



ION Saint Louis



FALL 2012

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From the editor:

Dear St. Louis Section

The ION is published by the IEEE St. Louis Section Executive Committee and is usually edited by the Section Secretary. Over the past two years, I have enjoyed editing the ION editions. I hope, you found them both enjoyable and informative.

As this is the last newsletter for this year, it is also my last attempt at editing the ION. The next edition will be edited by Dr. Kyle Mitchell, our Secretary-Elect for 2013. I would like to congratulate Dr. Mitchell on being elected the Section Secretary for 2013.

As always, please keep sending your articles of any planned and past events, yours and other IEEE colleagues achievements, and any other interesting bits of information for the next newsletter.

Prakash B Shahi,

Engineering Manager,

Nidec Motor Corporation

Chair's Column

Saint Louis Section of IEEE
Chair's Column, October 2012

School has resumed, the cooler weather moves into St. Louis and the second half of the year for the Section has already revved up. Without further adieu here is brief summary of some exciting activities and events remaining for 2012 and few that have already occurred.



September featured a number of events. First, we had a terrific turnout at St. Louis University on September 19 for our Senior Member drive. Dinesh Hiripitiyage did an outstanding job organizing this event and Dr. Mallik helped arrange for a number of computer workstations to be available as over ten members submitted senior member applications. A Planning Meeting was held on the same evening and the Section welcomed Dr. Kyle Mitchell as Secretary-Elect based on voting results of the membership. Dr. Mitchell will serve as Secretary beginning January 1. Additionally at the Planning Meeting, the Executive Committee accepted results of our membership for the selection of the 2012 Award Winners. Winners will be presented a plaque on December 1 and are promoted elsewhere in this issue.

As we turn to October, a significant achievement was met with the announcement of the new Joint Chapter in the Section. For over a year, officers in the Microwave Theory and Techniques Society (MTT-S) have encouraged the Section to reactivate its Chapter from a number of years ago. Both Dr. Barry Spielman of Washington University and Dr. Gregory Triplett of University of Missouri held many discussions and a series of lectures to determine how to best form the new Chapter since. With the help of Dr. Dennis Barbour of Washington University and Chair of the EMBS Chapter, a Joint Chapter was conceived and agreed upon.

On October 11, the Section will host members from Engineering in Medicine & Biology Society (EMBS), Photonics Society and MTT-S to a free dinner and special event to be held at the Engineers' Club. Look for the announcement through E-notice. The official charter for the Joint Chapter will be granted later this year from the IEEE Board of Directors.

As this column goes to press, a plant tour of the Ameren Headquarters is in the works during the second half of October. It will likely be conducted during the afternoon. A date is being worked out with Ameren's Business & Community Relations that will best meet everyone's schedule. The tour will include a Professional Development Hour (PDH) opportunity for those interested. Look for a flyer to be distributed through Enotice in the days ahead.

Chair's Column Continued

Once again, Washington University will host our 2 big events that wrap up the year. On November 3rd, the Annual Black Box competition will meet on campus and be open to all of the Student Branch Chapters in the Section. Andrew Wiens, Chair of the Student Branch of Washington University, has provided a flyer with rules found elsewhere in this issue. Washington University will be defending the first place victory from last year. All members are invited to come out and watch. We will be recruiting judges to help score the event.

Lastly, the Section will feature its Annual Awards Presentation and Christmas Social on December 1. The event will be held in the Holmes Lounge of Washington University. The event is for all members, their spouses and children. We have announced our award winners in advance in order to give colleagues and friends that are members an opportunity to come out and support the winners. Please look for the announcement elsewhere in this issue as well as the winners.

Here is a quick summary of the events previously listed herein,

September 19 – Senior Member Drive (Completed)

October 11 – New Joint Chapter – Dinner and Program

Later October – Plant Tour of Ameren Headquarters

November 3 – Student Black Box Competition

December 1 – Christmas Social and Awards

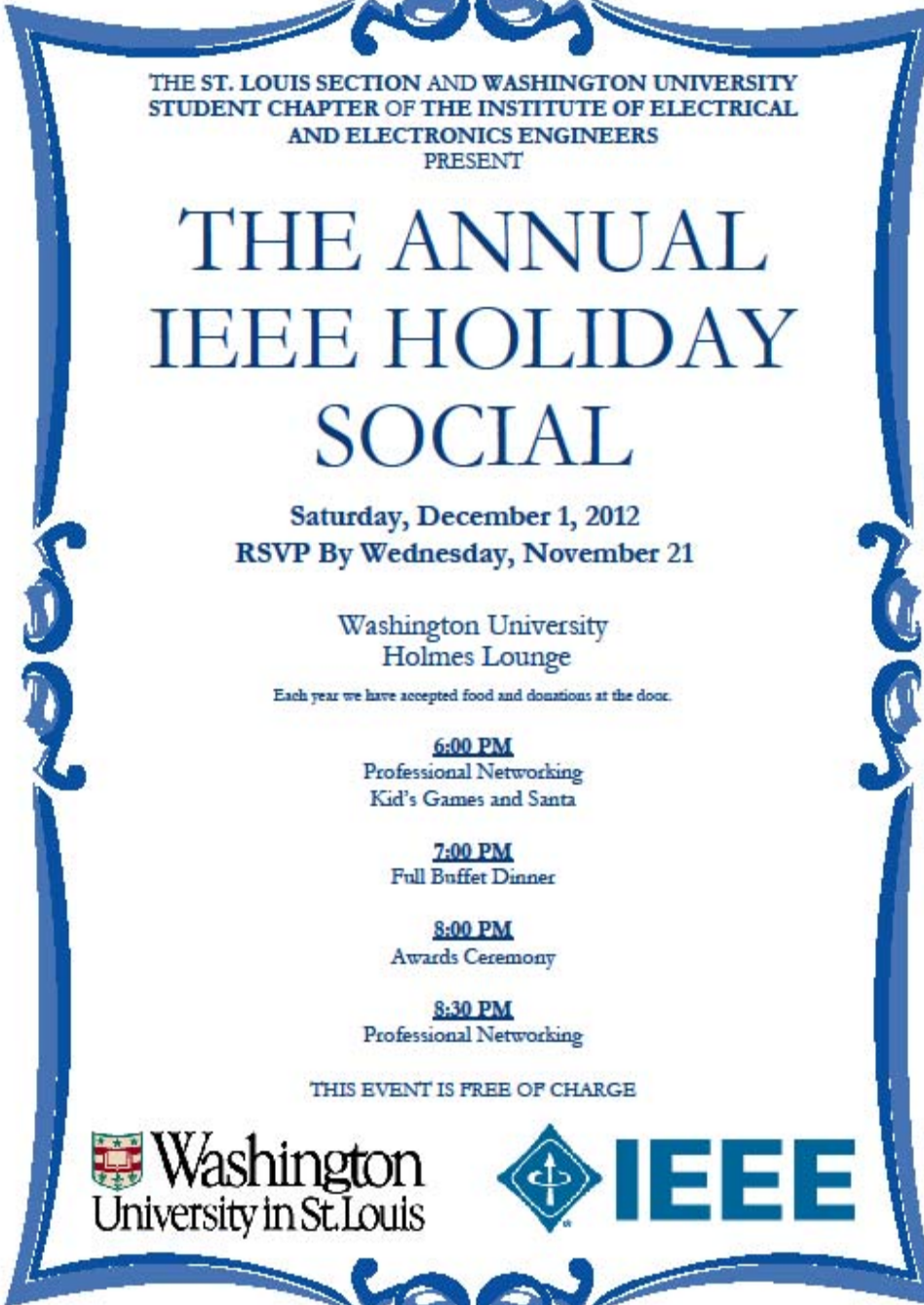
As I conclude my remarks, I would like to acknowledge two major milestones served by one man. Mr. Jim Leonard, P.E. of the Saint Louis Section completed his 50th year of service to IEEE. Officially, Jim was recognized as a “Member 1st 50 Years” of IEEE. Since IEEE was formed January 1, 1963, this year represents the 50th year. Approximately 9400 IEEE members qualify for this unique and special award. Ironically, the second major milestone completed by Mr. Leonard is the completion of his 50th year of service to The Boeing Company. Jim is a good friend and role model for all of us and I look forward to acknowledging this special IEEE recognition at the Awards Program.

P.S. If you would like to volunteer in some capacity, please drop a note to our Section's email alias at sec.stlouis@ieee.org.

Respectfully submitted,

Bob Becnel, P.E.

SECTION ANNOUNCEMENT: IEEE Winter Social 2012



THE ST. LOUIS SECTION AND WASHINGTON UNIVERSITY
STUDENT CHAPTER OF THE INSTITUTE OF ELECTRICAL
AND ELECTRONICS ENGINEERS
PRESENT

THE ANNUAL IEEE HOLIDAY SOCIAL

Saturday, December 1, 2012
RSVP By Wednesday, November 21

Washington University
Holmes Lounge

Each year we have accepted food and donations at the door.


6:00 PM
Professional Networking
Kid's Games and Santa

7:00 PM
Full Buffet Dinner


8:00 PM
Awards Ceremony

8:30 PM
Professional Networking

THIS EVENT IS FREE OF CHARGE



Washington
University in St. Louis



IEEE

SECTION ANNOUNCEMENT:

IEEE Black Box Competition 2012

IEEE Black Box Competition

Sponsored by the St. Louis Section of IEEE

When: Saturday, November 3, 2012

Where:

Electrical and Systems Engineering
Second Floor, Bryan Hall
Washington University in St. Louis
1 Brookings Drive, St. Louis, MO 63130

Time:

Registration 12:30, and,
Contest 1:00-4:00 pm

Open to all currently-enrolled undergraduates at one of the universities in the St. Louis Section of IEEE. Up to four teams from each school are allowed. (If more teams register, the local IEEE Branch Counselor will certify the official teams.) The competition is not open to graduate students.

Cost: The competition is free to everyone!

Prizes: A traveling plaque will go to the winning school with the winners names engraved. **Cash prizes for First (\$500), Second (\$300), and Third (\$200) place will be awarded.**

Registration: Teams must register by **October 29th** via email to:
blackbox@ieee.wustl.edu

The names of all team members along with the school name must be included in the registration information.

Food: Food throughout the competition will be provided.

Judges: Each participating school is invited to send one judge. The host school will provide one or two judges and the St. Louis IEEE Section will provide a judge.

Information: Andrew Wiens - chair@ieee.wustl.edu

SECTION NEWS

IEEE St. Louis Section Secretary Elect for 2013– Dr. Kyle Mitchell

The next St. Louis Section Secretary for 2013 is Dr. Kyle Mitchell. The Section Secretary is a progressive position that will move up annually in to the positions of Treasurer, Vice Chair, and , Chair respectively.

Dr. Kyle Mitchell has been a member of IEEE for 12 years. He received his Bachelors, Masters and Ph.D. from the Missouri University of Science and Technology in 1996, 1999 and 2002 respectively. He has served as student activities chair of the Saint Louis Section of IEEE for the past 2 years. He currently holds the positions of Associate Professor and Coordinator of Computer Engineering at Saint Louis University. Dr. Mitchell has participated in several IEEE sponsored students robotics and black box competitions. He was selected as the Saint Louis Section of the IEEE Outstanding Educator for 2007.



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Principle responsibility of a Section Executive Committee member is to oversee the management of the Section, and in doing so, serve the best interest of the IEEE, its members and the public. Section Secretary is a key member of the Section Executive Committee.

Section Secretary acts as a gateway between Section members and IEEE, having a leadership role in bringing members' needs to the Executive Committee. Part of the role involves having accountability and ownership of Section records, reporting officer changes, and submitting reports to IEEE Member and Geographic Activities (MGA). Besides the duties of record-keeping for the Section, the St. Louis Section Secretary is also the newsletter editor and the webmaster.

SECTION NEWS

Congratulations to IEEE 50 Year Member– Jim Leonard

IEEE St. Louis Section congratulates Jim Leonard as being recognized by the IEEE History Center as the First 50 Years Member. All the First 50 Years Members received the IEEE “Member 1st 50 Years” pins. IEEE was founded in 1 January 1963, through the merger of AIEE (founded 1884) and IRE (founded 1912). This is IEEE’s 50th year.

Mr. Leonard received his Bachelor of Electrical Engineering degree from the University of Akron in 1961; he received an MSEE (Power) from Washington University of St. Louis in 1966; and he received an MSEE (Digital) from the University of Missouri at Rolla in 1976 and a Professional Development degree from the University of Missouri at Rolla in 1984. He received an Honorary Professional Degree (Computer Science) from the University of Missouri at Rolla in 1997.



He is a Senior Technical Fellow at Boeing BDS in St. Louis, Missouri. He has been at Boeing BDS for 49 years and is currently responsible for the aircraft integration of the U.S. Navy air-to-surface Harpoon and Standoff Land Attack Missile into U.S. Navy, U.S. Air Force and foreign aircraft. He received the 1984 IEEE Centennial Medal, the 1986 IEEE/USAB Achievement Award, the 1991 IEEE Region 5 Outstanding Member Award, the 1996 IEEE/USAB Award for Distinguished Contributions to Engineering Professionalism, the 2000 IEEE Millennium Medal, the 2000 Region 5 Outstanding Member Award, and the 1991 McDonnell-Douglas/U.S. Navy Reliability, Maintainability, and Quality Assurance Award (Salty Dog). He has 28 published papers, a three-volume reference series on “Progress in Simulation” (Ablex Publishing), an IEEE Press Book entitled “Object Oriented Simulation”, and has produced the IEEE video for Region 5 “Your Future After Graduation”. He is a co-inventor on thirteen US Patents, two Australian Patents and one European Patent. Mr. Leonard is a registered Professional Engineer in Ohio and Missouri. In June, 1998, Mr. Leonard was elected a Fellow of the St. Louis Academy of Science. On Feb. 7, 2003, Mr. Leonard was elected to the Academy of Electrical and Computer Engineering at MS&T and on April 22, 2010, he was elected as one of four Directors. On February 25, 2005, Mr. Leonard was selected as “Engineer of the Year of 2005” by the St. Louis Chapter of the Missouri Society of Professional Engineers (MSPE). On Nov 19, 2005, Mr. Leonard was inducted into the HKN National Honor Society for Electrical and Computer Engineering. On Sept 20, 2007, Mr. Leonard was elected a Fellow of the Royal Aeronautical Society. Mr. Leonard was the Chair of BTEC15 (July, 2008). Mr. Leonard is the Boeing/IEEE Focal. He received the MS&T Alumni Achievement Award Oct 24, 2009. Jim & Barbara were inducted into the MS&T Order of the Golden Shillelagh (OGS) in April, 2010. He was elected IEEE Life Fellow on Jan 1, 2010. Jim received the IEEE St. Louis Section 2010 Outstanding Member award on 4 Dec 2010. On Sept 15, 2011, Jim received the IEEE/AESS Pioneer Award. On April 18, 2012, Jim (1961) received the 2012 Akron U Distinguished Engineering Alumni Award.

SECTION NEWS

IEEE Computer Society Seeks Chapter Chair

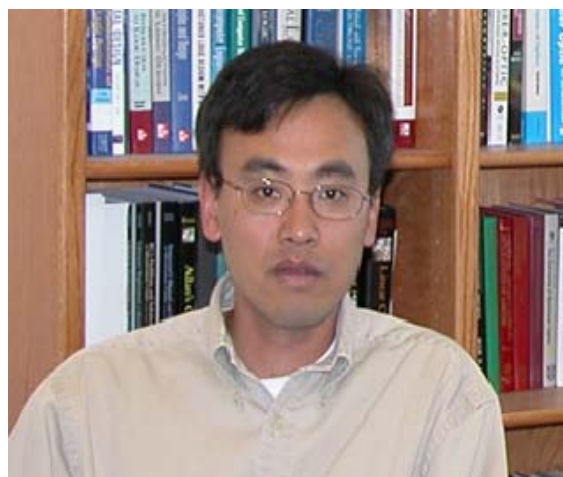
IEEE St. Louis Section Computer Society Chair has moved to a new region. As a result, the Chapter is in need of a new chair. Please contact the Section via email to sec.stlouis@ieee.org, if willing to serve. The Section will provide training to move you in to this position.

IEEE Senior Member Grade Elevation Night Held

A Senior Member elevation drive was held at St. Louis University, Parks College of Engineering, Aviation and Technology on September 12 2012. The applicants got a chance to submit their Senior Member on-line application on site as well as meet the Senior Members references'. Special thanks goes to Dinesh Hiripitiyage for organizing and Dr. Mallik and the St. Louis University Student Branch for hosting the event.

Jie Huang awarded Graduate Fellowship

Mr. Jie Huang, a PhD student at the Department of Electrical and Computer Engineering, Missouri University of Science and Technology (Missouri S&T), Rolla, Missouri, was awarded the Graduate Fellowship by the IEEE Instrumentation & Measurement Society in 2012. The project is entitled "Novel Coaxial Cable Interferometric Sensors for Distributed Measurement of Large Strain in Structural



Health Monitoring". Mr. Huang joined Missouri S&T in 2010 as a graduate student the Photonics Technology Laboratory (PTL) and was awarded the MS degree in Electrical Engineering in June of 2012. Working with his advisor, Prof. Hai Xiao, Mr. Huang has focused on combining microwave and optics to develop novel sensors for various applications. Mr. Huang is a student member of IEEE and the IEEE Instrumentation and Measurement Society. Mr. Huang hopes to become a professor at an academic institution of higher learning after completing his graduate studies.

Section News: Outstanding Awards

Outstanding Young Engineer



Abdiel Louis is a Network Administrator at Greenville College that integrates and delivers technology solutions to ensure maximum system scalability in the area of Virtualization with VMware and Hyper-V, Storage (SAN), Network Design and Implementation, and Identity Management with Microsoft technology stack. Abdiel Louis earned his M. A. in Information Technology Management at Webster University in 2011, where he focused on System Analysis and Design and Technology Management. Prior to that, he studied at Hannibal-LaGrange College, where he completed a B. S. degree in Computer Information Systems in 2008. He welcomes email at abdiel.louis@gmail.com, and tweets as @AbdielLouis.

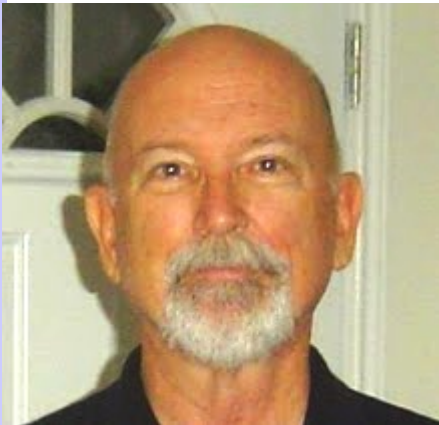
Outstanding Educator



Arye Nehorai is the Eugene and Martha Lohman Professor and Chair of the Preston M. Green Department of Electrical & Systems Engineering (ESE) at Washington University in St. Louis. Earlier, he was a faculty member at Yale University and the University of Illinois at Chicago. He received the B.Sc. and M.Sc. degrees from the Technion, Israel and the Ph.D. from Stanford University, California. Under his leadership as ESE chair, the undergraduate enrollment has more than doubled in the last four years. Dr. Nehorai served as Editor-in-Chief of the IEEE Transactions on Signal Processing from 2000 to 2002. He received the 2006 Technical Achievement Award and the 2010 Society Meritorious Service Award, both from the IEEE Signal Processing Society. He was elected Distinguished Lecturer of this Society from 2004 to 2005. He received best paper awards from IEEE and gave plenary presentations in major international conferences. He has been a Fellow of the IEEE since 1994 and of the Royal Statistical Society since 1996.

Section News: Outstanding Awards

Outstanding Section Member



Dr. Hardy J. Pottinger received a Ph.D. in Electrical Engineering from the Missouri University of Science and Technology in 1973. He is a senior member of the IEEE, and a member of the IEEE Computer Society. He was chairman of the IEEE-USA Pre-college Education Committee from 2003 to 2004. He was the faculty advisor for the student branch of IEEE at MST (UMR) from 1987 to 2002 and served as chairman of the St. Louis Section of IEEE in 1997. He was awarded the IEEE Region 5 Outstanding Engineering Educator in 1999. From 1979 to

2002 he was a professor in the Electrical and Computer Engineering Department at UM-Rolla and Assistant Chairman for Computer Engineering from 2000-2002. He currently serves as IEEE Region 5 Electronic Communications Coordinator and St. Louis Section Historian. He and his wife Judy retired in 2002 and enjoy traveling, square dancing, and genealogy.

Outstanding Student Member



Jonathan W. Steenbergen started out as an international business major but quickly came to grips that he needed to challenge himself. He chose electrical engineering because he hoped to eventually work on left ventricle assist devices (LVAD's), like the Heartmate II. The advancements made by the talented hardworking engineers at Thoratec Corp will be something he will never forget. The Heartmate II was single handedly the reason he went into engineering. The LVAD saved the life of his best

friend, Issac Steenbergen, and gave him a quality of life he hadn't seen from him enjoy since he was a small child. Jonathan is finishing up his BS in Electrical Engineering at Saint Louis University with an emphasis in Bio-Electronics hoping to hope make a positive difference in someone else's life like

Outstanding Company

The Boeing Company provided support of its IEEE Members throughout the year with a \$25 discount on membership, support of IEEE Members hosting IEEE Programs (Such as the 2012 NTIS Seminar), and Sponsorship of IEEE Conferences.

Section News: Outstanding Awards

Outstanding Branch Counselor



Dr. Roobik Gharabagi is an Associate Professor of the Electrical and Computer Engineering Department at the Saint Louis University. He joined the Department in August 1988 and received Tenure and promotion in 1994. He served as the Department Chair from July 2004 through June 2010. During his tenure as the Department Chair, the Department received accreditation from the ABET, established new programs in Computer Engineering and Bioelectronics. He was also instrumental in developing a new Master of Sustainability as part

of the Center for Sustainability. His ongoing research interests are in the areas of Semiconductor Device Modeling and Characterization, Integrated Circuits, Renewable Energy, and Undergraduate Education.

He has served IEEE in several positions such as a Student Branch Counselor to the IEEE student branch of the Saint Louis University for more than 15 years, the IEEE St. Louis Section as secretary, treasurer, vice Chair, Chair, past Chair, Chair of Awards Committee, and others. He worked closely with IEEE St. Louis Section members to bring the GLOBECOM 2005 Conference to St. Louis. He was the co-Chair of **Design & Developers Forum**.

Outstanding Student Branch



The Saint Louis University Student Branch was established more than 25 years ago. Since its inception the branch has been very active in the IEEE St. Louis Section as well as IEEE Region 5. The branch strives to engage students with their professional society through participating in various activities at branch, local, and national level. The branch has been recognized by the IEEE Region 5 for its growth and participation. IEEE

student members have participated and been successful in competitions at local and national level since its inception. Branch has hosted Black Box Competition, Robotics Competition, Section meetings, and more.

Section History: The Roaring Twenties

By Dr. Hardy J Pottinger

In the last two articles of this series I introduced the early years of our parent sections: AIEE and IRE. This article will focus on the period of 1920 to 1929. Since our section of the IRE didn't exist until 1941 it will only mention activities of the AIEE section. Before I get started though, I would like to thank MST's Dr. Steve Watkins and his unnamed co-conspirators for coming up with the remaining names on our list of past section officers. A history file had been put together in preparation for our 100th anniversary celebration in 2003 which contained all of the IEEE section chairs from 2004 back to the merger of AIEE and IRE in 1962. Only 1963 and 1964 remained unknown.

Fortunately that same file contained a cover letter to IEEE on Section letterhead which had the names of the entire executive committee for 1963-1964 printed at top! A Mr H. P. Dougherty of Union Electric was the chairman that year. That only left the 1964-1965 term to uncover.

The cover letter was a letter

of transmittal for the new section bylaws. The new bylaws included provisions that the terms of office were for one year starting June 1st (hence the 1964-1965 range) and that the elective officers were the Senior Vice-Chair, Vice-Chair, Secretary, and Treasurer. The Senior Vice Chairman automatically assumed the office of Chairman the following year. I had suspected that our missing chairman was lurking somewhere on that letterhead from 1963 and the bylaws confirmed it. Dr. Gerald E. Dreifke (1909-2010) was the Sr. Vice Chair in 1963-1964 and thus the chairman in 1964-1965. Case closed! In fact there were no fewer than seven past and future chairmen in that list of 37 Ex-Com members. The entire list of past sec-



ENGINEERS' CLUB BUILDING, 4359 LINDELL BLVD.

tion officers can be found at the IEEE Global History Network website (<http://tiny.cc/srvrj>).

If the early years of AIEE were dominated by discussion of electrification issues, the twenties began to see topics like radio and the new electronic communication technology. The following was a front page notice in the March 1922 issue of JAES:

On March 22 at 8:15, a meeting of the Associated Engineering Societies of St Louis under the auspices of the St Louis Section of the American Institute of Electrical Engineers. An illustrated paper by Mr F H Kroger, Engineer of the Radio Corporation of America, on RADIO wireless telegraphy and telephony have aroused unparalleled interest among professionals and amateurs alike. Mr Kroger 's talk will be a first hand exposition of the subject.

The April 1922 issue of JAES had this to say about the March meeting:

The St Louis Section of the AIEE held an overflow meeting in the Engineers' Club rooms on Wednesday evening March 20th when Mr F H Kroger Engineer of the Radio Corporation presented a paper on Radio. Interest in the subject was attested by the attendance which reached 200, many being turned away on account of lack of room.

I don't recall anyone being turned away from a section meeting due to lack of room in the thirty years or so that I've been associated with the section! They made typos back then too since March 22 was Wednesday, not March 20. Fred Kroger, the RCA engineer, apparently came up with the idea of a sampling oscilloscope according to an oral history at GHN. He was involved in 'low power design' at RCA. It would be interesting to see a transcript of his paper.

It should be pointed out that AIEE and the Engineers' Club did not meet at the current facility on Lindell Boulevard. Like the EC, the section probably used a variety of locations for their meetings. In 1926 the EC purchased the building at 4359 Lindell. With the cost of renovation, the total cost was \$57,500 paid in cash. What a bargain! That building looked quite a bit different from the current building but at least AIEE and the other engineering societies in St. Louis had a permanent place they could call home. Apparently there was a wind storm on September 29, 1927 which did moderate damage to the structure.

The June 1922 issue of JAES mentioned that Mr Stanley Stokes representing the Electrical Engineers will succeed Mr Robertson as Chairman (of the Joint Program Committee of the Associated Societies). Mr Stokes was actually AIEE secretary in 1920 and 1921 and C. C. Robinson was AIEE chairman in 1922. Mr Stokes was a Fellow of AIEE and a Vice President of Union Electric.

On April 25 1923 with 60 AIEE members present Mr G E Stolz General Engineer of the Westinghaus (sic) Electrical and Manufacturing Co gave an illustrated talk on Electrification of (the) Main Roll Drive. The visit to the Scullin plant on the preceding Saturday made Mr Stolz's talk doubly interesting. The April 1921 issue of *The Blast Furnace and Steel Plant* mentions that the main rolling mill drive was a 1800hp induction motor operating at 2200v and was provided by Westinghouse. There's an interesting note about Scullin Steel at (<http://www.mhmvoices.org/2009SpringFeature1.php>) the Missouri History website. Scullin Steel was one of the largest steel plants in the US and in business in southwest St. Louis from 1899 to 1981. AIEE reported 161 members in the St. Louis Section in January 1922 so 60 out of 161 would be a very respectable turnout.

Not everything was shop talk during this period. In September 1921 Mr James L Hamilton Chief Engineer Century Electric Co gave a most interesting talk illustrated with lantern slides on His Motor Trip Through Colorado Utah and the Yellowstone. Most of the slides shown were taken by Mr Hamilton. After the talk those present adjourned to the Reading Rooms where refreshments were served. Mr Hamilton was chairman of the section in 1919.

Mr Blake D Hull (1882-1952) was section chairman in 1924-1925. Mr Hull went on to become President of AIEE from 1947 to 1948. As director of the Southwest District he was instrumental in the formation of sections in Dallas, Houston, San Antonio, and Oklahoma City. Where would Region 5 be today without Mr Hull's effort? He was Chief Engineer for Southwestern Bell.

The October 1927 issue of the Journal of the Engineers' Club (JEC) mentioned

that the St. Louis Section of the AIEE has issued its annual program in pamphlet form. Could this have been our first 'newsletter'? Two meetings were held at the Engineers' Club; the first was addressed by Mr L A Sheldon, Research Engineer of the General Electric Co, on the subject of "Mercury Boilers and Mercury Turbines". Mr. T. S. Perkins, manager of the Protection Equipment Department of the Westinghouse Company, was the speaker at the second meeting.

Mr Charles Potter was chairman in 1928. He was Chief Engineer of the Electrical Division of Wagner Electric Company in St. Louis and a Fellow of AIEE. He published a paper in the Transactions of AIEE in February 1946 on Polyphase Induction Motors. Mr Harry R Fritz was chairman in 1936. He was Assistant Vice President of Southwestern Bell Telephone Company in St. Louis. He published a paper in the Transactions of AIEE in 1929 on Long Distance Telephone Problems. Oscar John Rotty was chairman in 1935 and Secretary in 1929. While an engineer with Union Electric, he published a paper in the Transactions of AIEE in 1928 on control of the Edison System in the St. Charles Street substation of Union Electric Light and Power Company. The 'Edison District' was bounded by Washington, Commercial, Poplar, and Jefferson Streets. I'll buy dinner for the first one who can tell me what the St. Charles Street 'Edison System' was!

Finally, since it ultimately led to MY involvement in IEEE, the Missouri School of Mines student branch was organized in March 1925. UMC and WUSTL branches were organized in 1903 and 1904 respectively.

Uncovering our history is a work in progress. One way to help would be to visit the GHN Region 5 site at <http://tiny.cc/qeqvew> and check out the links there that pertain to the St. Louis Section. If you have comments or questions or would like to contribute in any way, please contact me at h.pottinger@ieee.org.

25th Annual MOCON: 2012 FALL MISSOURI CONFERENCE WORK-SHOP

WEDNESDAY, 24 OCTOBER 2012

1. Electrical Over Current Protection by Mr. Paul Friemel, PE (Bussmann)

Thursday, 25 OCTOBER 2012

2. Blue Tooth Fundamentals (1/2 Day) by Bill K. Drake (UMSL)
3. Arc Flash Analysis (1/2 Day) by Mr. Edwin Scherry (UMSL)
4. Advanced Electrical Over Current Protection by Mr. Paul Friemel, PE (Bussmann)

Friday, 26 OCTOBER 2012

5. National Electrical Code 2011 Update by Michael W. Smith (UMSL)

UMSL = Univ. of MO at St. Louis Campus

Bussmann = Bussmann HQ, STL County

SEE WEBSITE FOR MAPS! www.moconstl.com

Advanced registration for the 2012 FALL Missouri Conference (MoCon) Workshop is now open. Advanced registration fees are \$550.00 for a full day tutorial and \$275 for a ½ day tutorial. Advanced registration will close on Friday, OCTOBER 12, 2012. After that, the fees will be \$600 for a full day tutorial and the fees for a ½ day tutorial will be \$300.00. IEEE Student Members and Retirees pay 25% Fees. Non-IEEE Students pay 50% Fees. You may use this form to register or you may register online at the MoCon Workshop web site: www.moconstl.com. Classes start at 8:30 am and end at 5:30 pm. Lunch is provided 12:30-1:30 pm. Lunch is also provided for those taking two ½ day tutorials on the same day. IEEE Members receive a 20% discount. **PDHs and CEUs awarded.**

Name _____ Tutorial # _____ Amt En-
closed\$ _____

Address _____ City/State/

Zip _____

Email address _____ Tel No. _____ IEEE Member

Remit check or purchase order payable to “2012 FALL MOCON” (CREDIT CARDS VIA PAY PAL)

MAIL TO: JERRY HERMAN, MOCON TREASURER

2112 McGregor Circle, Dardenne Prairie, MO 63368,

FOR COPIES OF THIS FORM, CONTACT MR. BOB MENZEL 314-545-6712

FIRST: Call for Volunteers

Have you ever wanted to make a difference? *FIRST* offers you the chance!



FIRST is a not-for-profit organization entirely devoted to helping young people develop life-skills, while instilling a thirst for scientific challenge. Last season *FIRST* attracted almost 300,000 youth and more than 100,000 Mentors, Coaches, and Volunteers from 60+ countries. Each annual program culminates in an International Robotics Competition. There, teams win recognition, gain self confidence, develop social and life skills, with each student making new friends and perhaps discovering a completely unforeseen career path.

Within the Saint Louis region there are twenty one events to choose from, beginning in November and running through April. Anyone interested in becoming involved with *FIRST* can access www.stlfirst.org to register as a volunteer, or find additional information about this wonderfully exciting program! See Next Page for St. Louis Area events information.

FIRST: Call for Volunteers**Saint Louis Area FIRST Robotics Events 2012-2013**Jr FIRST LEGO League Expo Events:

Saturday, November 3	Innoventor, Earth City
Saturday, February 23	MICDS, Ladue, MO
Saturday, March 2	Wedgewood School, Florissant, MO
Saturday, March 9	Reed School, Ladue, MO

FIRST LEGO League Qualifiers:

Saturday, November 10	Bishop DuBourg High School, St. Louis, MO
Saturday, November 10	Brittany Woods Middle, University City, MO
Saturday, November 10	Hazelwood East Middle School, Hazelwood, MO
Sunday, November 11	Bishop DuBourg High School, St. Louis, MO
Sunday, November 11	Brittany Woods Middle, University City, MO
Sunday, November 11	Hazelwood East Middle School, Hazelwood, MO
Saturday, November 17	MICDS, Ladue, MO
Saturday, November 17	St. Charles Community College, St. Charles, MO
Sunday, November 18	MICDS, Ladue, MO
Sunday, November 18	St. Charles Community College, St. Charles, MO

FIRST LEGO League - Eastern Missouri State Championship:

Sunday, December 9	St. Louis Community College – Florissant Valley
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FIRST Tech Challenge Qualifiers:

Saturday, December 8	St. Louis Community College – Florissant Valley
Sunday, January 20	Mark Twain Center, UMSL
Saturday, January 26	Show Me Center, Southeast Missouri State University

FIRST Tech Challenge – Missouri State Championship:

Saturday, February 23	Gale Bullman Center, Missouri S&T, Rolla, MO
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FIRST Robotics Competition, St. Louis Regional:

Thursday-Saturday, March 14-16	Chaifetz Arena, Saint Louis University
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FIRST Robotics World Championship:

Wednesday-Saturday, April 24-27	Edward Jones Dome, Saint Louis, MO
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Job Postings**PRINCIPAL DEVELOPMENT ENGINEER – ELECTROMECHANICAL
R&D
COVIDIEN****Summary of Position:**

This is a senior level R&D position leading large scale platform or breakthrough projects. The successful candidate will have a strong technical background in Mechanical Engineering and have experience managing technical aspects of large product development programs for the medical device industry. The ability to coordinate with internal and external cross functional teams is essential. The qualified candidate is expected to travel up to 20% of the time with occasional international travel required.

Essential Functions:

Applies strong technical expertise designing electromechanical systems and has full knowledge of other related disciplines. Develops technological ideas and guides their development into a final product.

Guides the successful completion of major programs and may function as the primary technical leader for new product development platforms. The decisions or recommendations of this individual would typically result in failure to achieve major organizational objectives.

Works on complex technical and project management challenges and provides innovative solutions that require use of ingenuity and creativity.

Exercises considerable latitude in determining objectives of assignment with minimal direction. Completed work is reviewed from a relatively long-term perspective, for desired results.

Skilled in working in a cross functional technical environment where working with outside partners is essential for project success.

This position may include the supervision of other technical personnel.

The individual in this position represents the organization as the technical project leader on product development projects. Interacts with external personnel on significant cross-functional programs, often requiring coordination with vendors outside the organization.

The position reports directly to the R&D Manager of the Electromechanics Group.

Experience:

BS/MS in Mechanical Engineering or Equivalent Degree

MBA or PMP Certification a Plus

Medical product development experience

Proven track record of successful technical project management in a product development environment

Experience working with overseas manufacturers and contract design/manufacturing houses

DFSS or Six Sigma/Lean Certification

Strong knowledge of mechanical system and component level design

Advanced Computer Aided Design (CAD) proficiency (SolidWorks or NX)

Advanced aptitude in project management including MS Project

Excellent oral and written communication skills

Willingness to travel internationally as needed

To apply or for more details, please follow the link below:

https://jobsearch.covidien.com/psc/cg/EMPLOYEE/HRMS/c/HRS_HRAM.HRS_CE.GBL?Page=HRS_CE_JOB_DTL&Action=A&JobOpeningid=2012005061&Siteid=1&PostingSeq=1

Job Postings**Principal Development Engineer – Medical Supplies (R&D)
COVIDIEN****Summary of Position:**

This R&D engineer will perform Electronics and Software design on Analog, Digital, and Micro-controller based Medical Products. Some maintenance of business for existing products will be required. This position requires coordination with internal and external cross functional teams. Up to 15% travel could be expected with occasional international travel.

Essential Functions:

- Electronics and Software design throughout the product development cycle (Concept, Feasibility, Development, Qualification, and Launch).
- Provides creative solutions while showing leadership to effectively promote their ideas.
- Able to manage themselves and encourage others to complete tasks on schedule.
- Able to work in a cross functional environment (R&D, Marketing, Regulatory, Manufacturing, Clinical, Quality, Legal, and Packaging).
- Able to work with outside suppliers as needed.
- Writes Verification and Validation Protocols and generates Test Reports.
- Follow procedures (such as executing Engineering Changes Notices).
- Able to organize and lead meetings (such as design reviews).
- Innovation leadership (help file for intellectual property/patents) on your ideas.

Reporting directly to the R&D Manager of the Software & Electronics Group, this position interacts with a team of cross-functional development partners often requiring coordination with outside suppliers.

Position Requirements:

- BS or MS in Electrical Engineering or Software Engineering
- Digital, Analog, and Microcontroller Design to the Schematic Level
- Proficiency in Embedded Microcontroller Software (C programming)
- Proficiency with development tools such as IAR or CodeWarrior
- Effective oral and written communication skills
- Proficiency with MS Office
- Travel (up to 15%)

Desired Experience:

- Experience with Medical Devices (ECG, Pumps, Thermometry)
- Experience with Wireless (Zigbee, WiFi, 3G)
- Python, Web Programming, Java, Microsoft Visual Studio.net
- Printed Circuit Board Layout
- Experience with LabView or National Instruments
- Knowledge of IEC 62304 – Medical Device Software Standard
- Knowledge of 60601 3rd Edition Standard
- DFSS or Six Sigma/Lean Certification

Working Conditions:

This individual will work in the office and laboratory areas of the Hazelwood R&D facility.

To apply directly or for more details, please follow the link below:

https://jobsearch.covidien.com/psc/cg/EMPLOYEE/HRMS/c/HRS_HRAM.HRS_CE_GBL?Page=HRS_CE_JOB_DTL&Action=A&JobOpeningid=2012005060&Siteid=1&PostingSeq=1