely autonomous. The robot courses through three different simulated sources of renewable energy namely solar power, wind and water sources obtaining energy from those sources to raise a flag. The TAMUK Robotics team went 2011 IEEE Region-5 Robotics Competition and received 3rd place award. They will be competing again at the 2013 student robotics competition in Denver, Colorado in April 2013.

http://www.tamuk.edu/engineering/robotics/
Faculty and Students Recognized

Faculty members and students were recognized by the Texas A&M University System awards, Frank H. Dotterweich College of Engineering dean’s awards, and department awards.

- Dr. Sung Park, The Texas A&M University System Student Recognition Award for Teaching Excellence, awarded Fall 2011
- Ms. Jeong Yang, The Texas A&M University System Student Recognition Award for Teaching Excellence, awarded Fall 2011
- Dr. Rajab Challoo, Dean’s Award for Distinguished Service, awarded May 2012
- Dr. Reza Nekovei, Dean’s Award for Distinguished Teaching, awarded May 2012
- Dr. Nuri Yilmazer, Dean’s Award for Professor of the Year and EE Professor of the year, awarded May 2012
- Dr. Mais Nijim, Dean’s Award for CS Professor of the year and Best Paper, awarded May 2012
- Dr. Lifford McLauchlan, Dean’s Award for Distinguished Service, awarded May 2011
- William Webb, Dean’s award for Outstanding CS Senior Student of the year 2011
- Sarah Munoz, Dean’s award for Academic Excellence CS student of the year 2011
- Jonny Gamez, Dean’s award for Outstanding Service CS student of the year 2011
- Donella Delgado, Dean’s award for Outstanding EE Senior Student of the year 2011
- Ruben Cardenas, Dean’s award for Outstanding Service EE student of the year 2011
- Domingo Loria, Dean’s award for Academic Excellence EE student of the year 2011
- Electrical Engineering undergraduate students Veneranda Castro, Oscar Hernandez, and Jorge Figueroa were selected for College of Engineering Senior Design Competition Winner of the year 2011 for their project titled “Developing a Split-Gate Carbon Nanotube Solar Cell”.

- Computer Science Association (CSA) received “Because You Care Award” sponsored by Keep Kingsville Beautiful (KKB) for their excellent community service in 2012.
Alumni Spotlights

Ms. Leticia Garcia joined the Department of Manufacturing Engineering at The Lincoln Electric Company in June 2012. She holds a BS in Electrical Engineering from Texas A&M University-Kingsville. She troubleshoots and conducts testing on printed circuit boards, works on cost reductions for parts, and creates innovative methods to improve process efficiency. Leticia has a great balance between office and lab time every day. Working at Lincoln Electric has provided her a great opportunity to utilize her degree while continuing to gain knowledge through hands-on experience.

Mr. Daniel Hernandez, 2012 Computer Science graduate, works at the Corpus Christi Army Depot (CCAD) as a Program Manager/Analyst. He is currently employed by a company called Quantell. His job is split into two portions: Program Analyst which is primarily involved with using a database at the depot that tracks aircraft production equipment and as a Program Manager he is in charge of nine other contractors where he is the point of contact between them and personnel who also work there that are not contractors.

Ms. Madhuri Tullimalli completed her master in electrical engineering under supervision of Dr. Nekovei on FPGA delay analysis and synthesis in fall semester of 2012. She has joined Intel Corporation in Folsom California as Analog Design Engineer starting January 2013.

Mr. Shayan Sengupta received his master degree in electrical engineering during spring semester of 2012. He worked on parametric reconfigurable VLIW processors for highly intensive computations under supervision of Dr. Nekovei. He joined Altera Corporation in San Francisco Bay Area as Application Hardware Engineer upon his graduation.

Put Your Career on a Fast Track

- The Fast Track MS program provides qualified undergraduate students a unique chance to start earning graduate credits during their senior year of study, setting them on a fast track to earn their Master’s degree.
- Students earn undergraduate credits to satisfy the requirements of their undergraduate degree by examination, at no additional cost.
- Students may apply to the graduate school for admission and use the earned credits towards an MS degree.

Highlights of the Fast Track Program

- Prior to starting the senior year, interested student sign up for the Fast Track MS program.
- Accepted students earn up to 9 graduate credits in their senior year, from a subset identified by the department.
- Students take a exam, prepared by the department, prior to finishing the graduate course, to earn an undergraduate credit by examination.
- The undergraduate course credits by examinations are used to satisfy their undergraduate degree requirements while the graduate course could be used towards an MS degree, after admission to graduate school.
- Students do not pay tuition for the undergraduate course since the credit is awarded by examination.
- With this proposed model, students could finish the degree requirements for MS in 12 months after their BS degree, upon admitted to graduate school.
The 10th Annual Pathways Student Research Symposium was held at Texas A&M University at Galveston on November 9-10, 2012. The following is a list of students who presented their research at this year’s annual Pathways.

A team of Electrical Engineering undergraduate students, Wolfgang Schwertner, Eric Wineman and Pedro Carmona, was recognized for placing top 5% in the undergraduate level research with a project titled “Airport Taxiway Monitoring System”. Advisor Dr. Chung S. Leung.

Sara Munoz and Sam Huron, Computer Science Undergraduate, Network Traffic Classification Using 3D Visualization, “Contagion” - A Fun and Interactive Pandemic Outbreak Educational for the Masses, Advisor Dr. Wei-Da Hao

Nikhil Mantrawadi, Computer Science Master’s, Object identification and classification in a high resolution satellite data using data mining techniques, Advisor Dr. Mais Nijim

A K M Nazmus Sakib, Computer Science Master’s, Analysis of Security Protocol in Cluster Storage System, Advisor Dr. Mais Nijim

Sasikanth Pagadrai, Electrical Engineering Master’s, An Improved Delay Based MILP for Virtual Topology Design in Optical Networks, Advisor Dr. Muhittin Yilmaz

Michelle Medina and Eduardo Monciveals, Computer Science Undergraduate, Organize It, Advisor Dr. Wei-Da Hao

Cristoval Castillo, Electrical Engineering Master’s, Application-based Modeling of Successive Approximation Register Analog-to-Digital Converters, Advisor Dr. Rajab Challoo

Pratyush Valluri, Electrical Engineering Master’s, Convex Power Optimization Framework for Storage Devices, Advisor Dr. Muhittin Yilmaz

Chakrapani Saralaya, Electrical Engineering Master’s, Digitally – Reconfigurable Field Programmable Analog Array for Low Power Signal Processing, Advisor Dr. Reza Nekovei

Majid Shaik, Electrical Engineering Master’s, Hardware Modeling for Synthetic Aperture Radar DSP, Advisor Dr. Reza Nekovei

Madhuti Tullimall, Electrical Engineering Master’s, Studying Fast Ripple-Carry Adders in Standard-Cell CMOS VLSI, Advisor Dr. Reza Nekovei
Support our Electrical Engineering and/or Computer Science Programs

If you would like to be supporter of our EE and/or CS programs, we will be extremely grateful for your generous support. We heavily rely on your support to develop scholarship funds and acquire cutting-edge equipment to continuously upgrade and maintain our infrastructure. Your contributions of ideas, time and financial support will make a great difference in the lives of our aspiring students. Your support will help our students reach their potential to be the future leaders of our society, our industries and of this great nation.

If you would like to support our programs, please send us an e-mail at Rajab.Challoo@tamuk.edu or call us at (361) 593-2004 and let us know how you would like to support our department.

Here are some samples of how you can contribute to our department:

- I would like to contribute to the EE/CS department Student Scholarship Funds
- I would like to contribute to the EE/CS department Lab Equipment/Infrastructure Funds
- I would like to contribute to the EE/CS department Faculty Professional Development Funds
- I would like to contribute to the EE/CS department Research Funds
- $1000 □ $500 □ $200 □ $100 □ other $________

Dear Alumni! Get in touch ... and let us know...

We would like to hear from you and know about your successes for our future issues of our newsletter. You can share your success stories or via e-mail. Please send the following information to Rajab.Challoo@tamuk.edu.

- Name: □ Graduation year(s) and Degree(s):
- Business or Home Address: □ Telephone:
- E-mail address: □ Your personal or Business website URL:
- News you would like to share: