



2024 BR SECTION CONTACTS

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SU – Dr.Fred Lacy

Chairman's Message

The June meeting was a joint meeting with IAS, ISA and WIE; held in person with a total of thirty-One (31) in attendance. Eighteen (18) were IEEE members and thirteen (13) guests. Those in attendance included three (2) IEEE IAS, and one (1) ISA members.

The June meeting topic was "Uninterruptible Power Systems" presented by Jim Amicon. with Ametek Solidstate Controls. This presentation was an introduction to AC Uninterruptible Power Systems, it focused on the design and topology utilized based on the nature of the application. Items discussed included: UPS Application, Critical AC UPS Components, UPS Topology, Rectifier Charger Technologies, Inverter Technologies, Static Switch Design, Manual Bypass Switch, Batteries, AC Output 1Phase or 3Phase, AC Distribution Considerations and Different System Configurations. Jim reviewed the components, applications, and pros and cons of the four basic UPS system topologies 1) Typical Offline System; 2) Single Conversion System; 3) Single Conversion System; and 4) On-Line Double Conversion. He listed the four main components in any online double conversion uninterruptible power supply (UPS) system: Rectifier; UPS Batteries; Inverter; and Static Bypass Switch along with other components such as the Maintenance Bypass Switch. Different UPS system configurations were presented including dual charger, dual charger with rectifier input inverter, parallel redundant UPS's, cascade redundant, manual redundant five position and remote manual bypass. He discussed various battery types along with the pros and cons of each for use in UPS's. Selective coordination is critical to avoid blackouts, especially with smaller kVA UPS's. Protection using current limited fuses with ¼ cycle or less clearing time is preferred. True RMS breakers are good but expensive. Thermal-mag breakers are least preferred since they have typically taken 3-4 cycles to operate.

The presentation provided the general knowledge to make educated decisions when specifying, designing and or installing an Uninterruptible Power Supply for applications.

July 11, 2024

LaContea Italiano Ristorante

Presentation Starts At 6:30pm

To RSVP to meeting click on link below

<https://events.vtools.ieec.org/event/register/426773>

Your RSVP for the meeting is important as this is an **in-person meeting**.

The sign-in list is typically published based on those that registered as of midday Wednesday (about 12 noon).

UPCOMING AGENDA

- July 11, 2024 – Protection of Sensitive Loads Using Sub-Cycle Switching and Grid Forming Inverters: Hugh Wager Crescent Power/Southern States
- August 8, 2024 – To Be Determined David Smith/Triad
- September 12, 2024 – To Be Determined, Karen D. Morton, PE
- August 8, 2024 – To Be Determined, David Smith Triad (The Newton Group)
- October 10, 2024 – Grounding, Rob Dannemiller, Post Glover Resistors, Inc.

Thanks.
Robert Walker

MEETING NOTICE

Date: Thursday July 11, 2024

Time: Social.....6:00pm

Place: LaContea Italiano Ristorante

Speaker Presentation.....6:30pm

Dinner: **Cash or Check only (\$20 members/ \$30 non-members/ Free IEEE students members)**

AGENDA: Meeting Sign-in include if member of IEEE, IAS, ISA, WIE or student.

- IEEE Region 5
 - IEEE Collabratech??
 - Licensed volunteers to help with IEEE-USA&Region 5 Pilot for a PE Refresher bob.becnel@ieee.org.
 - IEEE-USA to Alaska - 9-16 September 2024 <https://cruise.ieeeusa.org>
 - R5 Conferences, Webinars and Professional Activities, See following page.
- BR Section 2024:
 - Website development committee
 - IEEE BR YP Group
- Other
 - STEM
 - 2024 IEEE IAS PCIC Conference, Sept 16-19 Orlando, FA

CONTINUING PROFESSIONAL DEVELOPMENT PRESENTATION

"Protection of Sensitive Loads Using Sub-Cycle Switching and Grid Forming Inverters"

Presented by: John Schwartzberg

ABSTRACT of PRESENTATION

This presentation will discuss the application of sub-cycle switching at the medium voltage level for the protection of sensitive loads from distribution system disturbances such as voltage sags and interruptions. Sub-cycle switching systems include the use of multiple switches for dual source applications or a single sub-cycle disconnect switch, with grid forming inverters, for loads fed a single utility source. Case studies will be presented along with information on specification, design and installation of these systems. Attendees will learn about the operational advantages of these technologies, enhancing resilience and reliability for critical loads.

BIOGRAPHICAL DATA of PRESENTER

John Schwartzberg has over 30 years' experience in the application of power electronics in both transmission and distribution systems. He is currently the Director of Power Electronics for the Power System Solutions Division at Southern States LLC. He led the development of the world first 15kV class sub-cycle transfer switch with Silicon Power Corporation (now part of Southern States LLC) in 1995. In addition to his experience with Southern States/Silicon Power, he has over 10 years' experience in FACTS devices with General Electric (formerly AREVA T&D/Alstom Grid) primarily in reactive power compensation systems (SVC and STATCOM). He holds B.S. and M.S. degrees in Electrical Engineering from Drexel University.

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Ramblings and etc.

- **Meeting notices are emailed each month.**
- Please RSVP thru the link. If you cannot RSVP thru the link or have questions, please email, or call Robert Walker or one of the other officers.

VISIT THE BR SECTION WEBSITE

Working on updating the BR IEEE section website

2023-2024 Officers of the IEEE LSU Branch

President – Jadon Bijou jbijou2@lsu.edu

Vice President – Noah Fontenot nfont26@lsu.edu

Secretary/Treasurer – TBD

Coordinator -Chandler Pumford cpumfol@lsu.edu

Advisor: TBD

2023-2024 Officers of the IEEE SU Branch

Southern Branch Officers list is being updated.

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MemberChair: Keyonna Brown keyonna.brown@sus.edu

RSVP (Non-Members and Members) via the link BEFORE July 11, 2024

If you have issues, please email robert.walker@ieee.org

R5 Conferences, Webinars and Professional Activities

IEEE Region 5 Women in Engineering Upcoming Speakers

Anita Rao - From Software Engineer to US Senate Policy Advisor on Emerging Technologies

Monday, August 5th at 7pm CDT (8pm EDT, 6pm MDT)

Anita currently supports the General Services Administration's (GSA) Emerging Technology Division as an Emerging Tech Policy Writer, tracking new tech and its impact to government agencies. Previously, she was a TechCongress Fellow in the U.S. Senate working on AI, privacy, and telecom issues, and prior to that worked as a 5G software engineer at Qualcomm. She has a B.S. in Electrical Engineering from Columbia University and an MS in Computer Science from Georgia Tech.

Talk

From ChatGPT to 5G communications, technology permeates all aspects of modern life. Given the rapid pace of innovation, it's increasingly difficult for governments — the regulators — and technologists — the developers — to be aligned in building safe and trustworthy technology for citizens. In this session, follow Anita Rao's career journey from software engineering to advising in the U.S. Senate, learning about key tech issues plaguing policymakers and ways to effectively bridge the gap between tech and government along the way.

Registration Link: <https://events.vtools.ieee.org/m/425677>

Hayley Spears - Transitioning from Chemical Plants to NASA via STEM Educational Outreach

Thursday, August 29th at 7pm CDT (8pm EDT, 6pm MDT)

Hayley is a Safety and Mission Assurance Engineer at the NASA Johnson Space Center. Hayley received a Bachelor's of Science in Chemical Engineering from the University of South Florida in 2015. She started her career in the natural gas and chemical industries before switching to aerospace. When not at work, Hayley serves as a STEM Outreach volunteer for Space Design Competitions with Industry Simulation Education. Hayley lives in Houston and has a husband Adam, daughter Sasha, and two dogs, Doggo and Sui.

Hayley likes to SCUBA dive, cook/bake, and sleep as much as possible with a baby at home.

Talk

Hayley will talk about her career path from the chemical plant to NASA and lessons learned along the way, as well as the role STEM outreach has played in her life as a student and a volunteer.

Registration Link: <https://events.vtools.ieee.org/m/425680>

Moriah Bisewski – Moving from Electrical Engineering into Patent Law

Friday, September 27th at noon CDT (1pm EDT, 11am MDT)

Moriah holds a BS of Electrical Engineering ('17) from the University of Houston and a Juris Doctor (JD) ('24) from the University of Houston Law Center.

She is an active Institute of Electrical and Electronics Engineers (IEEE) member and has previously served as vice-chair of the IEEE Houston Section, among other volunteer roles with IEEE. She regularly presents to non-profit groups about intellectual property and mentors young engineers in their early careers. These efforts, among others, were celebrated when she was awarded the 2018 IEEE Region 5 Outstanding Young Professional award.

Moriah's community involvement continued through law school. While at UHLC, she volunteered as a student attorney in the Entrepreneurship and Community Development Clinic (ECDC), as president of the Intellectual Property Student Organization (IPSO), and as co-host of the UH STEMInist podcast. These efforts, among others, were celebrated when she was awarded a 2024 State Bar of Texas Intellectual Property (IP) Section Diversity Scholarship Award.

Talk

Moriah Bisewski is a patent agent at Fletcher Yoder Intellectual Property Law Firm, with seven years of -experience in helping engineers protect their ideas with patents. After years of getting negative feedback from engineers about others' presentations, she decided it was time for a disruption in what is typically presented in a patent law presentation. Today, she helps professionals contextualize patent prosecution through presenting examples of pitfalls and best practices from her experience in the industry to better understand whether they should "do-it-yourself." This and other interesting information to be covered during her presentation should help audience members with building conversational skills around patents within the larger space of intellectual property rights.

Registration Link: <https://events.vtools.ieee.org/m/425682>

Upcoming additions:

Thursday, September 12th at 7pm CDT

Courtney Wright – (topic in discussion)

Courtney is a mechanical engineer who moved into Systems Engineering and now works as a Project Manager for INCOSE (the Systems Engineering version of IEEE who also manages professional certifications) heading the certification, academic equivalency, and training programs. Her path to engineering and experiences during her career have been challenging, including having and caring for micro-preemie twins.

Tuesday, October 1st at 7pm CDT

Rachel Bayes – Building and managing a small woman-owned business

Rachel is founder and CEO of Illuminate Video, specializing in making B2B safety videos. She is also an engineering student, initially studying Mechanical Engineering Technology, but shifting into Engineering Management due to the growth in her business. She'll talk about starting her business, becoming designated a WOSB, and the challenge of running a business while trying to earn an engineering degree. Reached out but have not connect to schedule talk:

Point of Contact michelle krueger mpatrick@ieee.org