



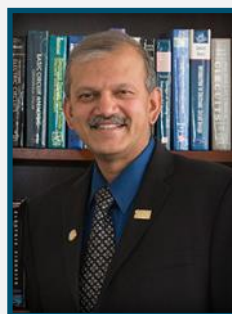
# EA INSIGHT

The Newsletter of IEEE Educational Activities

Volume 4 Issue 1 2016

## Looking Ahead to 2016

Welcome to the first issue of EA Insight for 2016! It is an honor and a privilege to serve Educational Activities in my new role as the 2016 Vice President, and I am both humbled and excited at the same time. Coupled with my role as the 2016 IEEE-HKN President, it promises to be a busy year for sure. In some ways, our opening WebEx for the year on 23 January was a testament to who we are in Educational Activities. With a blizzard raging through New York and New Jersey, our dedicated staff in EA, led by our new Managing Director, Jamie Moesch, and our new Manager of EAB, Rachel Warnick, organized and conducted the meeting without a hitch with over 80 volunteers online from around the world. I likened EA to an orchestra in my opening remarks, and with the cast of brilliant volunteers and staff, I see my role as your "collaboration" conductor to ensure that we continue to deliver a great performance year round.



Dr. S.K. Ramesh

We are off to a rapid start in the New Year, with several new faces whom you will get to meet and know through our incredible array of educational programs and services. From Pre-University Education, to University Education, and Continuing Education, we serve a broad range of constituents from students, educators, practitioners, and the public. EPICS in IEEE is maturing as an IEEE Foundation Signature program, and along with our highly successful Teacher In-Service Program and the TryEngineering.org, TryComputing.org, and IEEE Spark online

*Continued on next page...*

Issue Editor:

- Joanne Van Voorhis



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### EAB Core Purpose:

***"To be a leader in science, engineering, and technology education, to be a difference-maker in career-long learning for practitioners, to be a global catalyst for innovation, and to foster public understanding and appreciation of technology"***



## Looking Ahead to 2016 *Continued*

resources from our Pre-University Education area, we have a couple of exciting opportunities that are focused on Young Learners and Exhibits. The latter in particular aligns well with IEEE's Public Visibility efforts to promote informal education through science centers and museums worldwide. We have always had a strong focus on accreditation when it comes to University Education, but we have diversified significantly in recent years with a portfolio of programs, products and services to serve the needs of students and faculty in IEEE's fields of interest in Engineering, Computing, and Technology (ECT). Two such programs include IEEE Academic, and the Early Career Faculty Development (ECFD) Program. IEEE Academic is a program started by students to provide other students with online video resources on how to handle difficult to understand subject matter. The ECFD program is designed to provide early career faculty (ECF) with resources to help them become more effective teachers and researchers. Today, we have almost 1900 ECF in our online community and have conducted six virtual workshops.

On the Continuing Education front, we are gearing up for a busy year ahead as we plan to produce up to 75 new tutorials for the IEEE eLearning Library. Newly developed tutorials are reviewed and approved by subject-matter expert volunteers and societies to ensure they meet quality standards. Topics of the tutorials planned for 2016 include: Cybersecurity, Smart Grid, National Electric Safety Code (NESC), Software Defined Networks, Ethical Hacking, Project Management, Internet of Things, Big Data, Green ICT, Biometrics, and Smart Cities. We also plan to develop more than 30 new Massive Open Online Courses (MOOCs) and continue to work on the Certificates Program and other educational content aimed at the practicing engineer. These are just some of the key programs and initiatives that we will be working on during this year.

Indeed, if you happen to witness the annual EAB Awards ceremony, you will be in awe of the many wonderful programs and services we provide under Educational Activities. And more importantly, the people behind these programs that **I**nspire, **E**ngage, **E**xcite, and **E**nergize the IEEE way! As we look ahead to 2016, our goal is to strengthen our programs and build connections and partnerships with TAB, MGA, and SA to effectively serve the educational needs of all our constituents. I invite you to join us in this exciting journey which has the potential to energize Educational Activities and position it for greater successes in the years ahead.

-- Dr. S.K. Ramesh ✉

2016 IEEE Vice President, Educational Activities

[s.ramesh@ieee.org](mailto:s.ramesh@ieee.org)

## ***Nominations for 2016 EAB Awards***

**Don't miss the chance to nominate a deserving colleague for an EAB Award in 2016! For more information on EAB awards that recognize and honor individuals and companies for major contributions to engineering and technical education, visit [www.ieee.org/education\\_careers/education/awards](http://www.ieee.org/education_careers/education/awards).**

***Nomination Deadline is 2 May***



## A Note from Jamie Moesch

### Progress and Partnership for EA in 2016

Jamie Moesch, Managing Director, Educational Activities 



Hello to everyone in the IEEE Educational Activities community. As I write this, I'm a little over three weeks into the role of Managing Director of Educational Activities.

Many of you may know me from my past role as part of Member and Geographic Activities (MGA), where I was responsible for improving the member experience. From my time in MGA, I have direct knowledge of how our members look to IEEE to: 1) keep them current and educated in their fields; 2) foster the next generation into the profession.

I am certain Educational Activities (EA) will fulfill these needs in exciting new ways as we further unite with other groups across IEEE; like Standards, MGA, Technical Activities, IEEE-USA, Marketing Sales and Design, and others. We will also accelerate our progress by continuing to develop and foster relationships with external partners.

Ultimately, I see a future where EA will advance current services and programs to become a world-class educational business--providing offerings to our members and customers, and funding vital public imperative activities like our pre-university activities and accreditation. Existing projects and programs are clearly headed in the right direction. Through prioritization in areas where EA collectively wants to focus its efforts for the greatest impact, we can create multi-year tactical plans to expedite these initiatives.

I'd like to highlight some specific anecdotes of inspiration I've seen in my first few weeks that include:

- The passion of our EA staff in each of my one-on-one meetings with team members
- Our new EA Vice President, S.K. Ramesh's devotion, inclusiveness, and work ethic as soon as he was appointed
- My interactions and meetings with past EA leaders, especially Doug Gorham who went out of his way to bring me up to speed quickly before his retirement
- Each interaction I've had with enthusiastic EA volunteers
- The clear support and encouragement for realizing the potential of Educational Activities from other units of IEEE including staff colleagues, the IEEE Management Council, and our volunteer leaders on the IEEE Board of Directors

I very much look forward to working with each one of you as stewards of the future for this important area of IEEE. Should you ever need to contact me, please don't hesitate to reach out to [j.moesch@ieee.org](mailto:j.moesch@ieee.org) or +1 732 562 5483. I wish each of you the greatest success, health, and prosperity in 2016.



## Focus on Pre-University

### Pre-University Education and Outreach: A Global Catalyst for the Public

By Yvonne Pelham, Sr. Manager, Educational Outreach 

The goal of raising the level of public understanding and appreciation for technology is at the heart of the mission of Educational Activities Pre-University Education and Outreach programs.

The mission to (1) promote and enhance the level of technological literacy of pre-university educators and students, and (2) be a trusted source of resources, curricula, and pedagogical practices for pre-university educators is realized through the outcome of the formal and informal education programs and products. The mission is focused on encouraging students to aspire to IEEE-related careers and demonstrate to the community at large the impact of engineering, computing, and technology on humanity.



TISP Workshop in Athens, Greece.  
Photo Credit: George Papadimitriou

Overall, IEEE's Pre-University Education outreach activities, including IEEE's Teacher In-Service Program (TISP), EPICS in IEEE, ECT Portals, and museum exhibits impact more than one and a half million students, parents, teachers, volunteers, student members, and community residents in dozens of countries each year.

To build on the operational and programmatic successes of 2015, volunteers and professional staff will focus on continuous improvements and enhancements for the current programs and progress the pilot programs during 2016. The following are examples of anticipated activities in informal education.

With support from the New Initiatives Committee, a project "**Bringing 2030 Engineering and Technology Careers into Today's Classroom**" will create videos of IEEE in their workplace where innovative and leading edge work is taking place. These talks will demonstrate how their work can influence industry/society and make predictions about how their work will change the jobs of the future. The videos will provide a unique and engaging experience to raise students' awareness of the engineering and technology career opportunities that will be available in 2030.

This project will also demonstrate IEEE's impact on research achievements in the engineering and technology fields in ways the general public (including pre-university students) can easily comprehend, and will provide a unique resource that motivates students to aspire to be the engineers of 2030.

Discovering a scarcity of high quality engineering game apps, EA Business Development and Pre-University teams are working together to create a **Virtual Circuits** game application. The project is creating an app that mimics real life breadboards/snap circuits which would let students explore the basic principles of electrical circuits through a fun interactive experience. On target to launch in 2016, this app will be available on [TryEngineering.org](http://TryEngineering.org).

**EPICS in IEEE** will expand its focus and improve several program elements during 2016. The educational components of the program as well as the continued development of the narrative for the EPICS in IEEE story will be primary focuses of the program. EPICS in IEEE will have an expanded portfolio of promotional and marketing materials, a web presence, and an interactive virtual community to build the community of interest engaged in the mission of impacting communities.

Efforts will continue in 2016 to support two new initiatives that are in pilot phases:

- Efforts will continue into 2016 to secure partners and financial support for the **"I Can Engineer: Development of Resources for Young Learners"** Pilot, which is a project to develop engineering, computing, and technology resources for young learners, ages 4-7.
- As a follow-on to the **IEEE Exhibits Program** Strategic Summit held in 2015, a report on the recommendations for the strategic direction will be distributed and guidance on the best path forward will be sought from key stakeholders.

In 2016, the expanded collection of programs and products for the pre-university community will reach and impact many around the world, raising the level of appreciation and understanding of technology and of IEEE.



Students from University of Johannesburg working on an EPICS in IEEE Project.  
Photo Credit: M.S. Hoosain




High School students working on an EPICS in IEEE project. Photo credit: M.S. Hoosain



# University Programs Perspective

## University Resources Committee's Expanding Impact

By Burt Dicht, Director, University Programs 

75,972. That is the approximate number of people who were impacted or engaged in programs/services provided by the University Resources Committee (URC) in 2015. And that number does not include tens of thousands of more people who visited the URC supported web portals, such as Accreditation.org and the Real World Engineering Projects (RWE). To place the 2015 number in context, in 2010, 19,094 people were impacted or engaged in university education programs.

That is an almost 4 fold increase in the number of people impacted since 2010. How did such an increase occur? The main impetus was the creation of the URC and a focus on developing programs for students and faculty. The URC was formed in 2013 as a result of an Educational Activities Board reorganization initiated by then EA VP, Michael Lightner. Volunteer and staff leaders felt there needed to be a greater emphasis on programs that would directly enhance university education and the overall academic experience, and engage faculty and students.

Prior to the URC, EA's university education activities were predominantly focused on engineering education accreditation and the work IEEE did to support ABET accreditation and global accreditation. The three committees responsible for overseeing IEEE's accreditation efforts are the Committee on Engineering Accreditation Activities (CEAA), the Committee on Engineering Technology Accreditation Activities (CETAA), and the Committee on Global Accreditation Activities (CGAA). These three committees worked under the Accreditation Policy Council, or APC.

The work of the APC and the accreditation committees was, and still is, a great success story. Today, IEEE is the lead member society for the accreditation of almost 800 engineering programs. More than 300 volunteer committee members and program evaluators oversee and conduct between 150 to 200 evaluations each year. They make use of very mature and efficient processes and they are truly committed to enhancing the content and delivery of engineering, technology, and computer education. In 2010, the accreditation aspects of EA accounted for almost 98 percent of the 19094 people impacted.



Early Career Faculty Development Online Community

It was clear that the university education footprint was very limited outside of accreditation. As the reorganization effort progressed in 2012, a volunteer/staff team looked at a new university education structure that would not only maintain high standards on the accreditation side, but also expand EA's role in developing a portfolio of programs, products, and services for students and faculty across IEEE's fields of interest in ECT.

A year of intense effort and debate resulted in the proposal to create the URC. The URC would be responsible for overseeing and implementing all of EA's university education programs and activities. The immediate impacts of the proposal were to sunset the APC and transfer the accreditation committees to the URC. Three new committees were also created to develop and implement new programs for the students and faculty: The Faculty and Departments Committee (FDC), the Curricula and Pedagogy Committee (CPC), and the Student Educational Resources Committee (SERC).

The URC and its new committees have now been operating for three years. Immediate Past EA VP Saurabh Sinha served as the first URC chair in 2013, and Kapil Dandekar was the chair for 2014-2015. Since the inception in 2013, URC is now responsible for an increasing portfolio of products that resulted in that large increase in the number of people impacted or engaged since 2010. This is the current URC product portfolio:

Product or Service	CEAA	CETAA	CGAA	FDC	SERC	CPC
<b>Program Accreditation</b>	X	X				
<b>Accreditation Agency Support &amp; Training</b>	X	X	X			
<b>Accreditation.org</b>			X			
<b>IEEE - IBM Smarter Planet Challenge (2011- 2014)</b>					X	
<b>IEEE - IBM Watson Student Showcase</b>					X	
<b>IEEE Academic</b>					X	
<b>Advanced Learning Workshop</b>					X	
<b>Early Career Faculty Development</b>				X		
<b>Real World Engineering Products</b>				X		
<b>Perspectives on ECT Education Survey</b>						X
<b>MOOC Reviews</b>						X

To provide a better idea of URC's increasing scope and diversity, accreditation now represents 31 percent of the impact footprint as opposed to 98% in 2010. The rest comes from these new programs that have been launched under URC. A few examples are: Early Career Faculty Development Online Community (1880 participants), IEEE Academic (more than 50,000 students have accessed educational content), and Advanced Learning Workshop, or ALW (almost 200 students have participated).

The outstanding impact URC had in 2015 was the result of the hard work and dedication of a seamless volunteer/staff partnership. URC in 2016, under the leadership of new chair Stephen Phillips, is positioned well to build on the accomplishments of the past three years to expand its portfolio and positive impact on the university education community.

# Volunteer Spotlight

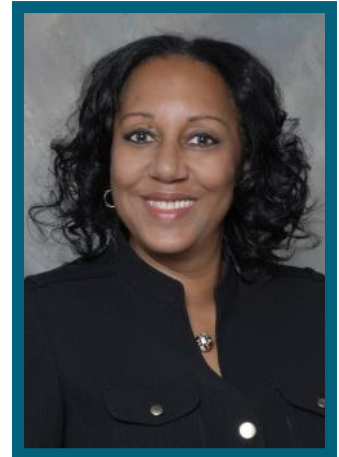


## Education is Empowering!

By Pam Jones, Senior Consultant to the U.S. Navy ✉  
MGA Representative to the EAB, SEOC Chair 2016, IEEE-USA Representative

Education is empowering and is something that, once attained, can never be taken from you! This is the mantra that I drum into the children that I work with. Though I am not an educator by profession, I enjoy working with pre-university children in underserved communities.

By day, I work as an Information Technology Consultant in Washington, DC. I am a solutions architect who supports operations. I received my B.S from the University of Maryland and went on to Graduate studies at University California, Irvine. My passion, however, has been in working in the underserved community.



While working at IBM in downtown Baltimore, I experienced the affluence of the area and corporate America at my office during the day. But, at night, I witnessed many homeless people who inhabited the streets near my workplace. These people would have large boxes, and put them over the steam grates so they could stay warm. What a difficult way to live. I couldn't understand it. It seemed so wrong. It was surreal. To assist, I decided to work as a volunteer with the underprivileged. In conversations with many of them, one point kept coming to the forefront, education was a key to ending the circle of poverty.

I started volunteering in those programs that reach out to our young people early, during middle and high school. While working, I also became engaged with programs such as DiscoverE and inner-city mentoring programs sponsored by my employer. I believed it was important to go into the underserved communities and seek out our overlooked gems. Who knows, one of them could be our next Nobel Prize winner.

Two years ago I brought the First Lego League Robotics Program into an underserved community. The program teaches kids about robotics hardware, software engineering, and how to program robots. The children learn patience and tenacity. Part of engineering is learning to go back to the drawing board when their product doesn't do what they expect. They also learn never to give up when something seems to be difficult.

As a result of the work that I sponsored, the community center in which I worked received a citation from the Mayor. It was the envy of the county. Three other boroughs now want to set up robotics programs in their community centers. I'm going to work with community leaders to get the funding and manpower to expand the program. For many of the children, this is the first time that they have been exposed to robotics. For them, it is fun game. They don't realize that

they are learning about hardware design and software development.

In 2015, my desire was to continue to broaden the outreach of STEM in the community. My focus, this time, was in the underserved community working with young women who, I believe, needed to widen their view of what might be their future career opportunities. In addition to STEM initiatives and the DiscoverE

programs, I have enjoyed talking to kids about STEM as well as working on short STEM projects in schools for the past 15 years. When I give a talk, I focus on breaking the stereotypes of what people think engineers or technologists look like.

I also started a girls coding camp last summer (named “{Girls It’s Cool to Code}” Camp) thanks to the support from WIE. Girls in the underserved community spent a fun week learning not only how to code but also how code affects so many aspects of our lives. In a short time, the children have gone on to start technical blogs and work with individuals in the Veterans Administration on designing a robotic arm to help injured warfighters.

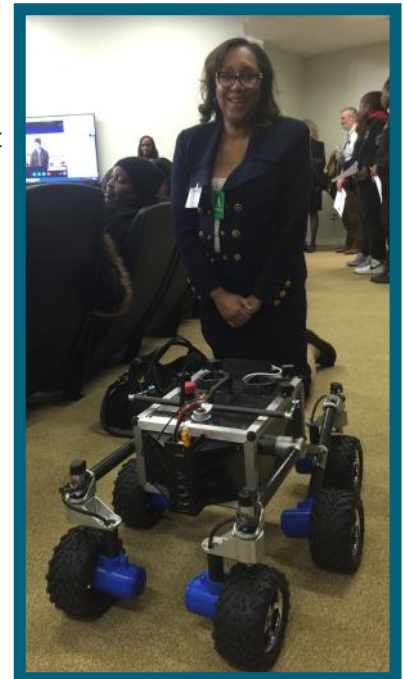
2016 is going to be a most challenging year on a couple of fronts. Finding funding to continue the programs has been difficult. Federal budget sequestration and the world economy has had an adverse effect on many companies’ giving plans. I worry about not being able to fund the summer coding programs and the robotics programs. Equally challenging is finding people who are truly committed to working with the children. Some come in once or twice and then are gone. Some groups throw a little money at the community and then aren’t seen again.

A new project that I am going to be introducing this fall is “STEM the roadshow” – a potpourri playground of engineering and technology stations where kids can discover through play. This roadshow will be held in various locations on weekends when children have time to explore.

I believe that good education for all of our children is paramount as our children are our greatest resource. Introducing young people to STEM from our underserved communities is critical. We need every great mind to be engaged to solve the world’s great problems – cybersecurity, renewable energy, lack of clean water, even landing on Mars. This can be done through a good STEM foundation. Come join me.



Future technologists & engineers. Picture credit: P. J. Jones



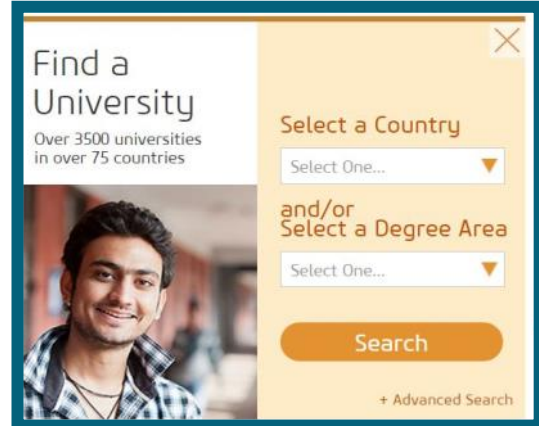
Jones at White House SoSTEM (State of STEM held after the SoTU [State of the Union]) event with robotics program children. Picture credit: P. J. Jones

# Research Update: Accreditation Database

## Consolidating EA Global Accredited Program Databases

By Joanne Van Voorhis, Sr. Manager, Research and Content Development 

IEEE Educational Activities has developed and maintains an extensive and growing database of accredited engineering, computing, and technology (ECT) programs around the world. This resource feeds the “Find a University” search that is featured on several EA portals, including Accreditation.org, TryEngineering.org, and TryComputing.org. Aligned to the goals of these portals, the database allows site visitors to search for programs by country or degree area. Initially developed as part of TryEngineering.org, the feature helped lay a foundation for the broader global accreditation resources now available at Accreditation.org.



Find a University feature on  
[TryEngineering.org](https://www.tryengineering.org).

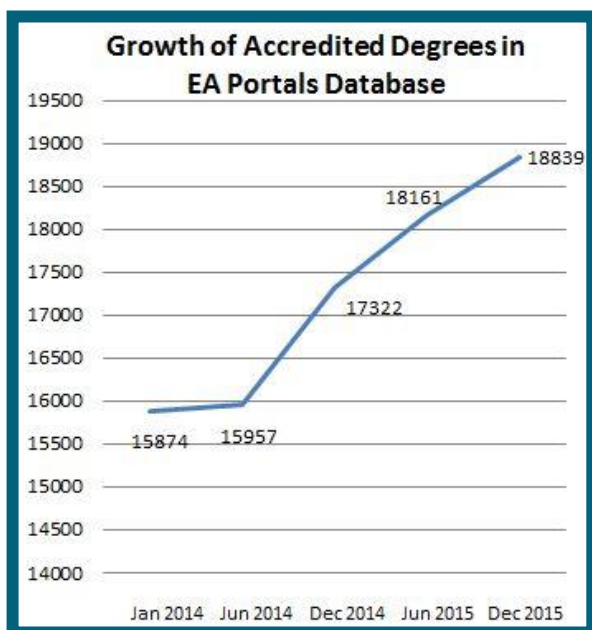
Over the years, as engineering, computing, and technology program accreditation has spread around the globe, there has been a continual expansion of the number of responsible accrediting bodies, universities, and degree programs we track. Our database currently represents 77 countries, 3,598 universities, and about 19,000 programs.

These are each confirmed on an annual basis to maintain accuracy, and we continually conduct research to make sure the EA database is the most comprehensive possible. This includes

adding accrediting bodies in additional countries which are venturing into program accreditation, and confirming whether programs have maintained accreditation status over time. There currently exists no similar source for global accreditation anywhere, so it remains a valuable asset of IEEE Educational Activities.

Initially, separate databases fed each of the three portals, but in 2015 we successfully instituted a system that consolidated the number of databases required to feed the portals to just one!

The process included adjusting programming of the supporting content management system,



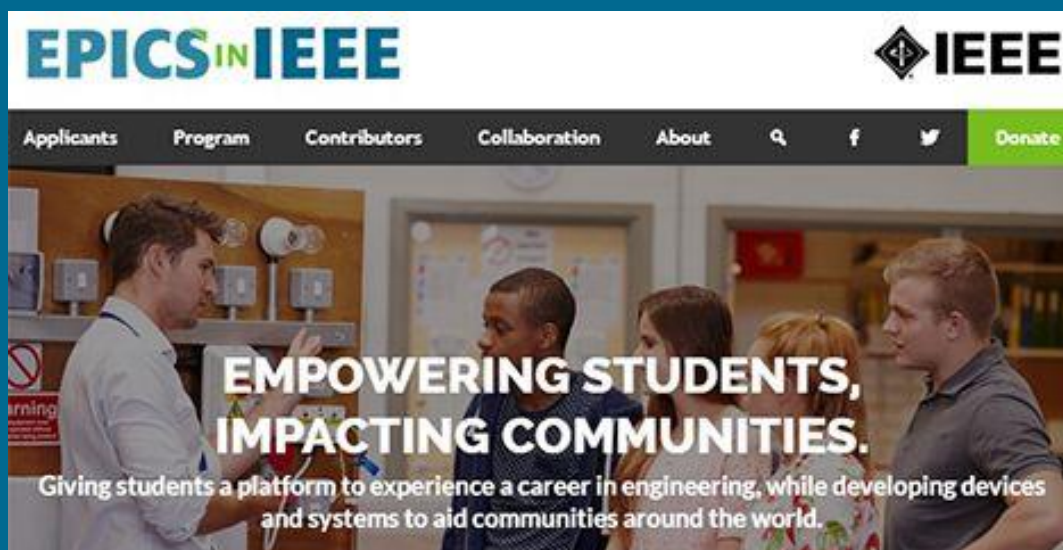
testing and troubleshooting, and adapting existing data to function in such a way to export specific degrees to specific portals. For example, TryComputing.org includes computing degree listings, but does not include listings of mechanical engineering accredited programs. Our system needed to be adept in exporting only appropriate degrees to address each portal's search functions.

This year-long effort was the result of good teamwork between EA professional staff, volunteers, and vendors. The process was also reviewed over the course of 2015 by members of the ECTPSC (Engineering, Computing and Technology Portals Strategy Committee). The committee's insights and suggestions were quite valuable throughout the process, and a case study was developed in 2015 to track the premise, challenges, and results of the effort.

As we move into 2016, we will be looking to further boost the comprehensiveness of our global listings, and of course reaching out to members of the Committee on Global Accreditation Activities (CGAA) for any clarification or guidance. Please visit <http://accreditation.org/university> to explore the current resources and email me at [j.vanvoorhis@ieee.org](mailto:j.vanvoorhis@ieee.org) if you have suggestions or feedback.



Find a University feature on Accreditation.org.



# EPICS.IEEE.ORG



# Recognition and Achievement

## IEEE EAB Awards to Expand in 2016

By Rachel O. Warnick, Manager, IEEE Educational Activities Board 

The IEEE Education Activities Board Awards recognize and honor individuals, teams, groups, organizations, and companies for major contributions to engineering and technical education at its annual Awards Ceremony held each November. Through EAB and IEEE-HKN Awards, outstanding accomplishments and those who have achieved excellence in IEEE technical fields of interest are recognized.

In 2016, the EAB Awards program will include two scholarship awards, which were previously part of the IEEE Awards program. The Charles LeGeyt Fortescue Scholarship was established in 1939, as a memorial to Charles LeGeyt in recognition of his valuable contributions to the field of electrical engineering. The scholarship carries a stipend of approximately US\$20,000, and is awarded for one year of fulltime graduate work in electrical engineering at an engineering school of recognized standing located in the US.

The IEEE Life Members Graduate Study Fellowship in Electrical Engineering was established by the IEEE Board of Directors in February 2000 and is financed by the IEEE Life Members Fund. The fellowship is awarded annually to a first year, fulltime graduate student for work in the area of electrical engineering at an engineering school/program of recognized standing worldwide. The award carries a stipend of US\$10,000 per year.



2015 EAB Award Winners

(See [www.ieee.org/education\\_careers/education/awards/winners.html](http://www.ieee.org/education_careers/education/awards/winners.html) for details on each award.)

These EAB Scholarship Awards recognize graduate students for work in electrical engineering and offer financial support for continued education endeavors. EAB Awards are given for meritorious activities in accreditation, continuing education, educational innovation, pre-university education, service to the IEEE EAB, employee professional development, informal education, and related achievements that advance the practice of engineering and of engineering education. IEEE-HKN Awards promote and recognize outstanding contributions by students, faculty, young professionals, industry, and professionals in IEEE's technical fields of interest.

For a complete list of all the IEEE Educational Activities Board Awards, please visit [www.ieee.org/education\\_careers/education/awards](http://www.ieee.org/education_careers/education/awards). Nominations and applications are being accepted now, and the deadline is Monday, 2 May 2016.

## Follow EA Via Social Media

- IEEE Educational Activities [Facebook](#), [Twitter](#), [Instagram](#)
- EPICS in IEEE [Facebook](#) and [Twitter](#)
- IEEE Continuing Education [Facebook](#) and [Twitter](#)
- IEEE-HKN [Facebook](#) and [Twitter](#)
- IEEE University Programs [Facebook](#)
- TryEngineering [Facebook](#) and [Twitter](#)





## IEEE-HKN 2015 - A Year of Growth

By Nancy Ostin, Director, IEEE-HKN ✍️

IEEE-HKN concluded a busy 2015, welcoming several new prestigious Professional Members, and confirming the approval of new IEEE-HKN chapters in the US and globally.

### Professional Induction Ceremony – 21 November 2015

IEEE-HKN welcomed 25 new members as Professional Inductees during the November 2015 IEEE Board Series meeting held in New Brunswick, NJ.

Evelyn Hirt, IEEE-HKN 2015 Board of Governors President, inducted the following members in a ceremony held during the IEEE Educational Activities Board meeting. IEEE-HKN is proud to recognize the following individuals for their contributions to IEEE and IEEE fields of interest.

Marc Apter	Thomas Coughlin	Murty Polavarapu	Ronald Tabroff
Amir Aghdam	Peter Eckstein	Pradeep Ramuhalli	Enrique Tejera
Supavadee Aramvith	Margaretha Eriksson	Mary Ellen Randall	Thomas Tierney
Karen Bartleson	Robert Hebner	Marina Ruggieri	Ljiljana Trajkovic
Martin Bastiaans	Witold Kinsner	Emily Sopensky	
Mary Ward-Callan	Susan K. (Kathy) Land	W. Ross Stone	
Carole C. Carey	Paolo Montuschi	Scott Tamashiro	

In a separate ceremony held on 21 December 2015 at the IEEE Richland Section meeting, Dr. Zhenyu (Henry) Huang was inducted into IEEE-HKN by President Hirt. IEEE-HKN extends our congratulations to all new Professional Inductee Members!

### New IEEE-HKN Chapters

The following Universities were approved by the IEEE-HKN Board of Governors to establish IEEE-HKN chapters:

- National Technical University of Athens (NTUA) - Mu Gamma
- Singapore University of Technology and Design (SUTD) - Mu Epsilon
- Eastern Washington University - Mu Delta
- Western Washington University - Mu Zeta
- University of KwaZulu-Natal (UKZN), Howard College Campus, Durban, South Africa – Mu Eta



IEEE-HKN 2015 President Evelyn Hirt and 2016 President S.K. Ramesh welcome 25 new Professional Inductees at the November Board Series.

The chapter installation ceremony at the Mu Epsilon chapter at Singapore University of Technology and Design (SUTD) was held on 14 December 2015. Eleven student members, one Faculty advisor, and an IEEE representative member from the IEEE Singapore headquarters were inducted. This Chapter was formally installed by the 2015 IEEE President and CEO, Howard E. Michel, and Associate Provost of SUTD, Professor Lim Seh Chun.

The Mu Zeta chapter installation ceremony at Western Washington University was held on 15 January 2016, and nine student members and two faculty members were inducted by IEEE-HKN 2015 President Evelyn Hirt. IEEE-HKN welcomes these new chapters and members, and looks forward to additional installation ceremonies in 2016.

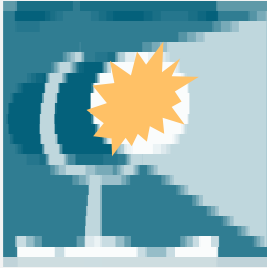


Howard E. Michel and the new members of the Mu Epsilon chapter at Singapore University of Technology and Design (SUTD), installed on 14 December 2015. Credit: SUTD

### **2016 IEEE-HKN Student Leadership Conference**

The 2016 Student Leadership Conference will be hosted by the Beta Epsilon chapter at the University of Michigan, Ann Arbor, on April 1-3, 2016. The theme of the conference will be "The Balanced Engineer," featuring presentations encompassing technology, career development, and chapter best practices. The Student Leadership Conference is the premier annual event for IEEE-HKN students from all over the world to meet for an exciting weekend of programs and to network with industry experts, faculty leaders, and the IEEE-HKN Board of Governors. If your organization would like to learn more about sponsorship opportunities, please contact Nancy Ostin, IEEE-HKN Director at [n.ostin@ieee.org](mailto:n.ostin@ieee.org). Also, donations to the Student Leadership Conference Fund at the IEEE Foundation are gratefully accepted to support the costs of the event, and provide stipend support to IEEE-HKN chapters to attend the conference. Find out more at [www.ieeefoundation.org/donate](http://www.ieeefoundation.org/donate). Thank you for your support!


**If you were ever inducted HKN, you are always HKN.**  
**Submit our alumni re-connect form:**  
<http://fs25.formsite.com/ieeevcep/form14/index.html>



## Spotlight on Standards Education

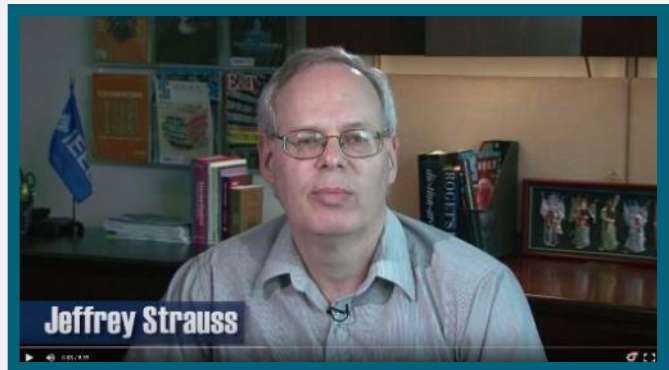
Upcoming [IEEEEx.org](http://IEEEEx.org) course!

### Innovation & Competition: Succeeding through Global Standards

By Jennifer McClain, Senior Manager, Standards Education & Business Development 

Products and technologies that influence and transform the way we live, work, and communicate rely on the development of technical standards. Standards also fuel compatibility and interoperability, reduce costs and risk, simplify product development, enable innovation, hasten time-to-market for new products, support commerce – and can determine a company's global competitiveness. Standards play a vital role in helping consumers understand and compare competing products, and give confidence to investors.

Coming in March 2016, the 6-week MOOC, entitled "Innovation & Competition: Succeeding through Global Standards," offers a practitioners' view of standards and is geared to graduate students and emerging professionals in the fields of engineering, technology, computing, business, economics, and law – particularly those working, or planning to work, in all facets of product planning, development, introduction, and support.



Lead instructor Jeffrey Strauss from Northwestern University's Center for Technology and Innovation Management

The course will enable participants to better contribute to their organizations and to advance their careers. Faculty in related areas will also benefit from taking the course and be able to add value to students through their teaching. By completing this MOOC, people can expect to come away with an understanding of the different types of standards, how they impact trade and innovation, how they evolve, why companies participate in standards development, how standards are changing to meet emerging needs, how related activities can be integrated with other organizational functions, strategic implications, and how standards can be applied to product design and planning. Consideration will also be given to related conformity assessment, regulation, and intellectual property management.

This joint project of Educational Activities and the IEEE Standards Association was funded through an IEEE Foundation grant. The MOOC is part of the overall new [IEEE Standards University](http://IEEEStandardsUniversity.org).

## EA Updates and Changes



### IEEE EAB Board Updates:

- ▶ S.K. Ramesh was elected 2016 Vice President, IEEE Educational Activities

### 2015/16 Professional Staff Changes:

- ▶ Jamie Moesch is now Managing Director, Educational Activities
- ▶ Ray Alcantara is now EPICS in IEEE Program Manager
- ▶ Eileen Fitzgerald is now Acting Director, Continuing and Professional Education and Strategy
- ▶ Elizabeth Kurzawa is now Sr. Program Manager, Educational Outreach
- ▶ Tracy Parker is now Promotion Manager
- ▶ Jacqueline Quigley is now Program Activities Manager, IEEE-HKN
- ▶ Amy Recine is now Product Manager, Continuing and Professional Education
- ▶ Rachel Warnick is now Manager, Educational Activities Board



### Welcome Natalie Marie Recine!

Amy Recine, product manager on the Continuing and Professional Education team, and her husband John welcomed the birth of their daughter, Natalie Marie Recine, on 28 December 2015. Natalie weighed 9 pounds, 7 ounces and was 21 inches long. Both mom and baby are doing well.

# IEEEEx.org


## Online courses offered by IEEE and edX





# Continuing and Professional Education in the News

## CPE Outlook Bright for 2016

By Jill Bagley, Senior Manager, Business Development Operations 

As a result of work accomplished by the Educational Activities team of volunteers and professional staff in 2015 to form new Customized Education Solutions Program partnerships, both IEEEEx ([www.ieeex.org](http://www.ieeex.org)) and IEEE eLearning Library will see significant increases in activity and growth in 2016.

Educational Activities launched IEEEEx on the edX platform last year, and offered seven Massive Open Online Courses (MOOCs) and paid courses. In 2016, we are planning for 20 or more new courses, including courses on cybersecurity, systems biology, real-time systems, Internet of Things, and Standards (with special focus on the updated National Electric Safety Code). EA is partnering with both internal OUs and external organizations for the new course content. For more information about IEEEEx, and to enroll in a future course, visit [www.ieeex.org](http://www.ieeex.org).



With the IEEE eLearning Library's new home on the IEEE Xplore platform, we are looking forward to greater visibility in 2016. We are currently planning for up to seventy-five new tutorials for the library this year, and will produce them in HTML5, which is a mobile-friendly format for delivery on tablets and smart phones (both Android and iOS). In addition, we will be converting a number of existing eLearning Library tutorials to HTML5 throughout the year. As with the IEEEEx courses, content for the new eLearning Library tutorials will be coming from both internal and external partners. Visit <http://ieeexplore.ieee.org/courses/home> to explore tutorials and other resources.



# Professional Staff Spotlight: Rachel Warnick

## From Rock Stars and Parties to Robots and Education

Rachel O. Warnick, CAE, Manager, Educational Activities Board ✉

With a career in association and non-profit management, I have partnered with volunteers to accelerate their initiatives. At times, these initiatives were vastly different from those I am working on today supporting the IEEE Educational Activities Board.

When I worked at the Count Basie Theatre Foundation in Red Bank, NJ (USA) my responsibilities included managing galas and benefit concerts featuring Bruce Springsteen, Brian Wilson, the Counting Crows, and Harry Connick, Jr. to name a few. At the Drug, Chemical and Associated Technologies Association, I managed an annual black-tie dinner featuring notable figures, like former New York City Mayor, Rudy Giuliani and President, Bill Clinton.



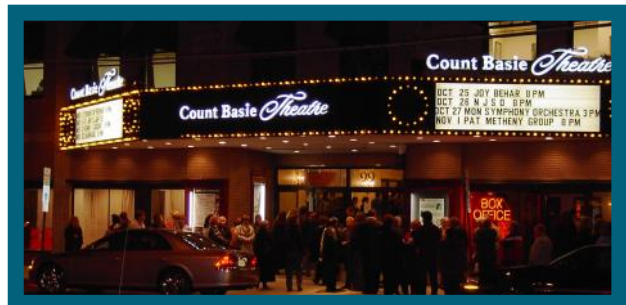
With President Bill Clinton in March 2003.

Nearly four years ago, I made the move to the IEEE where I was able to drive initiatives for the IEEE Robotics and Automation Society (RAS) – truly rock stars in their own right!

In the role, one aspect was being the Column Manager and Editorial Assistant for the *IEEE Robotics & Automation Magazine*, I learned so much about the advancements being made in the field and the benefits to humanity. These included robotic prosthetic advancements, robotic exoskeletons and more. I also gained insight into the various IEEE departments supporting the RAS Member, Publication and Technical Activities Boards as well as the Long Range Planning and Electronic Products and Services Committees.

Most recently I joined the IEEE Educational Activities Department in September of 2015 as the Manager of the Educational Activities Board. The significance of volunteer efforts relative to education foster technological innovation and excellence, where the impact resonates far beyond individuals' reach to the greater community of engineers. Great work is being done not only for engineers today, but building the foundation for the future.

Ultimately, the core of my previous experience is a skill set that includes volunteer-relationship management, operations administration, governance and communications. These attributes are relative regardless of the initiatives and I look forward working with the IEEE Educational Activities Board and staff to help realize their goals.



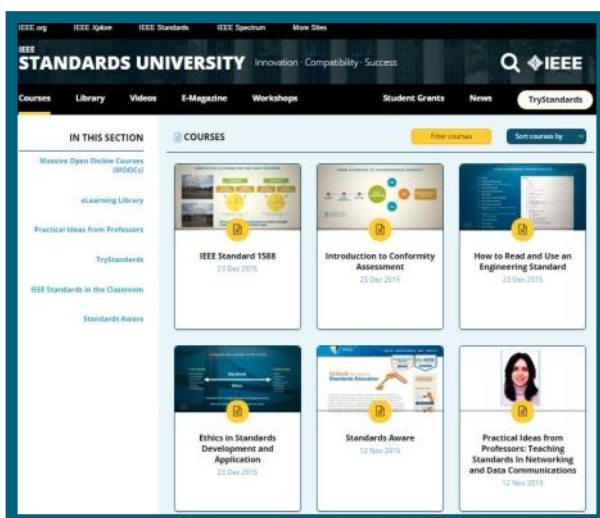
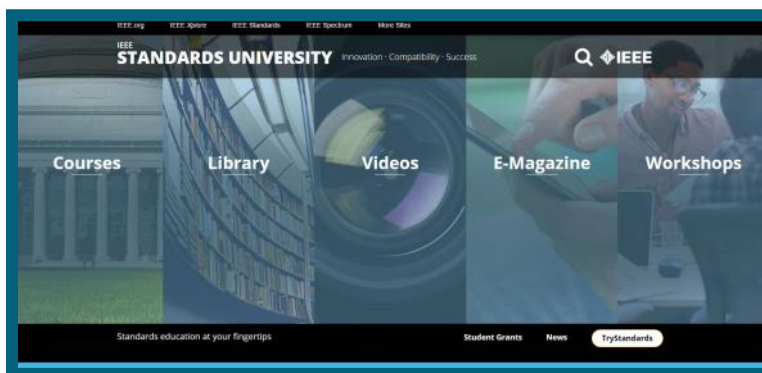
Count Basie Theatre in Red Bank, NJ

## Featured Resource



### IEEE Standards University

IEEE Standards University was recently launched and aims to expand the influence of IEEE Standards and benefit humanity and IEEE membership—by (1) making standards education a viable reality at the university level by providing a critical mass of materials; (2) modernizing the delivery method for educators, students, and professionals; (3) expanding IEEE standards education efforts; and (4) establishing continued leadership in this area for IEEE.



The new website includes the latest issue of the newly designed Standards Education e-Magazine. Eight new standards videos are also included, that focus on the IEEE 802® family of standards. New eLearning modules are also available, including topics such as “Ethics in Standards” and “Introduction to Conformity Assessment.”

Look for additional videos and eLearning content as well as a standards simulation game in the future, and explore all the new resources now online at [www.standardsuniversity.org](http://www.standardsuniversity.org)!

### Key Dates/Events

- 13 February: [EAB Meeting](#)
- 15 February: New [IEEE Spark](#) Issue “Engineering Inside: Light”
- 1-3 April 2016: IEEE-HKN [Student Leadership Conference](#)
- 6-10 April 2016: IEEE EAB Mini Series
- 2 May: [EAB Awards](#) Nomination Deadline



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