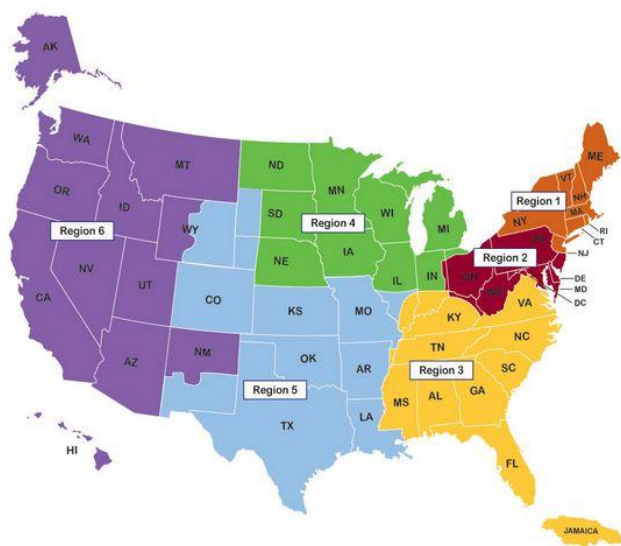


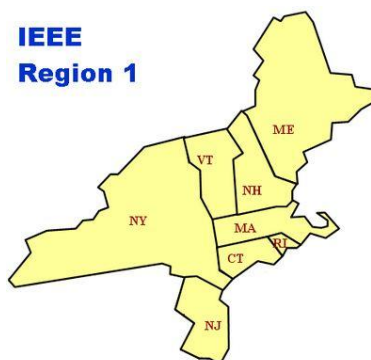


RegiOne, the newsletter of IEEE Region 1

April, 2014, vol. 1, No. 1



The IEEE is divided into six administrative Regions in the USA



The Region 1 consists of 22 local Sections in 8 states



Please welcome Anthony Wan

A Future Member of the IEEE at the Micromouse competition!

He was an official time-keeper

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FOR your convenience content *descriptors* that appear below are hyperlinked to the corresponding news, articles, photos etc in the body of the newsletter. If you place the cursor over an item in the contents page and then press <CTRL + and click> you will be taken to the articles of your choice. If you do the same thing on the title of the article you come return to the contents page. Hope you enjoy reading this issue of the RegiOne. Any comment and suggestions are most welcome. Direct them to the editor: a.dutta-roy@ieee.org

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Principal Region 1 officers for 2014 – '15

Chairman of BoG and Director: Vincent Socci
Vice chair and director-elect: Ronald A. Tabroff
Secretary: Charles P. Rubenstein
Treasurer: Bala S. Prasanna
Past Director: Peter A. Eckstein

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From the editor:

Introducing RegiOne, the newsletter of the IEEE Region 1

GREETINGS to you and welcome to the first issue of RegiOne!!

Vincent Socci, the director of Region 1 would like to see a Region 1 Newsletter don a new at-

tire. We decided to start our efforts by giving a distinctive name to the newsletter: RegiOne. The Publications Services and Products Board, a major board of the IEEE unequivocally defines the purpose of a newsletter in the realm of the

IEEE and differentiates it from a bulletin that may merely post a calendar of events and personal news. We'll make every effort to make RegiOne a multimedia, colorful, transparent and easily navigable online publication. After all, if we were to preach any technology we must practice it before we preach! I am very much aware that in this age of social media networks it is not easy to grab the attention of readers. There are too many distractions. Hence, we'll try to make the newsletter interesting by performing a balancing act between essential news and the topics that could make our publication fun to read! Presently, we are experimenting with the fonts, color and alignments etc., for our cover, contents pages and the letterhead. Please let us know if you have any suggestion or preference.

I think that a function of our newsletter would also be to establish more cordiality and camaraderie, to improve communications among the IEEE members, to provide better scope for professional education and networking opportunities for younger members, and to engage life members in useful community projects of the IEEE. Furthermore, expanding our membership base must also be one of our priorities. Students are our best assets at the IEEE and we should do everything possible for them to remain in the profession after they graduate and *not* veer off to other nonproductive industries. We encourage young engineers to write for RegiOne, reports of events, new technical ideas and your thoughts for improving the functions of the IEEE etc. Even if at the first try you are not able to produce a readable material do not give up. We are here to help you. Remember

that RegiOne is regularly scanned by Google and other search engines. So, once your article is published that will serve a demonstrable and retrievable evidence of your soft skill that you can include in your resume.

There are N (where N tends to be a large number) steps we could take to make our Region 1 the very best under the umbrella of the IEEE. We can achieve all these only if all of you cooperate.

The newsletter is also intended to provide summary reports on all activities in the Region. I am aware that these days the demand on your time is huge and you may not be able to devote much of it to the volunteer activities of the IEEE. We all are in this boat. In spite of these obstacles, I appeal to all of you, especially those in the positions of coordinators, area leaders and Section chairs, to please write a few paragraphs, however short, on the activities of the Sections highlighting any specific activity that may be emulated by other Sections, and seminars and conferences in your field of expertise. We would like to make such news and messages available, four times per year, to anybody, in the IEEE and in our community "advancing technology for humanity." The IEEE is as much yours as it is mine. Please send your suggestions and contributions to me (a.dutta-roy@ieee.org) ASAP. Thank you.

Sincerely,
Your editor
Amitava Dutta-Roy, Ph.D
Life Fellow, IEEE

A SPRING 2014 MESSAGE FROM THE DIRECTOR OF IEEE REGION 1

From the Desk of the Director

Vince Socci

WELCOME to the first issue of RegiOne. Our hope is that regular communication with our Region 1 membership will enable our members to stay aware, get involved, and gain value from Region 1 activities, events, and offerings. IEEE is a great organization, and you are encouraged to use this newsletter to your advantage.

I took the role of Region 1 Director on January 1, 2014 and I look forward to serving in this role through the end of 2015. We have a great team of volunteer leaders throughout our region. With 30,000 members in our region, we have a tremendous opportunity to network, learn, and grow.

I am excited about all we are doing here in Region 1. Each of the 22 sections is providing technical and social events for our members. We have a team of volunteers at the region, section, chapter, and committee roles to serve our members. In our region, you can attend conferences, lectures, professional activities, networking events, outreach programs, and many other events.

Do you know about all the products and services of IEEE? Why are there so many? IEEE membership is a diverse group of nearly a half MILLION people. As the largest technical society

in the world, IEEE has formed value offerings to support the wide range of member needs and desires. I encourage all our region members to explore the full suite products and services offerings. You will find the ones that you value most and use them to your advantage and value. It is up to YOU to gain member value from IEEE. Explore and dive in!

I have been an industry guy all my life. I work on product development, program management, and customer delivery. For me, customer service is important. As an entrepreneur, running my own business, I recognize the importance of knowing what your customer requires, serving their needs, maintaining their relationships, and creating value that grows your organization. In IEEE, we do the same thing. We look for what our members and society need. Then we build relationships with relevant resources and work with them to deliver value. We measure our success by how we serve our mission.

To that end, we have many programs that the region supports for our members – from educational activities to career development. I have also started four key initiatives for my term as Region 1 Director.



R1 Key Initiatives for 2014-2015

Maximize Member Value

- Determine cost vs. benefits
- Key resources are money and volunteer time.
- Assess how we spend these resources
- Reduce waste
- Use savings to increase value
- Local value and offerings

Support IEEE members' careers

- R1 jobs for R1 engineers
- Improve industry relations
- Facilitate career networking within IEEE membership
- Prepare our members for engineering needs within R1
- Support the career life-cycle

Invest in Engineering Profession

- Precollege students: Inspiration
- University students: Top-notch curricula.
- GOLD members: Mentoring and professional guidance.
- Seasoned engineers: Continuing education and training

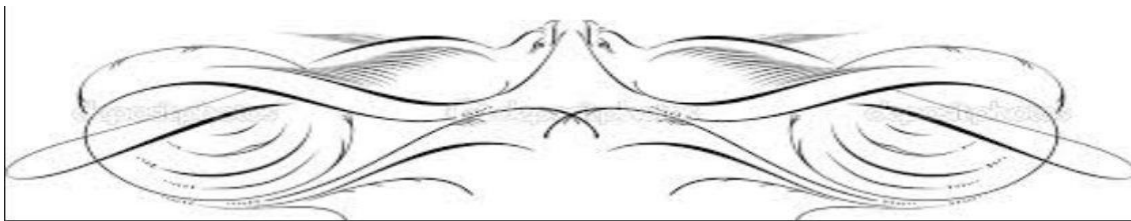
Develop IEEE reputation/credentials

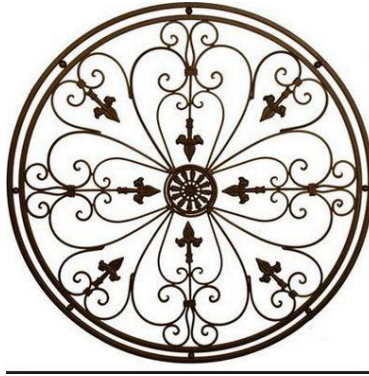
- Recognized competence and integrity
- Certifications and continued education for IEEE members.
- Industry respect and recognition
- IEEE-USA active and accurate in position statements
- Technical societies CEUs



RegiOne is a tool we can all use to make 2014 a great year for Region 1. In it, you will find information about all the news and happenings throughout our region. I encourage all our region members to get involved with their sections. Attend the meetings. Take part in the

events. Use the IEEE products and services. This is YOUR IEEE.

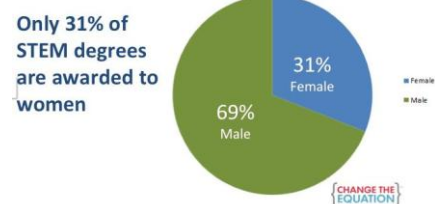
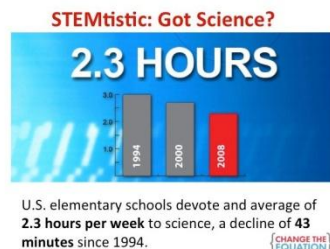
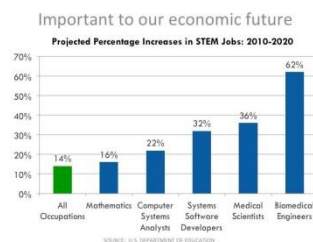
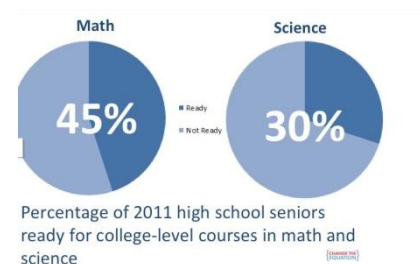
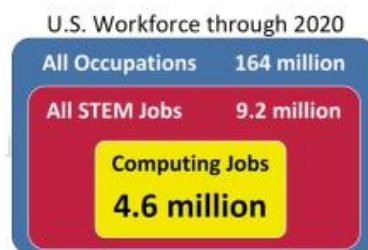
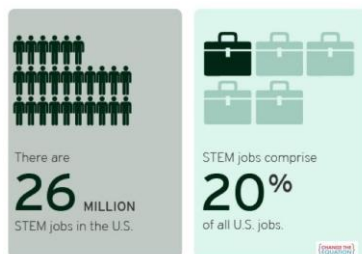




Integrated IEEE STEM Conference: ISEC 2014

Sponsored by IEEE Princeton/Central Jersey Section, IEEE Region 1 and IEEE Education Society

S T E M = Science, Technology, Engineering and Mathematics



Courtesy: StemEdCoalition

IEEE-USA is a member of the STEM Education Coalition

THERE is no doubt that the IEEE-sponsored STEM Conference at Princeton, NJ on 8 March, 2014 was a fantastic success. In these pages we'll try to give you reports on STEM through texts, photos and slide shows. Hopefully, they will convey the importance of STEM education, especially among women, not

only in this country but in the world. The Integrated STEM Education Conference (ISEC 2014) was sponsored by the IEEE Princeton/ Central Jersey Section, IEEE R1 and IEEE Education Society. If you are interested to see the names of the speakers at various levels, keynote speeches and panel discussions you could go to the site: <http://ewh.ieee.org/conf/stem/> - Editor

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Impressions of ISEC 2014

Nita Patel, Keynote speaker at STEM

KUDOS to the organizing committee (Susan Donohue, Nagi Naganathan, Ashutosh Dutta & Vignesh Subbian) for the 2014 Integrated STEM Education Conference. The event held at Princeton University on Saturday, March 8, 2014 was a fantastic opportunity to connect educators, volunteers and those interested in advancing STEM



Dr. Karen Panetta

education for a day of sharing ideas, hearing success stories and establishing collaborations for the future.

In celebration of International Women's Day, all of the keynotes were women prominent in technology. The day began with a funny, engaging keynote by Dr. Karen

Panetta, Associate Dean of Graduate Education at Tufts University. Dr. Panetta spoke about inspiring the next generation of engineers by connecting them with ideas and projects that demonstrate how they can make an impact on their communities and the world around them. Dr. Panetta also encouraged us to promote the incredibly diversity, not only technically but also socially, within engineering. "There truly are no

limits," shared Dr. Panetta.

After the keynote, attendees dispersed to attend one of five (5) individual tracks. The tracks



Nita Patel

were K-12 STEM Pedagogy, K-12 STEaM (STEM + Art), Post-secondary/Higher Education Programs, K-12 Robotics and Women in STEM. I attended a talk by Frehiwot Whhib, where she presented some interesting research on the difference between social coping for men and women. She spoke of how these different strategies play a role in why there

are fewer women in STEM professions and encouraged us to explore ways to provide more women-friendly environments. A team presentation by Julie Fetzer, Katherine Czerniejewski and Dana Voll followed. They discussed the importance and subtle differences in recruiting strategies and how they play a role in attracting women to STEM. Finally, I heard CJ Chung present the concept and success story of the first Global Robotics Art Festival and how encouraging young people to use their creativity by coupling it with technology.

Ms. Nita Patel (IEEE Women in Engineering International Chair) was the pre-lunch keynote. She



Dr. Alicia Abella

shared statistics on trends for women in STEM and touched on just a couple of the challenges around the complex problem of engaging more girls in STEM fields. In fact, more women are graduating today and are doing better in school than boys; however, traditional stereotypes about inherent limitations continue to persist. "The key takeaway is that we need to articulate the difference between reality and perception and we make a change by influencing the influencers," shared Ms. Patel.

Dr. Alicia Abella (AVP Cloud Services Research Organization, AT&T) presented a keynote after lunch on why STEM education is vital for the Future of America. Highlighting the increasing demand for STEM workers, Dr. Abella urged us to not underestimate what the next generation can achieve. She shared several programs conducted by AT&T (some in conjunction with Princeton) that helped to highlight the incredible creativity and innovation of these young participants. "In just a few hours, these kids created something remarkable," commented Dr. Abella.

After this keynote, attendees once again were distributed among five (5) tracks. This time, the track themes were K-12 Integrated STEM, Issues

and Perspectives in STEM Education, Integrated STEM in Post-secondary Education, 3D Printing/Design in Education and K-12 STEM Outreach. I attended the presentation by Elizabeth Bondi and Briana Neuberger on multidimensional comparison of project-based learning programs. It was interesting to see a classification for different learning styles (from (a) strict single teacher presenting to a large class of students to (b) small teams working collaboratively with instruction from a teacher). Although thorough research was not yet done, I found it interesting that there did not seem to be significant difference in education outcome in one method over the other. There were a few more sessions in the afternoon and I closed the day with a presentation by Srijoy Dutta and Rohan Mathur on a digital literacy project in India supported through EPICS. It was great to hear from these high-school seniors about developing, planning, and executing on a project to change a community.

Overall, the conference was a smashing success in my mind. I enjoyed speaking with the passionate educators in attendance and hearing the different, interesting topics around STEM education.



Editor's note:

THE author of this article Nita Patel, P.E., is a Systems and Software Engineering Manager at L-3 Warrior Systems. Nita is currently the Women in Engineering International Chair, on the Computer Society BoG and Eta Kappa Nu BoG. Outside of the IEEE, she is active with Toastmasters and the United States Chess Federation. She was one of the three keynote speaker at

ISEC 2014. Her presentation may be downloaded from <http://1drv.ms/1kPMmYN>

We also have the pleasure to give you a link to the STEM keynote presentation by Alicia Abella, PhD, AVP, AT&T Laboratories:
<http://1drv.ms/1it9dep>

This presentation too may be downloaded from the site.

The STEM topic draws much attention these days, especially as it tries to attract more women. On December 11, 2013 the non-profit German Center for Research and Innovation in New York promoted a panel discussion on the topic of “Engaging Women in STEM: Perspectives from the United States and Germany.” Profes-

sor Iraj Kalkhoran, Associate Provost of Undergraduate Academics, Polytechnic Institute of New York University described the situation in the USA, especially at his Institute. To see and hear the speeches and the panel discussion go to the podcast at <http://www.germaninnovation.org/news-and-events/podcasts?year=2013> . The German Center has promoted many seminars that describes science and technology in the USA and Germany. If I attend any other discussion and find it interesting I'll let you know.



Three pictures at the IESC 2014 were taken by our Southern Area Chair, Robert Pellegrino



Ashutosh Dutta, Karen Panetta



L to R – Nagi Naganathan, Rebecca Mercuri,

Ashutosh Dutta and Habib Ahson



Kevin Meredith, Rebecca Mercuri

More pictures of ISEC 2014 may be downloaded from please go to: <http://goo.gl/4PBf4R>. All those pictures were either taken or compiled by our own Dr. Ashutosh Dutta, Coordinator of R1 Employment and Career Activities

The First Region 1 Executive Committee meeting, Newark

The Executive Committee of Region 1 held its first meeting of 2014 on 28 March in Newark. Many important topics were discussed and they will certainly influence running of the Region' affair during this and the next year. The director Vincent Socci and secretary Dr. Charles Rubenstein conducted the meeting very well though we passed the time limit imposed by the hotel. To view some of the pictures taken before and during the meeting please visit <http://goo.gl/rezZgE>.

2014 IEEE R1 Student Conference at NJIT, a report

Jonathan Avila, IEEE R1 Student Activities Committee Vice Chair

The Region 1 Student Conference was held at the New Jersey Institute of Technology on 28 and 29 March, 2014. One hundred and fifty registrants attended the two-day event. Students from as far north as the University at Buffalo, University of Vermont, and University of Maine, among others, were in attendance.

The event was coordinated in a mere 2 1/2 months by a team of mostly new undergrad and graduate volunteers recruited just in time for planning at the beginning of the



year. Babak Beheshti (Chair, R1 SAC) set the wheels in motion by providing a nice foundation for the committee's student volunteers to take and embrace this conference as their own. Led by 22 Year-Old NJIT Alum Jonathan Avila (Vice Chair, R1 SAC), the student volunteers coordinated everything from student branch outreach, event competitions, advertisement, company sponsorship, food and drinks, registration, and among other things, budgeting. Grant Griffiths (Chair of Regional Events, R1 SAC) produced many of the materials used to promote the conference,

along with Anish Kshatriya (Webmaster, R1 SAC) and Benjamin Franco (Social Networking Chair, R1 SAC) whose website and social site skills, respectively, proved invaluable in the lead up to the conference.

The Conference started off at night on 28 March with two events running simultaneously at NJIT: the conference STEP Event (Student Transition and Elevation Program) and Micromouse Competition Warm-ups. The STEP Event was initiated by Suzanna Schmeelk (Chair of Graduate Affairs, R1 SAC) with support from Tejas Addagarla (Vice Chair – Graduate Affairs, R1 SAC), with the help of Elie Rosen (PCJS YP Chair) and Rob Vice (R1 YP Coordinator), as they planned the agenda for the STEP Event which was held in Tiernan Hall. In a building adjacent to the STEP Event, student members from across the northeast came to make last minute adjustments to their robots and algorithms during the Micromouse Competition Warmups, which was held in the Faculty Memorial Hall ECE Student Lounge – Home of the IEEE NJIT Student Branch. Soon Wan (R1 Membership Development Chair), a long-time Micromouse Competition Coordinator, received help from the fine student volunteers in the NJIT Student Branch. Led by Daniel Pinedo, the Local Steering Committee consisting of Jonathan Agudelo, Saumil Patel, and Stephen Senophaat, among others, brought the maze in for a packed but productive session of testing and refinement.

On the following morning, the venue was shifted to the Campus Center Atrium of NJIT, and the conference opened with two informative presentations by Michael Williams (Treasurer, R1 SAC) who introduced Dr. Kapil Dandekar (Drexel University) on the IEEE Engineering Projects In Community Service (EPICS) Program, and by the Keynote Speaker Nancy Ostin (IEEE-HKN Director) on the merits of becoming an IEEE - Eta Kappa Nu member, professionalism, and getting involved. A short recess occurred

before the second half of the morning was filled by Student Branch Showcase presentations from the students themselves! Coordinated by Bala Kotharu (Chair of Student Organizations Subcommittee, R1 SAC) and his team consisting of Elizabeth Amyouny, Wei Wei, and Katalin Frolio (Northeast, Western, and Southern Regional Officers, Respectively in R1 SAC), students branches submitted about 10 different 10-minute powerpoint presentations, showcasing different projects, fundraising initiatives, awards, and activities that they have been involved in.

Mouser Electronics sponsored an hour-long lunch, and the Badges and Lanyards for the event. The sponsor also had a table where many students interacted with the vendor to know more about the company and its products. Rob Vice and Elie Rosen conducted a panel session for Young Professionals that lasted one hour. Students received some “heart-to-heart” advice about professional life, including career transitioning, day-to-day job activities, graduate school vs. working in industry, and how the IEEE as a professional organization can enhance and augment their career. Students were also encouraged to ask questions pertaining to these topics among others.

Presentations ended with a short discussion on student involvement in R1 SAC, featuring a brief presentation by Paola Garcia-Cardenas (Region 9 Relations Officer, R1 SAC) on reaching out to other regions to understand how they do business, and how we can learn from them as an organization, as a possible avenue for involvement with Region 1 Student Activities.

Students were then free to participate in various competitions throughout the day. The Micromouse Competition, coordinated by Soon Wan, was held in the atrium after student attendees volunteered to help move the Micromouse Maze from Faculty Memorial Hall to the Atrium. Soon spent a good part of the

morning rearranging the very maze he repainted to its competition layout. Thirteen groups were registered to participate. Winners from the Micromouse Maze included:

1st Place – UMass Amherst –
Micromouse: Venus – Team Members:
Justin Marple, Rohan Kapoor, Aaron Lucia, Dylan Pare, Aaron Dunbrack

2nd Place – University At Buffalo –
Micromouse: Microbull - Team Members: Mack Ward, Kyle Thompson, Joe Materski, Scott Will

3rd Place – Stony Brook University –
Micromouse: Stuart Little - Team Members: Shiwei Fang, Saket Ati, Thomas Bundy, Steven Leo, Neeshim Roy

The Ethics Competition, coordinated by Roger Avendano (Recording Secretary, Interim Chair of Communications, R1 SAC), was held in Faculty Memorial Hall. About 9 groups were placed in different classrooms in the building to ponder over this year's prompt before presenting a 10 minute case to a panel of judges. Winners from the Ethics Competition included:

1st Place: Stevens Institute of Technology (2nd year running)

2nd Place: University of Vermont

3rd place: New York University

The Paper Competition, coordinated by Lance Doiron (Industry Relations Executive, R1 SAC),

had the presentation portion of the competition held in the Atrium as well. Paper submissions are to follow.


The T-Shirt Competition was also coordinated by Roger Avendano, where students could submit their votes on their favorite Student Branch T-Shirt over the internet. With only one winner, most students voted for this student branch:

Winner: Long Island University

Students returned for an Awards Ceremony and Dinner held at the Best Western – Robert Treat Hotel. Tom Brennan, Vice President of the NY/NJ Chapter of OWASP, served as the dinner speaker for the night, as students were treated to dinner afterwards. Vince Socci (IEEE R1 Director) handed out various awards and participation certificates for the conference competition winners and participant student branches during the morning Student Branch Showcase.

Planning for the next conference will begin in late April, alongside a parallel effort to plan for an offshoot event to be held again in Newark, NJ – the 2014 R1 Student Branch Leadership Workshop, which will utilize hotel rooms previously not used in the 2014 Region 1 Student Conference.

Pictures taken by Jonathan during the Students' Conference may be found at:

<http://goo.gl/wWeMjb>. You can see the pictures individually or as a slide show. 

Micromouse competition

Thanks to Soon Wan, responsible for membership development and SAMIEEE at Region 1 and the coordinator of the micromouse competition, general pictures of the Students' Conference and the competition available at

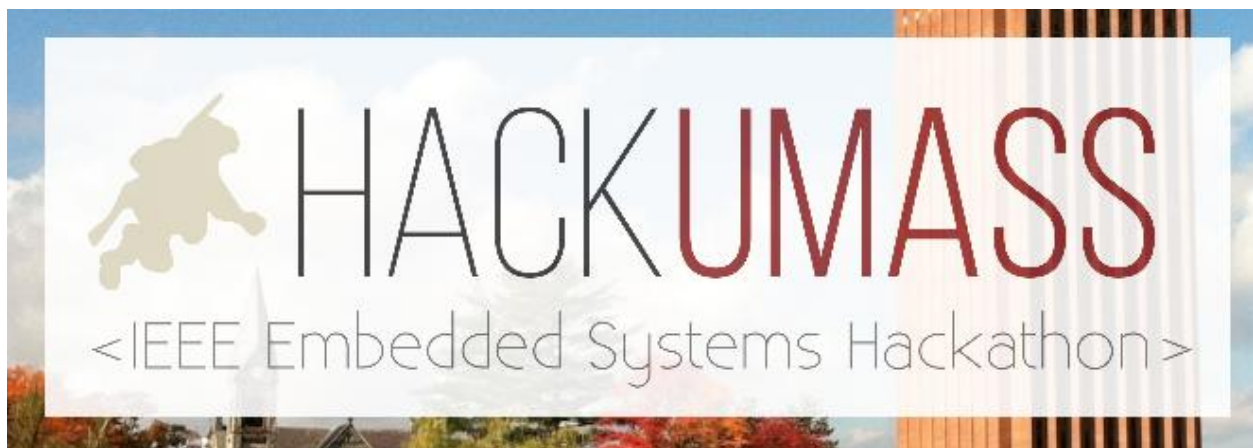
https://www.dropbox.com/sh/lu68dfavvdp4aud/dyk4_oCjXD. Please read about the participants and winner of the competition in Jonathan's article above. Two video clips taken by your editor on the Micromouse competition

may be seen at: http://youtu.be/Pzxts_dU6F4
and <http://youtu.be/JuYLu1pZYaA>

HACKUMASS

A report by Soon Wan, Membership Development, R1

(Note: HACKUMASS was not a part of the Students' Conference described above)



On 5 April, 2014, University of Massachusetts Amherst IEEE Student Branch hosted a fantastic 24 hours embedded systems hackathon – HackUMass. It's an event where innovators, problem solvers, and creators could come together and build something great. It didn't have to solve the world hunger, or even present a solution for global warming! HackUMass was a place where the students could combine their existing skills and new ones to develop something that they had always wanted to build.

Eighty four student hackers from all over the Northeast formed 24 teams and hacked for 24 hours. Five of the teams were awarded special recognition for their hacks after the demos yesterday. There were so many impressive projects that it was challenging for the judges to make

the final selections. The UMass Amherst IEEE Student Branch leaders have set a high bar for future IEEE hackathons.

HackUMass was one of the 6 pilot embedded system hackathons that the IEEE Technical Activities Board (TAB) Strategic Planning Committee approved. The goal is to raise more activity for students in the area of ECE versus the existing CS offerings such as IEEEExtreme. The tie is with hardware and a flipped education model where less instruction is given and more of a support role is filled. The Program will provide students with the skills required by embedded engineers and a learning experience equivalent to a 10 week course in a matter of hours (~9 hours and some additional info sessions, 1-3 hours each). Statistical data has shown that this

approach is a great way to educate the students on hardware and maximizing their experiences through the success of failure. The photos taken

by Soon Wan at the HACKUMASS can be viewed at <http://goo.gl/ltMtem>.



Are you a good engineer?

We all have our own ideas as to how to become a good engineer. Our colleague Nagi Naganathan presented his views of how to become a star engineer at the Students' Conference: Nagi is active in R1 as Secretary Princeton /Central Jersey Section, SSCS Chair PCJS and Computer Society Vice Chair PCJS.



Engineer to Star Engineer

Nagi Naganathan
March 28, 2014



To view Nagi's presentation please go to <http://1drv.ms/R3z5mR> to download the pdf version

IEEE Region 1 Membership Development – You can help!

Message from Soon Wan, Chair, Membership Development and SamIEEE

Dear IEEE Region 1 Members,

We need your help in 2014 to expand our Membership Development program. The foun-

dation and strength of IEEE is a growing base of Members. While the current Region 1 mem-

bership (as of March 31, 2014) is about 34,000, that number could change if we don't encourage members to renew and find prospective new members. It is estimated that there are several hundred thousand potential IEEE members in Region 1 alone. Just think of what we could do as an organization if just half of that number joined. To support this growth, we need your help. Here's what you can do:

First: Every Section has a list of members that have not paid their dues and are now in "arrears", their service discontinued. Please contact your local Section Chair and volunteer your time in contacting these members and encouraging their renewal. Many will renew if you just ask. For help in answering renewal questions, please contact or visit the Membership Services web page at:

http://www.ieee.org/membership_services/membership/renew/renew_faq.html.

Second: Promote the Member-Get-A-Member program. This program is available with incentives for finding new IEEE members. You will get an award for every professional grade member that you recruit. Make it a challenge within your Section to see who is best at membership development. The reward is more than an award; it's a bigger organization with better connections into industry and community. These connections help to build the IEEE Network that supports our careers and the profession.

More information on this program can be found at www.ieee.org/mgm.



Third: The Class of 2014 will graduate in next two months. Go participate in a student meeting. Have a joint Section / Branch meeting and answer their questions about life after graduation. You will help them start their Network and it will re-enforce their commitment to IEEE. The Student Branch near you can be found at http://www.ieee.org/membership_services/membership/students/branches/index.html

In closing, we need your help with Membership Development in Region 1. Our goal is to increase Region 1 membership 2% this year. If each of us recruited just one new member, we would double our size in one year. Remember, without Membership Development, we can't build the IEEE of tomorrow.

IEEE Senior Members

Ilir Progni

Senior member is the highest grade for which IEEE members can self-nominate, or be nominated. So, if you are an electrical, electronics, or computer engineer what does it mean to you? A lot, really! First, the IEEE being an established professional organization with global reach, your experience and competence as an engineer will be recognized all over the world. Second, if you happen to be an employee of an organization (and if you want) a letter of commendation will be sent to your employer on the achievement of Senior member grade. Third, Senior members are eligible to hold executive IEEE volunteer positions. Fourth, Senior members can serve as references to other applicants (e.g., your boss and colleagues) for Senior membership. (Please see complete description of other benefits of Senior members at http://www.ieee.org/membership_services/membership/senior/index.html.) These benefits are so helpful for career development that most of the Senior members never leave the IEEE. They make up 8 percent of the entire IEEE membership, an increase of 2 percent from 2004, the year I became a Senior Member. Their yearly renewal or retention rate has gone



up from 90 to almost 96 percent during the same period. As the data suggest that Senior Member Elevation Clinic has benefited both our members and the IEEE and this article gives a peek into the quality and content of the benefits of the Senior Member Elevation Clinic.

Does it mean that anybody and everybody can self-nominate himself or herself to Senior membership? Obviously not. The IEEE Web site, at the link above, also gives the requirements for Senior membership. In addition to ten years of professional experience a candidate for such membership must provide references from current IEEE members holding the grade of Fellow, Senior member, or Honorary member. Here comes the problem. Though not always but very often a candidate cannot locate those required references among his immediate colleagues, former teachers or an extended circle of IEEE members. To alleviate this problem some Sections in Region 1 have held Senior Member Elevation Clinics. These Clinics offer the potential candidates opportunities for networking with other Senior members or Fellows who live in the geographical vicinity.

Member Elevation Clinic Benefits to the Candidates for Senior Membership

Senior Member Elevation Clinic offers a unique opportunity to our members towards their professional development in the areas of: educa-

tion; experience; significant performance; and networking opportunities with an elite commu-

nity of other distinguished senior and/or fellow members.

In addition to the advantages already outlined by the IEEE, there are two significant outcomes that every candidate or applicant may directly benefit from the Senior Member Elevation Clinic such as enhanced credentials and expanded networking opportunities. The Senior Member Elevation Clinic offers a unique opportunity to

enhance and assess every candidate credentials by **one or several peer reviews** from senior and other fellow members which results in a significantly improved resume of the candidate or applicant. The Senior Member Elevation Clinic offers a unique opportunity to **network with an elite community** of other distinguished senior and peer members who are willing to serve as reviewers and references and willing to help the candidate in the best possible way.

Senior Member Elevation Clinic Benefits to the IEEE Sections

Senior Member Elevation Clinic also offers professional and networking development opportunities for meeting IEEE Section officers and local IEEE Technical Chapters. Consequently, this unique activity **enriches and enhances section leadership and prepares future leaders** for the IEEE Sections and Regions, Technical Chapters and Societies. IEEE benefits from high retention rate of Senior Members and increased

membership of IEEE Senior Members in the IEEE Technical Societies. Moreover, IEEE Sections and should benefit from **increased rebates and funding** from the IEEE, IEEE Regions and IEEE Technical Societies. To read how the Worcester County Section has successfully implemented its annual clinics please visit http://www.giftet.com/SMEC/2014/60_SMCB.pdf.

Ilir Progrid, PhD, SM IEEE is the CEO and President of Giftet, Inc, Worcester, Mass. He is also the chapter coordinator at Region 1.

-----Editor

The IEEE and its Fellow Grade Program – 50th anniversary

Two well known professional associations of engineers in the USA, one the American Institute of Electrical Engineers (AIEE) and the other being the Institute of Radio Engineers (IRE) in 1963 decided to merge to form the IEEE. Both of the precursor societies had Fellow programs to honor accomplished engineers. In 1964 the IEEE also resolved to continue with its own Fellow program by elevat-



ing only ten of its members to Fellow grade. About 10 000 IEEE members who demonstrated extraordinary records of accomplishment in IEEE's fields of interest have been elected as Fellows. It's not easy to be elected as an IEEE Fellow. For, literally only one-tenth of 0.1 percent of the total voting membership can be elevated in any given year. (The inset shows a lapel pin that the Fellows can wear.) - Editor



APPLAUDING 50 YEARS OF FELLOWS

Rosann Marosy

In 2014, IEEE will mark its 50th Fellow Class. It represents decades of honoring IEEE Fellows whose extraordinary accomplishments have changed the world. Only one-tenth of one percent of the total voting membership can be elevated in any one year. Over the last fifty years, IEEE has elevated roughly 10,000 members to this honor. This is a very small percentage. To mark this occasion the IEEE has issued a commemorative coin (both sides of the coin are shown above) and distributed to its Fellows. The coin should be of great value to the recipients as a unique symbol of honor and prestige, and personal sentiments. Throughout the year, various celebrations will take place to honor those who have achieved this distinction. If you

compared to the total membership. Unquestionably, Fellows are the crown jewels of the organization. One can only imagine what the next fifty years will bring, and the new technology that will be developed, discovered, or taught, and what new IEEE Fellows will be recognized for their achievements.

know an IEEE Fellow, congratulate him/her again for receiving this honor. You can recognize them personally, or you can acknowledge them publicly at region meetings, society meetings, section meetings, and/or conferences.

Ms. Rosann Marosy is the Fellow Manager at the IEEE headquarters

Fellow Grade and Personal Satisfaction

Panagiotis Papamichalis

The following article (first published in the Institute on January 15, 2014) is reproduced here with the kind permission of the author and Kathy Pretz, the editor of The Institute – Editor.

WHEN I was a graduate student at Georgia Tech, the professor who influenced me most was Ron Schafer, a world-renowned professor of signal processing. His teaching was exceptional, and he made everything sound so simple—even when the topic was far from it. He was highly respected by the students and staff.

Schafer was an IEEE Fellow and a member of the IEEE Signal Processing Society. I realized then that being an IEEE Fellow was a stamp of approval for work well done. To achieve it, one must constantly strive to succeed, whether in research or innovation, which was a great motivator to me as a young engineering student. This honor is all the more great because no more than one in 1000 IEEE members are elevated to Fellow each year.

When I became an IEEE Fellow in 1999, I was working at Texas Instruments, in Japan, as director of the company's research center there. Not only did I appreciate the recognition, but so did my company. It was important to them that they were employing knowledgeable employees worthy of such a title because it gave their customers confidence that the products and services were being made by top engineers.

I was extremely lucky to be employed by Texas Instruments, particularly at that time, because it was introducing low-cost digital signal processing (DSP) chips, and they became a big commercial success in the digital revolution of the cell phones, digital cameras, and MP3 players that we enjoy today. Developing efficient

implementations with DSP and educating the company's engineers about them was my contribution to the field, for which I was elevated to IEEE Fellow.

Being a Fellow became even more essential for me when I decided to switch careers to academia to become a professor. Working in the industry was a lot of fun, but I also greatly enjoyed teaching as an adjunct at different universities. When I was offered the opportunity to move to academia as chair of the electrical engineering department at Southern Methodist University (SMU), in Dallas, I jumped at it.



I learned that the academic environment places even more emphasis on being an IEEE Fellow, as this is a reliable indication of the quality of one's work. At SMU, I have been teaching and doing research on image, signal, and speech processing, and I am also currently an associate dean of its School of Engineering.

I should note it's not an easy job selecting Fellows. This responsibility of providing accurate and honest assessment of the nominees' qualifications places a heavy burden on the Fellow Committee, which is made up of current Fellows who spend untold hours evaluating the candidates' credentials.

In the end, it is the quality of the people elected to be IEEE Fellows that makes the election a highly sought-after designation. I am honored to be among them.

To learn more about the IEEE Fellows program, read our story "Fifty Years of Recognizing Extraordinary Accomplishments."

Panos Papamichalis is the chair of the 2014 IEEE Fellow Committee. He is the associate dean

for academic affairs and a professor of the electrical engineering department at Southern Methodist University, in Dallas. Before joining SMU, he spent 23 years with Texas Instruments and was named a TI Fellow.

First Blind Takeoff, Flight and Landing, 1929 A Joint IEEE-AIAA Milestone

Mort Hans, First Blind Flight Committee Chair and Nikolaos Golas, Region 1 Historian & Milestone Coordinator

AFTER the World War I the role of aviation expanded from primarily the military to commercial enterprises with mail, cargo and passenger flights. Weather and visibility could disrupt regular flights which were required for the new aviation industry to be commercially successful and for the Post Office to establish overnight delivery schedules.

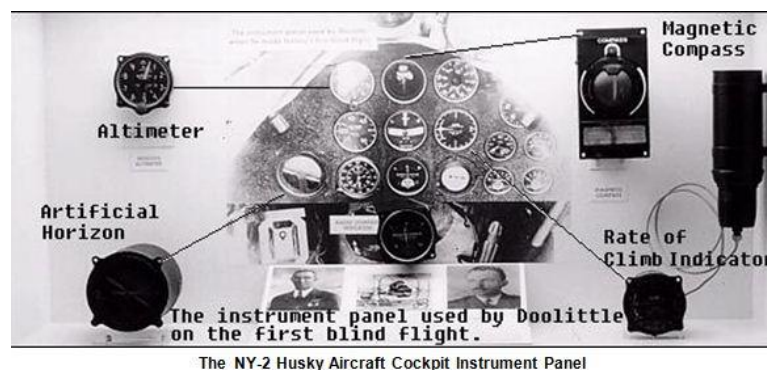
At the beginning of the 1920s, the aviation instruments which were primarily mechanical, could provide altitude, attitude, direction and air speed information, but not an aircraft's spatial position, which was crucial during landing. Instruments and navigation aids were needed which would allow an aircraft to be

flown on a course in fog, in any condition of visibility or no visibility.

The first blind flight occurred on September 24, 1929 when U.S. Army Air Corps pilot, Lt. James Doolittle, at the Guggenheim's Full Flight Laboratory at Mitchel Field took off in a specially instrumented Army Air Corp NY-2 Husky aircraft built by the Consolidated Aircraft Corporation with Lt. Benjamin Kelsey as his safety officer and landed after a fifteen minute, 20 mile, flight

without ever seeing the ground. At the time the NY-2 Husky was the world's most instrumented aircraft engaged in blind flying research. The rear cockpit contained the blind

flying displays and during the blind flight it was shielded by a canvas canopy hood to eliminate external references.



In Doolittle's own words, "We both got into the plane, and the hood over my cockpit was tightly closed. I taxied out and took off toward the west in a gradual climb. At about 1,000 feet, I leveled off and made a 180-degree turn to the left, flew several miles, then made another left turn. The airplane was now properly lined up on the west leg of the Mitchel range, so I started a gradual descent, I leveled off at 200 feet and flew level until I passed the fan marker on the east end of the field. From this point I flew the plane down to the ground using the instrument landing procedure we had developed. The whole flight lasted only 15 minutes. So far as I know, this was the first time an airplane had taken off, flown over a set course, and landed by instruments alone." Crucial to the success of the flight, in addition to the newly devel-

oped Kollsman Altimeter and the Sperry Directional Gyro and Artificial Horizon, was the radio range and marker beacon developed by the Bureau of Standards and the special radio receiver with a vibrating reed display built by the Radio Frequency Laboratories.

The achievement of the First Blind Flight and Landing was the result of an unusual cooperative effort primarily involving the Daniel Guggenheim Fund for the Promotion of Aeronautics, the U.S. Army Air Corps, the Department of Commerce, the Sperry Gyroscope Company, the Kollsman Instrument Company

and the Radio Frequency Laboratories. Other companies, the Pioneer Instrument Company, the Taylor Instrument Company and the Bell Telephone Laboratories contributed as well.

Doolittle's successful blind flight and landing demonstrated that having and being able to use accurate and reliable instruments was the key to safe flying, under near zero visibility conditions and that contrary to the belief of many pilots at the time that being able to fly, "by the seat of my pants," was the more important skill.



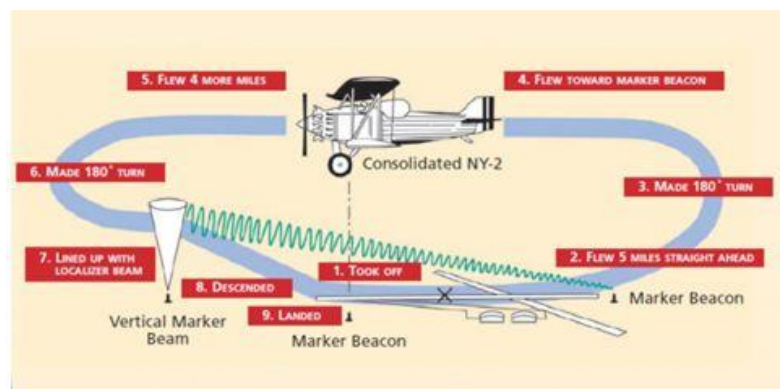
NY-2 Husky Aircraft with Canvas Canopy Hood

Of all the organizations that contributed to the success of Doolittle's flight, were it not for the Full Flight Laboratory established by the Daniel Guggenheim Fund for the Promotion of Aeronautics,

Doolittle's achievement that helped pave the subsequent rapid growth of the aviation industry might well not have occurred until several

years in the future. Furthermore, it paved the way to the all-weather microwave landing systems that are currently used.

This will be a joint designation between the IEEE and



Flight Route for First Blind Takeoff, Flight and Landing

the American Institute of Aeronautics and Astronautics (AIAA). The plaque citation summarizing this Milestone achievement and its significance follows:

On 24 September 1929, the first blind takeoff, flight and landing occurred at Mitchel Field, Garden City, NY in a Consolidated NY-2 biplane piloted by Lt. James Doolittle. Equipped with

specially designed radio and aeronautical instrumentation, it represented the cooperative efforts of many organizations, mainly the Gugenheim Fund's Full Flight Laboratory, U.S. Army Air Corps, U.S. Dept. of Commerce, Sperry Gyroscope Company, Kollsman Instrument Company and Radio Frequency Laboratories.

The milestone plaque will be installed in the Mitchel Field Flight Safety exhibit of the Cradle of Aviation Museum just a few hundred feet

from where the flight's takeoff and landing originated. Save the date for the dedication ceremony commemorating the 85th Anniversary of the event scheduled as follows:

Event: First Blind Takeoff, Fight and Landing
Milestone Dedication Ceremony

Date: Wednesday, 24 September, 2014

Time: 11.00 am

Place: Cradle of Aviation Museum, 1 Davis Avenue, Garden City, NY 11530

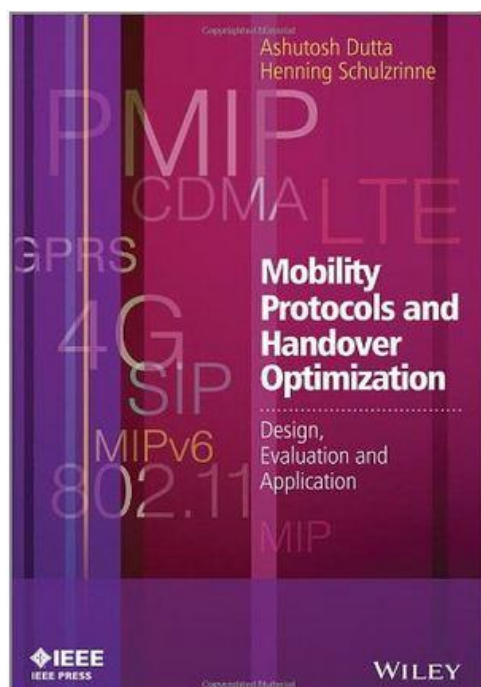


Books by our members

Region 1 members have recently written two new books. We congratulate the authors: Dr. Ashutosh Dutta, Prof. Henning Schulzrinne, and Nita Patel on the publication of their books. They set the examples of how one can create an equilibrium between family, research, jobs, book writing and volunteering for the IEEE. Other members of the R 1 please note. Lack of time is not a valid excuse.

Ashutosh Dutta's book: Mobility Protocols and Handover Optimization. Ashutosh is a 25-year veteran of the engineering community. Besides being most active in the IEEE affairs he is currently a Lead Member of Technical Staff (LMTS) at AT&T's Security and Mobility Organization. Prof. Henning Schulzrinne is an IEEE Fellow and professor at Columbia University, New York. He is currently on leave to work with the FCC as its CTO.





The book is published by IEEE-Wiley. Judging by the price, a whopping \$104.87 at Amazon it must be good book. It has the seal of approval from the IEEE. Complete description may be found at <http://onlinelibrary.wiley.com/advanced/search/results?start=1&resultsPerPage=20>

“In this book, the authors show how an optimized system of mobility management can improve the quality of service in existing forms of mobile communication. Furthermore, they provide a theoretical approach to mobility management, as well as developing the model for systems optimization, including practical case studies using network layer and mobility layer protocols in different deployment scenarios. The authors also address the different ways in which the specific mobility protocol can be developed, taking into account numerous factors including security, configuration, authentication, quality of service, and movement patterns of the mobiles.” – Amazon.com

Nita Patel's online book published by the IEEE-USA is an interesting book on Women in Engineering. Nita is one of the most knowledgeable persons in the IEEE who knows what a woman feels in a hitherto man's domain. Please read her article on STEM above and view her presentation slides. Nita's book has an affordable price tag: \$7.99 for the IEEE members. You can purchase the book from the IEEE-USA Web site <http://goo.gl/7VBJuz>. Nita Patel's bio data may be found under her "Impressions of STEM" above.

The IEEE-USA annual meeting

This year the IEEE-USA has decided to hold its annual meeting in Region 1. The venue is Crown Plaza Hotel near Providence-Warwick Airport, RI. The meeting will be held from 16 – 18 May, 2014. The program for the entire meeting promises to be an interesting one. On Friday, 16 May experts will lecture on and discuss technical innovations that will ease our lives. Remember that we at the IEEE are committed to encourage advancing



of technology for humanity! The general chair of Innotek, the conference on innovations within the IEEE-USA meeting is the R1 Secretary Dr. Charles Rubenstein. The conference has already attracted some notable speakers from various sectors of university, government, private sector and standard bodies. Mark those dates in your calendar. You can see the program and the registration procedure by visiting <http://sites.ieee.org/innotek/>.

The following are the URL addresses of some of our 22 Sections. The other addresses will be furnished to you as soon as they are made available.

Northeastern Area (Area director: Jason Hui)

New Hampshire: <http://www.ieee-nh.org/>
Boston: <http://www.ieeeboston.org/>
Maine: http://ewh.ieee.org/r1/maine/me_ieee.html
Providence: <https://ewh.ieee.org/r1/providence/>
Worcester County: <http://users.rcn.com/ieeeworc/>

Central Area (Area Director: Babak Izadi)

Green Mountain (Vermont): <http://sites.ieee.org/gm/>
Springfield: www.ieee.org/go/springfield
Mid-Hudson: <http://ewh.ieee.org/r1/berkshire/>
Mid-Hudson: https://webinabox.vtools.ieee.org/wibp_home/index/R10019
Schenectady: <http://sites.ieee.org/schenectady/>

Western Area (Area Director: Alexander Loui)

Rochester: <http://rochester.ieee.org/>

Buffalo: <http://www.ewh.ieee.org/r1/buffalo/>

Syracuse: <https://ewh.ieee.org/r1/syracuse/>

Birmingham: https://webinabox.vtools.ieee.org/wibp_home/index/R10003

Southern Area (Area Director: Robert Pellegrino)

North Jersey: <http://sites.ieee.org/northjersey/news/newsletters>

New York: http://ewh.ieee.org/r1/new_york/

Connecticut: <http://www.ieeeect.org/>

Long Island: <http://sites.ieee.org/r1?s=Long+Island>

New Jersey Coast: <http://sites.ieee.org/r1?s=New+Jersey+coast>

Princeton/Central Jersey: <http://ewh.ieee.org/r1/princeton-centraljersey/>

END