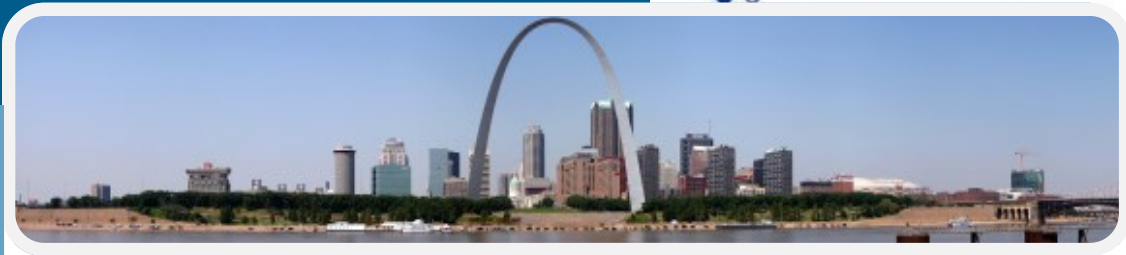




ION Saint Louis

WINTER 2016



IEEE St Louis Section Newsletter

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Chair's Column

Saint Louis Section of IEEE Chair's Column, Winter 2016

Greetings and happy new year to IEEE STL members old and new, I am delighted to be serving as Section Chair for 2016 and look forward to meeting as many of our professional and student members as possible in the coming year. We are fortunate to have as our Executive Committee for 2016:

Chair- Yoelit Hiebert, PE, CEM

Past Chair - Prakash Shahi

Vice Chair - Prasenjit Shil, PhD

Treasurer – Maciej Zawodniok, PhD

Secretary – Ben Cardwell



Looking back for a moment, our 2015 Winter Social was a great success with over 120 members and their families in attendance. Dr. Aaron Bobick, Dean and James M. McKelvey Professor, School of Engineering & Applied Science, Washington University in St. Louis presented the keynote address and the section presented a number of awards and recognitions. Many thanks to our volunteers for their help with the Winter Social and all our events of 2015.

Looking forward, we have some new programming planned for the winter and summer of 2016 in addition to our ever popular fall programs. Coming up in March, IEEE STL will sponsor a "Second Friday" PDH seminar at the Engineering Center of St. Louis covering energy efficiency technologies. We are excited to be able to contribute to the professional development of the St. Louis engineering community and hope our members will be able to take advantage of this opportunity.

Chair's Column

Another event we will be part of is the Smart Comp 2016 conference, an event we are cosponsoring with the Missouri University of Science and Technology. The conference will be held May 17 – 19, 2016 in downtown St. Louis and we are busy planning and making arrangements for what should be a world class conference.

Look for more information about these events in the pages below and stayed tuned for details in the coming weeks and months for information about these and additional upcoming programming.

We are always interested in ideas and feedback so please don't hesitate to contact any of the Executive Committee with questions, concerns, or suggestions. 'm looking forward to my tenure as Section Chair and to working with our Executive Committee and our members for what I hope will be another great year for the St. Louis Section of IEEE.

Sincerely,

Yoelit Hiebert

Chair, IEEE St. Louis Section

Notification

2015 IEEE REGION 5 AWARDS CALL FOR NOMINATIONS

IEEE Region 5 is accepting nominations for the following awards.

- #001 Outstanding Large Section (>500 members)
- #002 Outstanding Small Section (≤500 members)
- #003 Outstanding Member
- #004 Outstanding Educator
- #005 Outstanding Large Student Branch (>50 members)
- #006 Outstanding Small Student Branch (≤50 members)
- #007 Outstanding Student
- #008 Outstanding Student Branch Counselor
- #009 Outstanding Large Company (>500 employees)
- #010 Outstanding Small Company (≤500 employees)
- #012 Outstanding Young Professional Member
- #013 Outstanding Individual Achievement Award (up to 5 awards)

Please review the successes of 2015 and consider nominating the individuals and organizations that made those happen.

A short description of each award and nomination forms are posted on the Region 5 Website (ieeer5.org/awards)

Please send nominations to the Region 5 Awards & Recognition Committee Chair, Diane Bowen Collier, d.b.collier@ieee.org with the following subject:

"IEEE R5 Award Nomination # [Award Type]"

Nominations must be submitted using the Word forms available. The deadline for nominations is February 10, 2016.

Please address any question to the R5 Awards & Recognition Committee Chair:

Diane Bowen Collier

[817-988-5660](tel:817-988-5660)

d.b.collier@ieee.org

IEEE Region 5: <http://ieeer5.org/>

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IEEE St Louis Section News

Welcome New Fellows to IEEE Saint Louis Section!

Dr. Jun Fan:

Rolla, MO, for contributions to power delivery networks in printed circuit designs

Professor Chenyang Lu:

Saint Louis, MO, for contributions to adaptive real-time computing systems

Jagannath an Sarangapani:

Rolla, MO, for contributions to nonlinear discrete-time neural network adaptive control and applications

Upcoming Events

SMARTCOMP 2016

“Smart Living through Computing”

IEEE St. Louis section is co-hosting the SMARTCOMP 2016 on [May 18-20, 2016](#) in [St Louis](#).

Smart computing is emerging as an important multidisciplinary area, which can be broadly classified into two major topics: how to design and build smart computing systems, and how to use computing technology for resource sustainability to improve the human experience.

The 2nd IEEE International Conference on Smart Computing (SMARTCOMP 2016) invites original papers on any topic that is related to smart computing. With the theme “Smart Living through Computing”, SMARTCOMP 2016 will be a forum for the presentation and exchange of cutting-edge ideas.

CO-SPONSORS:



IEEE St Louis Section News

IEEE STL Section Winter Social 2015

The IEEE STL Section Winter Social and awards dinner was held Saturday, Dec. 12, 2015 at the Engineers' Club of St. Louis. Over 120 people attended including student branch members and Region 5 officials.

Dr. Aaron Bobick, Dean and James M. McKelvey Professor, School of Engineering & Applied Science, Washington University in St. Louis provided the Keynote Address entitled "Computers Seeing Action" in which he discussed his previous work on computers seeing action ranging from simple motion to football plays, and his more recent work involving robots understanding human action in an assembly context.

During the awards ceremony, awards were presented to:

Outstanding Educator-

Dr. Roobik Gharabagi - SLU

Dr. Joe Stanley – MS&T

Outstanding Member

Ben Cardwell – Penta Engineering

Outstanding Student Member

Joanna Lou - SLU

Outstanding Student Branch

Parks College of Saint Louis University

The winter social is the section's biggest event of the year as it gives student, academic, and professional membership a chance to meet and mingle. We hope to see you at the 2016 Winter Social!

Pictures on next page!

IEEE St Louis Section News

IEEE STL Section Winter Social 2015

(Special thanks to our photographer, Achyut Pradhan)



IEEE St Louis Section News

Blackbox Competition - 2015

On Saturday, November 14, the Saint Louis Section of The IEEE held its annual blackbox competition at Saint Louis University. This year a new digital blackbox contest was added to the event. Seven teams from Missouri University of Science and Technology, Saint Louis University and Southern Illinois University Edwardsville participated in the traditional analog circuit blackbox contest. Three teams from Missouri University of Science and Technology and Saint Louis University attended the newly added digital blackbox contest.

In the analog blackbox competition, teams of two students were given a box containing an unknown analog circuit containing up to six discrete components, two of which may be two or three pin non-linear devices. The boxes included four taps into the circuit. The students were given three hours to apply tests using a DC supply, waveform generator, DMM and oscilloscope to the box in an attempt to reverse engineer the unknown circuit.

In the digital blackbox competition, teams of two students were given a box containing an unknown digital circuit. There were no constraints placed on the complexity of the unknown circuit. The boxes contain 32 digital IO taps into the circuit. The students were given three hours to apply tests using a DC supply, waveform generator, DMM, 16 channel logic analyzer and oscilloscope to the box in an attempt to reverse engineer the unknown circuit.

The students were judged based on testing methodology, conclusions drawn from testing, documentation of methodology and conclusions, and building a circuit from the knowledge gained. Judges from Saint Louis University and Missouri University of Science and Technology critiqued the submissions and the student teams.

This year the analog blackbox competition was won by the team of Frank Cobian and Curtis Meuth from Southern Illinois University Edwardsville. The team of Daniel Crockett and Kristen Collins from Southern Illinois University Edwardsville took second place. The team of Labbeb Quaisi and Christian Lees from Saint Louis University took third place.

The digital blackbox competition was won by Anthony Nguyen from Missouri University of Science and Technology. The team of Claire Stonner and Chris Lucas from Saint Louis University took second place. The team of Logan Moore and Josh Beckwith also from Saint Louis University took third place.

Additional photos from the contest can be found here:

<https://csss.slu.edu/~mitchekk/work/ieee/BB2015/index.html>

The above link will be changing to:

<http://csss.slu.edu/mitchell/work/ieee/BB2015/index.html>

Pictures on next page!

IEEE St Louis Section News

Blackbox Competition

Check out our pictures from the Blackbox Competition!

Analog Winners

First Place Winners



Second Place Winners



Third Place Winners



Digital Winners

First Place Winners



Second Place Winners



Third Place Winners



Student Branch News

SLU Billiken Bots

IEEE Hosts 6-12th Graders for Make A Difference Day

As a part of Make a Difference Day at SLU, IEEE, a professional engineering society in Parks College of Engineering and Aviation, held its third annual BillikenBots event on Oct 24, 2015. The event was made possible by sponsorship from the St. Louis Professional Section of IEEE, Parks College of Engineering and Aviation, MADD, the Junior Academy of Science in St. Louis, and the Boeing Employee's Fund. The event was hosted by members of the Junior Academy of Science to introduce students to what engineering and STEM fields have to offer. Sixty students from across the St. Louis area came out for the event, for the love of science, and for the opportunity to design and build a robot.

Students were presented the challenge of building a "toothbrush robot" using only a pager motor, toothbrush head, battery, and art supplies. Participants were encouraged to use their creativity to design the best robot to compete in a Grand Champion's Race at the end. Robots were judged on speed, accuracy and design. Engineering students held a panel discussion for participants to ask questions during lunch. The discussion was a great way to get students excited about their futures and encourage them to keep pursuing their goals. The day was a great success with volunteers enthusiastically helping the participants build their robots and the participants racing them and showing camaraderie with each other!

Volunteers included members from the SLU's IEEE student branch, the freshmen Engineering Learning Community, SLU's Biomedical Engineering Society student branch, and various other students in Parks College. The excitement throughout the day could be seen and heard as students and volunteers took part in the activities of the day. We look forward to the fourth annual BillikenBots next year!

A special thank you to our sponsors:

IEEE St. Louis Section and Region 5

Junior Academy of Science through the Boeing Employee's Fund

Saint Louis University and Parks College of Engineering, Aviation and Technology

Saint Louis University Make A Difference Day

Pictures on next page!

Student Branch News

SLU Billiken Bots

Check out our pictures from the SLU Billiken Bots!



Student Branch News

Missouri S&T Student Branch

The Missouri S&T Student Branch was rejuvenated in 2015, and has exciting plans for 2016. The group has a dedicated backing of officers all with one vision in mind: helping Missouri S&T electrical and computer engineering students grow technically, professionally, and socially. There is never a dull moment in this branch, because every week the group is hosting some event to make the vision a reality. Whether it's the weekly Electronic Workshops, where students can come in and build a project to gain hands-on technical skills, a SPAVe event, where students have the opportunity to network with companies, or Open Lab hours, where students can connect with other students during the day and enjoy a break from classes in the Student Projects Lab, the group has helping the students on the forefront every week.



Student Branch News

With this shared vision in mind and a whole restructure of the group, the Missouri S&T Student Branch was able to help make the organization flourish in 2015. The organization raised its membership from 40 students to 60 students. The group shifted some of its focus to hosting more social events, including socials for the members, open lab hours, and even hosting BBQ events (including the St. Louis Section BBQ). The group also brought in a record number of company presenters. The General Meetings for the Missouri S&T Student Branch consist of updates followed by a company representative presenting to the students, giving the opportunity for students and company representatives to network. These General Meetings are held every other week, so we have an average of 8 companies come to network with the students each semester. The group was also able to attend and compete in the Region 5 Conference in New Orleans, LA for the first time in many years. The events that the group competed in included the Robotics Competition, Circuit Design Competition, and Student Paper Contest. Other students volunteered during the conference. Two students from Missouri S&T, Kyle Harper and Kyle Gassel, won first place in the Circuit Design Competition, and another student, Justin Hoyt, won second place in the Student Paper Contest. There was a huge increase in interest in the St. Louis Section Black Box Competition, where the group hosted practices and internal competitions with the biggest turn out of students there has ever been. One of the students, Anthony Nguyen won first place for the Digital Black Box Competition. The group also had the most successful SPAVe event in history, with ten companies coming to network and review how undergraduate students presented their personal projects. Overall the branch had a successful year.

In 2016, the group only sees room for improvement, and making the organization stronger. All of the group's past events will be moving forward and some new events will be happening this semester. The branch will be adding Emphasis Area Workshops, where students can learn from faculty in the department about the different opportunities available in electrical engineering, including undergraduate research opportunities. The group also will have a heavier focus on fundraising and hopes to add more social activities throughout the semester. With everything the group has accomplished, and everything that is planned, the branch is very enthusiastic about 2016, and can't wait to see what it brings for the Missouri S&T IEEE Student Branch.

Student Branch News

Speaker for IEEE SLU Branch: Frank McCormack and EPIC Tour

Saint Louis University Student Branch had the opportunity to welcome Frank McCormack, a lead engineer at EPIC Systems, Inc. to come speak about his career as an electrical engineer. Mr. McCormack described his background as a student in engineering and his subsequent career. He has worked for many companies in various positions and his knowledge of the industry was very impressive and interesting to learn about. He also shared a few tips and lessons that he has learned over the years with us which were well noted among us. Mr. McCormack also offered SLU students a tour at Epic Engineering & Consulting Group. It was a pleasure to meet him and hear about his experiences in the engineering industry.



Upcoming Events

2016 Engineers' Week Joint Society

LUNCHEON



Innovation & Design

Every Detail Matters

February 23, 2016

Clayton Plaza Hotel
7750 Carondelet Ave
Clayton, MO 63105

\$40 Tickets

\$400 Table

\$250 Sponsor

11:15 Registration

Noon Lunch

12:30 Keynote Address



Bryce G. Rutter Ph.D.
Founder & CEO
Metaphase Design Group, Inc.

Dr. Rutter is a renowned specialist in ergonomic product design and the leading-worldwide expert in the design of handheld products. His company, Metaphase, continues to define new product categories, rejuvenate sleepy brands and develop breathtaking design innovations for several of the world's most prestigious and influential brands and scorching start-ups. Dr. Rutter has received more than 75 international design excellence awards and has been profiled and interviewed by major media including the Wall Street Journal, CNN, and Businessweek.

Visit Eventbrite.com to make reservations

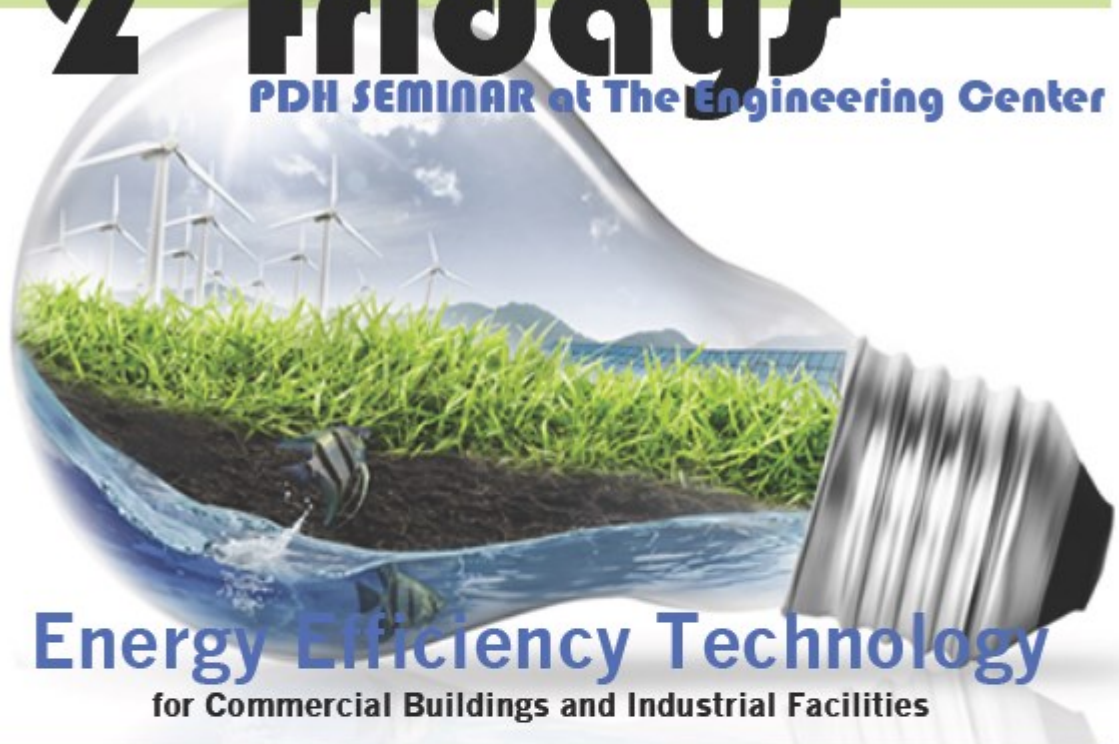


Group Reservations/Tables of 10 will be recognized during the event
Complimentary Parking in the 7777 Bonhomme Garage (Cross over to Hotel from Orange Level)
PAID reservations are required by February 16, 2016 • Advanced Reservations only - No Walk-ins
All Proceeds Benefit the Engineering Foundation of St. Louis

Upcoming Events

2nd Fridays

PDH SEMINAR at The Engineering Center



Energy Efficiency Technology for Commercial Buildings and Industrial Facilities

Networked Lighting and Building Controls • Motor Energy Efficiency
Strategic Energy Management • Solid State Lighting
Energy Efficiency Using Variable Speed Drive • Utility Long-term Strategy

March 11, 2016 • 8 – 4 pm

registration 7:30 am • lunch and up to 8 PDH provided

\$30 for all Affiliate members (\$75 nonmember)

register online at <http://engineersclub.net/education/educationalactivities.php>

hosted by



4359 Lindell Blvd St. Louis, MO 63108

314-533-9336

Upcoming Events

2016 ERA Electronics Show

REGISTRATION NOW OPEN

<http://www.erastl.org/showinf.htm>

ELECTRONICS, ELECTRICAL, ENGINEERING AND MANUFACTURING SHOW 2016

Sponsored by the Spirit of St. Louis Chapter-ERA

Orlando Gardens Event Center

Maryland Heights, MO

Wednesday, April 6, 2016

9:00AM – 5:00PM

50+ Booths in 16,000 sq. ft. of Exhibition Space
Technical Seminars expected to be running throughout the day:

Avatar Technologies,

Buse Inc,

Infineon Technologies,

Schaffner EMC Filter Products

More seminars to be announced....

Manufacturers, Representatives and Distributors of:

Electronic Components • Electrical Components and Supplies • Electro
-Mechanical Components • Electronic Manufacturing Services • Elec-
tronic Design Services • Manufacturing Equipment

ELECTRONIC REPRESENTATIVE ASSOCIATION

NAVIGATING THE CONNECTED WORLD

For more information or to register, visit our website: <http://www.erastl.org>

Or contact Bob Dillon at: bdillon@erastl.org/ [636-778-0047](tel:636-778-0047)

Upcoming Events

achieving a
sustainable energy future

April 13-14, 2016 | Saint Louis University, Center for Global Citizenship

Conference Registration

Meet with leaders from industry, academia, and government to open the dialogue about sustainability and our energy future.

Speakers and panelists will focus on the complex concept of sustainability in four key areas:

- Achieving a sustainable balance in the **utility industry**
- Opportunities for sustainability in the **transportation sector**
- Sustainable business practices in **urban development**
- Importance of sustainability **policy development**

The event takes place April 13-14, 2016 at Saint Louis University and includes opportunities for networking and discussion. Your \$50 registration fee covers lunches, breaks, an evening reception and conference materials. Participants will also receive a certificate awarding professional development hours.

Ready to learn more? View the preliminary [agenda](#) and list of [speakers](#) on our website. Or, click below to register online.

[Register Here](#)

Registration Questions

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