



ION Saint Louis



FALL 2008



Summer Social Chair, Heidi Anderson, enjoys a free moment during the IEEE Summer Social at Forest Park. Read more on page 3. (Photo courtesy of Michael Welling).

Annual Black-Box Competition is Planned

Date: Saturday, November 15, 2008

Location: Electrical and Computer Engineering, Saint Louis University, McDonnell Douglas Hall – 3450 Lindell Boulevard, St. Louis. Use the Grand stop on Metro Link.

Time: Registration 12:30 and Contest 1:00-4:00 pm.

Participants: 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: 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 emailing mitchekk@slu.edu. The names of all team members must be included, along with what school the team is coming from. Registration must be received by November 7th.

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: Dr. Kyle Mitchell, 314-977-8301 or mitchekk@slu.edu.

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du Maine Selected as 2009 Secretary

At the Section meeting on September 6, Jessica J. du Maine, P.E. was announced as the Section's 2009 Secretary. The September 6 meeting was held coincident with the Summer Social held at Forest Park. In keeping with the tradition of alternating the annual selection of Secretary from industry and academia, Jessica will represent academia for 2009.

Jessica is a Assistant Professor/Program Coordinator for Electrical/Electronic Engineering & Technology at the Florissant Valley Campus of St. Louis Community College. She is the faculty sponsor and founder of the Florissant Valley Student Branch of IEEE and the current Chair of the Computer Society for the Saint Louis Section. Additionally, Jessica is a Professional Engineer and a graduate of University of Missouri – Rolla (BSEE) and Washington University (MSEE).

Chair's Column

I hope you all had a great summer.

The *ION Saint Louis* is the official publication of the Saint Louis Section of IEEE. It is published approximately once per quarter by the Officers of the Section and distributed electronically via the Section Listserv and posted to the Section website.

Any member may submit IEEE-related information to appear in the publication to Bob Becnel at bob@becnel.com.

IEEE St. Louis Section summer social was a great success with 50 plus members attending. I would like to thank Ms. Heidi Anderson and the student gang from SIUC for managing the event.

We have Ms. Jessica J. du Maine on-board as the Section Secretary for 2009.

IEEE St. Louis section plans to have Senior member recruitment drive as part of October section meeting. You may find more info on the website or elsewhere in the newsletter.

IEEE St. Louis section plans to fund 2008 IEEE Black-Box Competition to be hosted by Parks College - Saint Louis University on Saturday, November 15, 2008 from 1:00-4:00 pm at Electrical and Computer Engineering, Saint Louis University, McDonnell Douglas Hall -- 3450 Lindell Boulevard, St. Louis. If you plan to take part in judging the student competition please contact Roobik Gharabagi gharabr@SLU.EDU who is looking for judges.

The awards committee is also looking for nomination for 2008 awards in the following categories:

- ❖ Outstanding Young Engineer Award
- ❖ Outstanding Educator Award
- ❖ Outstanding Student Branch Award
- ❖ Outstanding Company
- ❖ Outstanding Section Member
- ❖ Outstanding Branch Counselor Award
- ❖ Special Member Award

Please send nominations to Ms. Heidi Anderson heidi@sandboxconcepts.com

By November 15, 2008.

I hope to see you all at section meetings or at Christmas Social.

Respectfully,

Dr. Mallik, 2008 Section Chair



Family of Ken Owens, Past Section Chair, enjoy feeding the ducks during the Summer Social. See story on page 3. (Photo courtesy of Michael Welling).

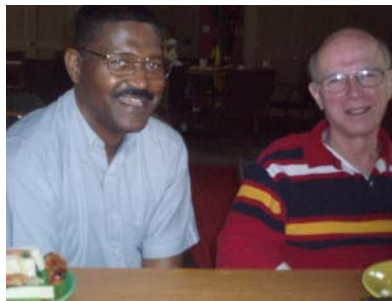
Summer Social a Huge Success

As Dr. Mallik indicated in the Chair's Column on page 2, the Summer Social was a huge success and enjoyed by everyone. The event was held on September 6 in Forest Park at the Boat House. Approximately 50 members and their family attended the event.

The weather was gorgeous. There were paddleboats and rowboats for all attendees to take out onto the lake. It was chance to socialize with many long-time members as well as new faces. The afternoon was capped off by the introduction of the 2009 Section Secretary, Jessica J. du Maine (see page 1).

The event was arranged and conceived by Ms. Heidi Anderson heidi@sandboxconcepts.com who deserves a lot of credit for the numerous hours spent in planning a wonderful afternoon. Other kudos belong to SIUC students Anil and Amod for developing an online registration tool for the event and Michael Welling for photographs.

Assorted Photographs from the Summer Social courtesy of Michael Welling (more photos on page 20).



Senior Member Drive Sponsored by GOLD

The annual Senior Member Drive will be held prior to the October Section meeting. We will have Senior Members prepared to sponsor potential participants and computer terminals to submit the application. If interested, qualifications and information is available at <http://www.ieee.org/web/membership/senior-members/index.html>. Pizza will be served as well. Contact one of the Section officers or GOLD Chair, Anil anil@siu.edu, if you still have questions.

Date: October 30 at 3:00 - 6:00 PM (Section Meeting at 6:00 PM) You do not have to stay for 3 hours.

Location: SLU Parks College

Host: Saint Louis Section and the GOLD Chapter

IEEE SOCIAL Hayride

Saturday, Nov. 1, 7:00pm, Queeny Park in west St. Louis County
Cost is \$125.00 divided among participants. Maximum of 20 participants.
There will be a campfire afterwards, so bring some ingredients to make s'mores!

RSVP by 5pm Oct 16 by e-mail

ieeesocials@yahoo.com

Families welcome

Nominations Sought for Section Awards

We are preparing nominations for Section Awards to be presented at the Christmas Social. Awards will include:

- ❖ Outstanding Young Engineer Award
- ❖ Outstanding Educator Award
- ❖ Outstanding Student Branch Award
- ❖ Outstanding Company
- ❖ Outstanding Section Member
- ❖ Outstanding Branch Counselor Award
- ❖ Special Member Award

Send an email to Ms. Heidi Anderson heidi@sandboxconcepts.com for nominations or to serve on the Award's Selection Committee. We are urgently looking for a member from the MST, MU, Carbondale and Edwardsville Campus to serve on the Award's Selection Committee.

Christmas Social Planned

It is not too early to plan on attending the IEEE St. Louis Christmas Social. The date of the event will be Saturday, December 20 at the Lake St. Louis Clubhouse. More details will follow.



Region 5 Meeting and Sections Congress Trip Report by Bob Becnel

Last month, the Region 5 Meeting was held as part of the Sections Congress in Quebec City. The Saint Louis Section lies within Region 5. Bob Becnel, Section Secretary, served as Primary delegate to the Sections Congress for the Saint Louis Section. Becnel also represented the Section Chair at the Region 5 Meeting. Section Member, Steve Watkins was also present in Quebec. The Region 5 meeting was held on September 19 from 8 AM – Noon.

IEEE Sections Congress 2008 is a triennial gathering of section leadership sponsored by the Member and Geographic Activities Board. It is the only major IEEE meeting that convenes the IEEE's grassroots leadership to share ideas, concerns, and solutions. The Congress was held September 19-22 in Quebec City. Learn more at <http://www.ieee.org/web/services/mps/sc08/about.html>.

Region 5 Meeting Highlights

- ❖ The 125th Anniversary Celebration of IEEE for the Region will be hosted by the Austin Section in 2009
- ❖ Overall membership of Region is up by 0.4% but student membership is down
- ❖ It was urged that the St. Louis Section form a Life Members Committee before the end of the year
- ❖ Current number of Life Members in Region 5 as of March are 2,194
- ❖ PACE funds still remain for the Region
- ❖ The Award's Committee has published a new manual of all available IEEE Awards and it was approved at the meeting. The manual is posted on the Region 5 website
- ❖ The next Annual Region 5 Meeting will be April 16-19, 2009 in Lubbock Texas

Sections Congress Highlights

- ❖ Each IEEE department had a booth setup with staff people in attendance to answer questions
- ❖ Dozens of breakout sessions were available and their presentation material is online <http://www.ieee.org/sc2008>
- ❖ Over 1000 IEEE Members were present
- ❖ The new vTools Suite by IEEE was introduced as a revolutionary method at running Sections and Chapters
- ❖ Ten recommendations were selected and will be implemented by the IEEE Board of Directors (see page 6)
- ❖ The 2011 Sections Congress will be held in San Francisco



Region 5 Student Activities Coordinator, Dr. Steve Watkins (left), looks on approvingly during an Ethics Lecture that he co-delivered at the Sections Congress in Quebec City. Not shown, Dr. Watkins' dual lectures on Saturday and Sunday were to standing room only audiences at the Quebec Hilton. (Photo courtesy of IEEE).



Region 5 Sections Congress Coordinator, William Ritter, Second from Right in Quebec. (Photo courtesy of IEEE).



Region 5 Director, David Pierce on Right at Quebec. (Photo courtesy of IEEE).

Top Ten Recommendations from the Sections Congress

Top Ten Recommendations from IEEE Sections Congress - as prioritized by Primary Section Delegates. These recommendations will be presented to the IEEE Board of Directors in November 2008 for assignment and action.

Ranking	Group	Recommendation
1	Member Benefits	Every member to have an annual entitlement to a limited number of free IEEE Xplore downloads.
2	Business and Financial Operations	Payment Flexibility - Members, especially students and those in developing countries who do not have credit cards, need flexible payment methods <ul style="list-style-type: none"> ❖ regardless of location and banking methods ❖ supporting aggregated payments in local currency. ❖ minimizing transaction costs and processing overheads.
3	Member Growth & Development	Provide "Leadership Training Handbook (Text and Multimedia) for Section Officers" to include: Volunteer Recruitment, Roles & Responsibilities of Section Chair and Section Committee, Presiding at Meetings, Documentation - Websites & Forms, Time Table for Elections & other formal IEEE Required Activities, and Transfer of Responsibilities to incoming officers.
4	IT Operations	The MGA Board to assign staff to develop, a user-friendly system and support to enable Sections, Chapters and Affinity Groups to deliver, at low cost, teleconferencing, collaborative technologies, and webinars as a free member benefit.
5	Member Growth & Development	For digital libraries: develop additional, smaller tiered packages (10, 20 items, etc.) which allow members to purchase defined quantities of digital content without expiration. Provide members permanent electronic access to previously purchased content.
6	Operations	Improve the implementation of recommendations identified at Sections Congress.
7	Member Benefits	There are a good number of IEEE member benefits that are relevant or accessible to Regions 1 - 6 members only. IEEE should implement similar benefits of local relevance across all Regions.
8	Business and Financial Operations	Sections and chapters need a web-based payment solution for small local events that is: <ul style="list-style-type: none"> ❖ Low cost ❖ Secure and immediate ❖ Capable of depositing into a concentration banking account or international equivalent with event and payer identification
9	IT Operations	Provide support and tools for the creation and maintenance of easy to update Section web sites with "single sign-on" authentication via IEEE web accounts featuring at least blogs, meeting calendars and member surveys. Use commonly available, best practice technologies not requiring programmer support for day to day use.
10	Membership	Implement Sustained Membership options for all membership grades exclusive of student grade: <ul style="list-style-type: none"> ❖ Single dues payment for multiple years/life-long membership; ❖ Increasing benefits in proportion to the length of renewal. ❖ Lowers IEEE administrative expenses related to "annual" membership cycles.

COMSOC Distinguished Lecturer in September

On September 18, the COMSOC Chair, Ken Owens hosted distinguished lecturer, Dr. Benny Bing of the Georgia Institute of Technology at SAVVIS Communications in St. Louis for free lunch. More information on the talk and Dr. Bing's biography are below. If you could not attend this provocative lecture, a similar version is available online at <http://www.comsoc.org/socstr/memprog/dislec/tut/bing/DLT.html>.

Abstract

Broadband wireless access is viewed by many telephone and cable operators as a "disruptive" technology and rightly so. The broadcast nature of wireless transmission offers ubiquity and immediate access for both fixed and mobile users, clearly a vital element of quadruple play services involving voice, video, data, and mobility. Unlike wired access (copper, coax, fiber), a large portion of the deployment costs is incurred only when a subscriber signs up for service. The first part of the talk will provide a comparative assessment of the standards and technologies underpinning emerging broadband wireless access solutions.

Wireless LAN applications have blossomed tremendously over the last few years. What started out as cable replacement for static desktops in indoor networks has been extended to fully mobile broadband applications involving moving vehicles, high-speed trains, and even airplanes. Wi-Fi data rates have also continued to increase from 2 to 54 Mbit/s with the current 802.11n draft topping 600 Mbit/s. This development may eventually render wired Ethernet redundant in the enterprise network. An increasing number of municipal governments around the world and virtually every major city in the U.S. are financing the deployment of Wi-Fi mesh networks with the overall aim of providing ubiquitous Internet access and enhanced public services. In addition, cheap phone calls using Wi-Fi voice over IP may become one of the biggest benefits of a citywide municipal network. This has led some technologists to predict that eventually we are more likely to see meshed Wi-Fi cells that are linked together into one network rather than the widespread use of high-powered WAN handsets cramming many bits into expensive and narrow slices of radio spectrum. The second part of the talk focuses on emerging Wi-Fi technologies.

Streaming live and on-demand video content over the Internet, and in telecommunications and broadcast networks, is becoming prevalent. In addition to broadband service providers (e.g., cable, DSL, satellite, 3G, WiMax) that employ a plethora of video-transport technologies such as IP-TV, switched digital video (SDV), video on demand (VoD), mobile TV, and peer-to-peer streaming, Web content providers have increasingly large volumes of video on their sites, and are making it more discoverable, helping drive usage and ad revenue. Service providers have also started to focus on video content and end-user quality of experience (QoE) to complement network-based QoS monitoring in order to meet rising customer expectations. The last part of the talk will focus on the optimization of video transmission for emerging access networks.

Biography

Dr. Benny Bing is a research faculty member with the School of ECE at the Georgia Institute of Technology. He has published over 60 technical papers and 10 books. In early 2000, his book on wireless LANs was adopted by Cisco Systems to launch Cisco's first wireless product, the Aironet Wi-Fi product. He was subsequently invited by Qualcomm and the Office of Information Technology to conduct customized Wi-Fi courses. He is an editor for the IEEE Wireless Communications Magazine. He has guest edited for the IEEE Communications Magazine (2 issues) and the IEEE Journal on Selected Areas on Communications. In October 2003, he was invited by the National Science Foundation to participate in a workshop on Residential Broadband. He is a Senior Member of IEEE and an IEEE Communications Society Distinguished Lecturer.

IEEE Power and Energy Society Name Change and Events

The Power Engineering Society went through a name change this year. They are now called the Power and Energy Society and use the same acronym.

UPCOMING EVENTS

Oct. 28-30, the St Louis Chapter of the Power and Energy Society is hosting a 3 day seminar at the Ameren headquarters. This seminar is for the non-engineering professional and titled 'Plain Talk about the Electric Power System for the Non-Power Engineering Professional' <http://tinyurl.com/6hn6ht>. The course is being offered nationwide by the IEEE- Power and Energy Society. Discussions include Power System Basics, Delivering Power to Customer, and The Grid. So if you are a utility board member, business executive, power broker or marketer, legal counsel, economist or accountant, this is for you. Attend one, two or all three days. Use code: PT-STL-08 to register <http://tinyurl.com/6hn6ht>. Follow your department's procedure for training approval and register by Oct. 3 to receive a 10 percent discount.

November 18, the St Louis PES will offer a workshop event from 12-5 pm at the Ameren headquarters. I've attached our agenda, speaker bios and abstracts. We will offer a total of 6 PDH opportunities to our members. The workshop sessions will be conducted by Financial, Industry, and Developmental professionals. We will also hold an initiative to promote senior membership.

MOST RECENT EVENT

August 6, GE's Service shop in Fenton hosted our group for 2 tours. Each tour earned 2 PDH. Photos attached. No photos were allowed in the shop area.

The author, Ann Lazarski, is an active member of the Saint Louis Section and Chair of the PES Chapter.

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Photos from the August 6 plant tour of the GE Service Shop in Fenton, MO. (Photos courtesy of PES).

08.06.2008

IEEE PES November 18 Event

Continued from page 8.

SCHEDULE OF EVENTS

	<u>Topic</u>	<u>Host</u>	<u>Room</u>
➡ 12:00 PM	Smart Grid *	Byron Flynn	S103A
	Building a Strong Financial Future	John Callahan	S103B
	Substation Batteries *	Keith Stieferman	S 103C
➡ 1:00 PM	Communicating with Impact *	Carol Moreland	S103A
	Making Sense of Retirement	John Callahan	S103B
	Substation Batteries *	Keith Stieferman	S103C
➡ 2:00 PM	Rebirth of USA Nuclear Power *	Kevin Butterfield	S103A
	Retirement Reality	John Callahan	S103B
	Senior Member Event	Paul Nauert	E334
	Power On *	Mark Nealon	S103C
➡ 3:00 PM	Smart Grid *	Byron Flynn	S103A
	Senior Member Event	Paul Nauert	E334
	Financial Planning Q&A	John Callahan	S103B
	Power On *	Mark Nealon	S103C
➡ 4:00 PM	Communicating with Impact *	Carol Moreland	S103A
	Rebirth of USA Nuclear Power *	Kevin Butterfield	S103B
	Callaway II *	Scott Bond	S103C
	Senior Member Event	Paul Nauert	E334
*(PDH: 1)			
➡ 12:00-5:00 PM	Grad & Certificate Programs	MS&T /UMR	Atrium kiosk
➡ 12:00-5:00 PM	Cleaves-Bessmer-Marietti	Rick Surratt	Atrium kiosk
➡ 12:00-5:00 PM	Energy Efficiency	Dan Danahy	Atrium kiosk

IEEE PES November 18 Event

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SMART GRID

Byron Flynn, GE

Utilities, regulators, and customers search for Smart Grid systems to address operational and electrical efficiencies, improved system reliability, and reduced ecological impacts. Their search for the right solution has resulted in a significant number of discussions around the requirements and capabilities of a Smart Grid. This session will explore three key Smart Grid functions with the strongest business case justification.

- 1. Grid Efficiency*
- 2. Electrical Efficiency*
- 3. Asset Management*

BUILDING A STRONG FINANCIAL FUTURE

John Callahan, Edward Jones

Introduces basic investment concept and discusses the importance of having an investment strategy; buying and selling quality investments; the value of time in the market; and the concept of risk tolerance.

SUBSTATION BATTERIES

Keith Stieferman, AmerenUE

A presentation on Lead acid battery basic theory (basics), safety, maintenance, testing and failure modes.

COMMUNICATING WITH IMPACT

Carol Moreland, InterAction Consulting

In this short session, Carol Moreland will share her insights and best practices for interacting with others more effectively. Whether the setting is a 1-on-1 meeting, a project team session, or a presentation to a group, some common principles apply. Topics will include projecting a positive image with nonverbal communication, active listening, and responding to questions. Carol will offer opportunities for you to ask questions and even try out some of her techniques during the session.

MAKING SENSE OF RETIREMENT

John Callahan, Edward Jones

This talk educates attendees so that they can make informed decisions about retirement. After the seminar, attendees should be able to: Understand the five-step asset management process for their finances; analyze their current situation; and recognize the importance of consulting a professional to help them prepare for retirement.

REBIRTH OF USA NUCLEAR POWER

Kevin Butterfield, Areva

Continued on page 12.

Computer Society Meeting Recap

As part of the September 25 Section Meeting, a Joint Computer Society presentation was made. Dinesh Hiripitiyage of Teradata presented a remarkable overview of the Teradata architecture and how it's different from any other database solution available in the market today. Approximately 3 dozen IEEE members, students, family members and even a young child were drawn to this exciting event held on the SLU Campus. It was evident that Dinesh is very excited about working for Teradata. The Teradata website is located at <http://www.teradata.com>.



The speaker was Dinesh Hiripitiyage. Dinesh has been in the IT industry for almost 10 years. He is employed by Teradata Customer Services for just over three years and a member of the on-site support team for the AT&T account (formerly SBC) in St. Louis. Dinesh has a BSEE from Washington University. His certifications include:

- ❖ Teradata Certified Professional V2R5
- ❖ Teradata Customer Services Professional
- ❖ Microsoft Certified Systems Engineer: Security (Windows Server 2003)
- ❖ Microsoft Certified Systems Administrator: Security (Windows Server 2003)
- ❖ Microsoft Certified Professional

Note: Jessica J. du Maine, P.E., Chair of the Computer Society was instrumental in arranging for Dinesh's presentation.



*Computer Society speaker and member,
Dinesh Hiripitiyage, of Teradata.*

IEEE PES November 18 Event

Continued from page 10.

RETIREMENT REALITY

John Callahan, Edward Jones

Discusses how to take inventory of current assets; how to determine how much income may be needed during retirement; and how to structure retirement plan distributions to best suit a person's needs.

SENIOR MEMBER EVENT

Paul Nauert, Vice Chair St Louis Chapter, IEEE-PES

Do you have over 10 years of membership with PES, including student membership? If so, you are eligible for senior membership. Come to E334 for assistance on this initiative. Be greeted by fellow senior members, ready and standing by to endorse you.

PROJECT POWER ON

Mark Nealon, P.E., AmerenUE

This presentation will review the basic elements of the Power On initiative, first announced to the general public in Missouri in July of 2007, and focus in particular on the \$300 million Undergrounding Conversion Program, undertaken as a definitive system hardening measure against severe weather, and as a means of improving service reliability for targeted customers.

FINANCIAL PLANNING Q&A

John Callahan, Edward Jones

Ask John questions regarding your personal and individual retirement situations.

CALLAWAY II

Scott Bond, AmerenUE-Callaway Plant

GRAD AND CERTIFICATE PROGRAMS

Vicki Gibbons, Missouri University Science & Technology

Learn about your options for advanced education in the Engineering field.

CLEAVES-BESSMER-MARIETTI

Rick Surratt

View samples of substation fittings, PTs, CTs, new products, and ArcFlash clothing.

ENERGY EFFICIENCY

Dan Danahy, AmerenUE

Gather information and learn about AmerenUE's Energy Efficiency, PurePower and other environment friendly programs.

Southern Illinois University – Carbondale Student Branch Event

October 23 - 25, 2008
Engineering Building
131A

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Visit to the Joint Computational Intelligence Society and Industry Application Society Chapter by Distinguished Lecturer

Name: Venkata Swaroop Pappala from University: University of Duisburg - Essen, Germany

Title: A Stochastic UC Model for the Optimal Operation of a Wind-Thermal Power System

Date and Venue: Friday, September 26, 2008, Time - 3 pm in Rm EECH 111, Missouri S & T, Rolla.

Abstract: The talk deals with a stochastic cost model and a solution technique for optimal scheduling of the generators in a wind integrated power system considering the demand and wind generation uncertainties. The proposed robust unit commitment solution methodology will help the power system operators in optimal day ahead planning even with indeterminate information about the wind generation. A particle swarm optimization based scenario generation and reduction algorithm is used for modeling the uncertainties. The stochastic unit commitment problem is solved using a new parameter free self adaptive particle swarm optimization algorithm. The numerical results are presented to indicate the low risk involved in day ahead power system planning when the stochastic model is used instead of the deterministic model.

Missouri S&T Student Chapter Plans for 2008-2009

Lisa Battern, student at Missouri S&T (Rolla), was elected President of the Student Chapter for 2008-2009. In doing so, Lisa and the Chapter announced some of their upcoming events and officers. Weekly meetings will occur at 7:30 PM on Wednesday.

Officers

- ❖ President: Lisa Battern lmb8rd@mst.edu
- ❖ Vice President: Amanda Hamdorf
- ❖ Secretary: Micah Weber
- ❖ Treasurer: Colin Gibson
- ❖ Student Council Rep: Fred Reineke

Past Events

- ❖ Welcome Back to School Pizza Party sponsored by Adtran
- ❖ Speakers from: Adtran, Micron Technology, and NAVAIR
- ❖ Bowling social outing (see photo to right)

Planned Events

- ❖ Speaker from: McEnergy Automation on October 1
- ❖ Speaker from: GE Transportation on October 15
- ❖ Speaker from: Marathon Oil Co on October 22
- ❖ Speaker from: Boeing on November 5
- ❖ Plant Tour: Ameren's Callaway Nuclear Plant in Fulton, Mo on November 14



Tomorrow's engineers and leaders put aside their books temporarily while they bowl a few frames at a planned IEEE Social in Rolla, MO. (Photo courtesy of MST IEEE Student Branch)

2008 FALL MISSOURI CONFERENCE (MOCON) WORKSHOP

WEDNESDAY, 22 October 2008

1. Electrical OverCurrent Protection by Mr. Paul Friemel, PE (Bussmann)
2. High Frequency Circuit Design by Dr. Jim Hahn (UMSL Campus)
3. Routing & Data Mgt in Secure Sensor Networks by Dr. Sanjay Madria (LSL)

THURSDAY, 23 October 2008

4. Arc Flash Analysis (1/2 Day) by Mr Edwin Scherry, PE (LSL)
5. Wireless Ad Hoc and Sensor Networks: Protocols, Performance and Control (1/2 Day) by Dr. Jagannathan (Jag) Sarangapani (LSL)
6. Signal Integrity by Dr. Jim Hahn (UMSL Campus)

FRIDAY, 24 October 2008

7. Advanced Electrical OverCurrent Protection by Mr. Paul Friemel, PE (Bussmann)
8. Intro to TCP/IP Networking and Appl (1/2 Day) by Mr. Ken Owens (Savvis Com)
9. Advanced Network Implementations (1/2 Day) by Mr. Ken Owens (Savvis Com)
10. Digital Signal Processing by Dr. Jim Hahn (UMSL Campus)

See Website for Maps and Location <http://www.moconstl.com>.

MOCON Registration

Advanced registration for the 2008 Spring Missouri Conference (MoCon) Workshop is now open. The advanced registration Web site is in preparation and will be open soon. Advanced registration fees are \$500.00 for a full day tutorial and \$250 for a ½ day tutorial. Advanced registration will close on 10 October 2008. After that, the fees will be \$550 for a full day tutorial (except for Advanced Electrical Overcurrent Protection, which will remain at \$500.00) and the fees for a ½ day tutorial will be \$275.00. 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 will be awarded.

Name _____ Tutorial # _____ Amt Enclosed \$ _____

Address _____ City/State/Zip _____

Email address _____ Tel No. _____ IEEE Member # _____

Remit check (no credit cards, POs OK) To Jerry Herman, MoCon Workshop Treasurer, 2112 McGregor Circle, O'Fallon, MO 63368, payable to "2008 Fall MoCon"

More information, call MR. BOB MENZEL 314-545-6712.

IEEE Swarm Intelligence Symposium, St. Louis, MO – September 21-23, 2008

The 2008 IEEE Swarm Intelligence Symposium (SIS 2008) was held at the Sheraton Westport Lakeside Chalet in St. Louis, MO, USA.

Inherited from its successful past organization in 2003-Indianapolis, 2005-Pasadena, 2006-Indianapolis, 2007-Honolulu, SIS 2008 was the largest technical forum in the Swarm Intelligence (SI) community. SIS 2008 was proudly sponsored by the IEEE Computational Intelligence Society (IEEE CIS) and co-sponsored by the Ameren, Emerson, IEEE St. Louis Section and the Real-Time Power and Intelligent Systems (RTPIS) Laboratory at Missouri University of Science and Technology.

SIS 2008 provided a venue to foster technical exchanges, reinforce friendships, and establish new networks. The symposium brought together researchers and practitioners in areas of theory, design, implementations, and applications of swarm intelligence.

The symposium featured:

- ❖ Two plenary lectures by pioneers of Particle Swarm Optimization (PSO) – Russ Eberhart and James Kennedy;
- ❖ A keynote lecture by a world renown-scholar and practitioner of computational intelligence, and the President of the IEEE CIS – David Fogel;
- ❖ Five state-of-the-art special sessions, with 21 papers, organized by domain experts involving many cross-disciplinary fundamentals and newly emerging applications, namely – PSO in electric machinery and power electronics, SI in electric power optimization and SI for wireless ad hoc sensor networks;
- ❖ Seven regular sessions consisting of thirty-nine high quality papers;
- ❖ Four late break news poster papers;
- ❖ Four tutorials covering the fundamentals of swarm intelligence to state-of-the-art applications.

A total of 64 papers were accepted for presentation at SIS 2008 out of 85 submissions, with a 75% acceptance rate. Each paper was reviewed by two to three reviewers. SIS 2008 paper authors were from six continents and 19 countries, namely – Brazil, China, Egypt, Estonia, Germany, India, Japan, Kuwait, Mexico, New Zealand, Nigeria, Saudi Arabia, South Africa, Spain, Switzerland, Taiwan, Turkey, United Kingdom and United States of America. This truly reflected the existence of global swarm intelligence.

SIS 2008 provided 16 student authors with three nights of accommodation at the symposium hotel and the IEEE CIS Education committee provided three student authors with travel grants.

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IEEE Swarm Intelligence Symposium

Continued from page 16.

In addition, the top three student authored papers were selected for prizes sponsored by the IEEE St. Louis Section, namely –

First Prize

Using Scouts to Predict Swarm Success Rate

Antons Rebguns, Richard Anderson-Sprecher, Diana Spears,

William Spears

University of Wyoming, Laramie, Wyoming, USA

Aleksey Kletsov

Coastal Carolina College, Jacksonville, North Carolina, USA



Dr. Mallik, Section Chair, presents First Prize. (Photo courtesy of RV Kulkarni)

Second Prize

Implementation of a PSO based Online Design of an Optimal

Excitation Controller

Chuan Yan, Ganesh K. Venayagamoorthy, Keith A. Corzine

Missouri University of Science and Technology, Rolla, Missouri, USA



Dr. Mallik, Section Chair, presents Second Prize. (Photo courtesy of RV Kulkarni)

Third Prize

Empirical Study of a Hybrid Algorithm Based on Clonal

Selection and Small Population Based PSO

Pinaki Mitra, Ganesh K. Venayagamoorthy

Missouri University of Science and Technology, Rolla, Missouri, USA

The author, Dr. Ganesh K. Venayagamoorthy, is an active member of the Saint Louis Section and Chair of the CIS and IAS Chapters.



Dr. Mallik, Section Chair, presents Third Prize. (Photo courtesy of RV Kulkarni)

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IEEE Swarm Intelligence Symposium

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Plenary Lecture by Russel Eberhart. (Photo courtesy of RV Kulkarni).



Plenary lecture by James Kennedy. (Photo courtesy of RV Kulkarni).



Keynote address by David Fogel. (Photo courtesy of RV Kulkarni).



A paper presentation in the Special session - Swarm Intelligence for Wireless Sensor Networks. (Photo courtesy of RV Kulkarni).



Rui Xu presenting the tutorial - Cluster analysis and swarm intelligence in clustering. (Photo courtesy of RV Kulkarni).



Poster session. (Photo courtesy of RV Kulkarni).

Official Black Box Rules and Guidelines

Continued from, page 1.

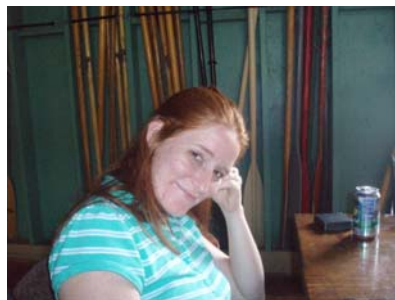
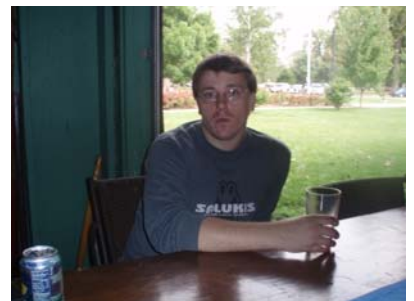
NOTE: Due to gas prices and for 2008 only, the Section will reimburse mileage for each team at the current IEEE rate from their campus to the SLU campus. This assumes multiple teams from the same school ride in one vehicle. The campus is all accessible via Metro Link using the Grand stop.

1. Students shall participate in teams of one to two students, where every team will be given their own laboratory station. The event duration will be three hours. If more groups register than can be accommodated by a single laboratory, the laboratory spaces will be assigned randomly. The quality of equipment may vary between laboratories, but all students will have access to the same equipment including at minimum an oscilloscope, a function generator, a multimeter, a power supply, a breadboard, and common circuit components
2. Each team will be allowed the use of personal calculators and two bound books of their choice. They may not bring outside laboratory equipment, computers/laptops, unbound reference material, etc. Also, no internet access, computer data acquisition, or software resources will be allowed.
3. The circuit will consist of up to 6 discrete components. The circuit will contain no more than 2 non-linear devices, if any. The non-linear devices are restricted to diodes and transistors (discrete BJT's and MOSFETs are possible, but ICs will not be included). The three standard linear devices, i.e. R, L, and C, will most likely all be present. The students will have access to four terminals that will be connected to four different points in the circuit. Power connections, if required, will be in addition to the four access terminals and the power specifications will be given.
4. The contest coordinator will be last year's winner. All requests, questions, etc. must go through the coordinator. Help related to using the laboratory equipment will be given to the teams, but no help that directly relates to the circuit will be given. Also, hints to ALL participants may or may not be provided during the competition. This is at the coordinator's discretion.
5. A blue essay book will be supplied each team. The documentation and solutions will consist of only handwritten entries, figures, and data; no printout will be considered. Multiple judges will examine and consider the notebooks only. The winners will be determined by a number of factors, including the correct answer (or proximity to) AND the documented steps and logical conclusions used to get that answer. Thus, a schematic, while necessary, is not sufficient alone.
6. Each judge will rank the teams and award 5 points to first, 4 points to second, 3 points to third, 2 points to fourth, and 1 point to fifth. The points awarded by the judges will be tallied and the winners determined by the scores. Ties will be resolved by a majority vote of the judges.
7. Judges decisions will be by majority vote and will be final with regard to disputes, eligibility, team certification, tie results, and other contest conduct. In particular, cheating will not be tolerated and is grounds for immediate disqualification. Cheating includes disrupting another group, copying another team's work, and collaboration with another group or outside individuals.

Photos of the Summer Social

Continued from page 3.

Photos below are courtesy of Michael Welling.



Photos of the Sections Congress

Continued from page 5.



Region 5 Director-Elect, Candy Robinson, observes the Primary Delegates and the voting. (Photo courtesy of Bruce Rubin)



Janice Larson, Primary Delegate from Houston, braves Hurricane Ike to attend the Sections Congress. (Photo courtesy of Bruce Rubin)



Historic Quebec. (Photo courtesy of Bruce Rubin)



MGA Vice President Joe Lillie talks to the attendees in Quebec City. (Photo courtesy of IEEE)



The entire body of Primary Delegates await voting on the Top 10 recommendations for the Sections Congress on Monday, Sep 22 in Quebec City. (Photo courtesy of Bruce Rubin)



Group photo of the Region 5 delegation on Friday, Sep 19 in Quebec City. (Photo courtesy of Bruce Rubin)

2008 Chapter Contacts

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Fall 2008 Upcoming Events

MST Student Branch Speaker from GE Transportation	October 15
MST Student Branch Speaker from Marathon Oil	October 22
Fall MoCON	October 22 – 24
SIUIS:3 at SIU Carbondale	October 23-25
Section Meeting/GOLD Senior Member Drive	October 30
Hayride Social	November 1
MST Student Branch Speaker from Boeing	November 5
MST Student Branch Tour of Callaway Nuclear Plant	November 14
Black Box Competition	November 15
Section Award Nominations Deadline	November 15
PES Event	November 18
Christmas Social	December 20

OCTOBER 2008

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DECEMBER 2008

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