



Madison Section Newsletter

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IEEE-Madison Upcoming Meetings

IEEE PES/IAS: "The Changing Electrical Distribution System"
Thursday, May 20th at 12:00 Noon On-Line
[Event Info](#)

IEEE Section: "Virtual Music Jamming with Low Latency Networked Systems"
Thursday, April 27th at 12:00 Noon On-Line
[Event Info](#)

Review of Previous Meetings

IEEE-Madison Committee Corner

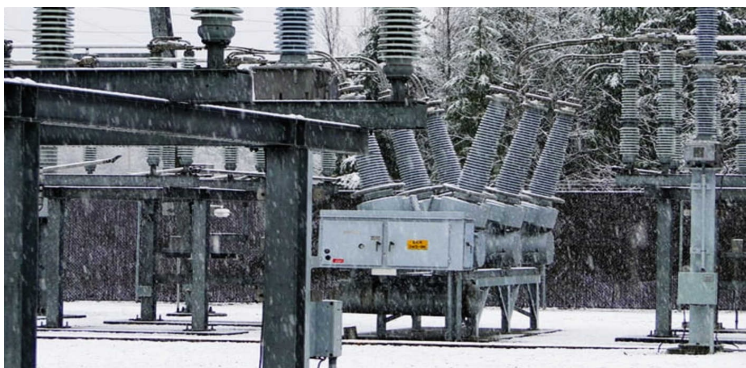
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IEEE-Madison Slack Channel

IEEE-Madison Upcoming Meetings

IEEE PES/IAS: "The Changing Electrical Distribution System"



- Thursday, May 20th at 12:00 Noon
- Virtual Talk
- Location:
On-Line (Link will be emailed from your registration information)
- Please Register at the IEEE-Madison [event page](#).
- Sponsored by IEEE-Madison PES/IAS Chapter

Talk: As the landscape of distribution systems continues to increase in complexity due to increased Distributed Energy Resource penetration, increased Electric Vehicle adoptions, new advanced technologies and increased customer demands, the design of the system needs to be considered as a whole. Distribution Automation, Voltage Optimization, or Distributed Energy Resource deployments cannot be introduced in isolation. Rather, seemingly competing technologies need to be integrated together to continue advancing the reliability and resiliency of the grid. Utilities need to develop new technologies to accommodate the changing grid.

Bio: Marina Mondello is the senior manager of Distribution Capacity Planning and has been with ComEd for 19 years. She was previously in the Reliability Programs department and the Distribution Automation Group which monitors and troubleshoots the Distribution Automation system at ComEd, along with developing settings for DA equipment. Prior to the DA Group she was in the Distribution Testing and New Business Departments. Marina received a BSEE from Rose-Hulman Institute of Technology in 2000. Marina was awarded the 2018 IEEE Power & Energy Society's Pioneer in Power Award for her work mentoring young women in the Power Industry along with voted Engineer of the year by her peers at ComEd.

Bio: Mike Freeman is a Senior Engineer in Distribution Capacity Planning and has been with ComEd 7 years. In his current role, Mike is responsible for issuing plans to provide capacity for large new business projects as well as studying the effects of the implementation of various elements on the distribution system such as Distribution Automation, Distributed Energy Resources, and Voltage Optimization. Mike started his ComEd career as a part of the Regional Engineering department. Prior to Joining ComEd Mike worked as an engineer for People Gas for 6 years. He received a BSEE from Northern Illinois University in 2007.

IEEE-Madison Section: "Data Center Modularity and Energy Efficiency"



- Thursday, May 27th at 12:00 Noon
- Virtual Talk
- Location:
 - On-Line (Link will be emailed from your registration information)
- Please Register at the IEEE-Madison [event page](#).
- Sponsored by IEEE-Madison Section

Talk: This Virtual Meeting features two speakers that will present an overview of important productivity tools for the Construction and operation of Data Centers. Each speaker will give a 30 minute overview of one general area. The last 30 minutes (more if there are still questions) dedicated to a Q&A. Several questions will be discussed: How are organizations increasing productivity in the construction of data centers and energy efficiency of operations with a focus on building construction? Assumption: Productivity and higher quality buildings are intertwined; improving one improves the other.

Talk Outline:

1. Status and examples of modularity in building construction
2. Status and examples of modularity in data centers
3. Energy efficiency (utilizing Liquid Cooling) in data centers

Bios:

Joe Ryan: For 20+ years, Joe Ryan has created a track record of success in senior management positions within the construction/capital projects industry. His leadership spans across the full spectrum of program management and construction management, including roles as a Program & Project Executive within leading world-class EPCs on large to mega-sized projects; to serving as the Program Executive/Principal representing owner/developer interests and orchestrating billion-dollar portfolios. This background provides Joe with a deep knowledge and expertise in the execution and delivery of mission-critical large-scale data centers, network operations centers, energy/infrastructure projects, and communication facilities, both domestically and

internationally.

Joe is regularly sought after to act as an advisor, by owners and financial firms, providing insights on the best tools, processes, and management techniques for achieving best in class efficiencies in cost, risk mitigation, schedule compliance, LEAN, IPD, facility operations and management.

Joe has formulated the key factors that differentiate successfully executed projects from the lackluster. Successful projects have engaged people that act as a cohesive team. A team that values transparent communication, creates an integrated & collaborative environment, and has a singular focus on value-adding execution. These teams also adopt learning and professional growth through evidenced-based, data driven continuous improvement.

For over 10 years, the integration of technology into the program/project lifecycle has been a major focus for Joe. He is an innovator in using technology to improve production, quality and team communications while reducing waste, cost and time on a project. This technology-driven approach is the platform that enables his teams to provide excellence through concept, design, construction and operations, while minimizing the loss of knowledge and data throughout the process.

Dale Sartor, P.E is a staff scientist/engineer at LBNL where he focuses on building efficiency technology applications. He leads projects to develop and transfer new technology and stimulate the use of underutilized technology. Mr. Sartor has an AB in Architecture, and a Masters in Business Administration. He is a licensed Mechanical Engineer, and a licensed General Building Contractor. He has over forty years of professional experience in energy efficiency and renewable energy applications including ten years as a principal of an architecture and engineering company, and seven years as the head of LBNL's In-House Energy Management Program. Currently Mr. Sartor is focused on RD&D on energy efficiency in buildings for high tech industries (i.e. laboratories, clean-rooms, and data centers). He oversees the Federal Energy Management Program's new Center of Expertise for Data Centers

IEEE-Madison Review of Past Meetings

The **IEEE-ECN** Meeting on April 15th at 7:00 PM on "Virtual Music Jamming with Low-Latency Networked Systems" was attended virtually by 55 members and guests from Region 4. Tom Kaminski gave an overview of the requirement for, and a demonstration of hardware and software systems to implement, systems for a musician or listener. The systems were built from available, inexpensive Raspberry Pi processors with off-the-shelf USB ADC/DAC components. Tom demonstrated both a peer-to-peer and client-server approaches to networked music jamming. Anton Kapela discussed some of the theory and limitations of the technology and possible future directions. The talks concluded with a live Jazz Jam provided by a group organized by John Lombardo (after a typical but short electronic tech foul up by Tom Kaminski). See the talk and jam session posted on IEEEtv at this [LINK](#). Copies of the presentation slides are available [HERE](#).

The IEEE-Madison Section Meeting on April 29th at Noon on "Productivity in Building Construction: BIM, Energy, & Software" was attended virtually by about 25 Region 4 members and guests. Josh Baysinger of Findorff showed how BIM is practically leading to increased productivity at a local builder. He also discussed the current and future use of robotics in building construction. Krishnan Gowri showed how BIM models can enable accurate Building Energy Modeling, allowing energy usage estimates concurrent with the building design phase. Dennis Knight discussed the process of standards development so that design tool smiths and designers can have inter-operable systems that make things such as virtual design walk-throughs, or energy modeling possible. The session is available at IEEEtv at this [LINK](#).

IEEE-Madison "Committee Corner"

Scott Olsen, IEEE-Madison Membership Development Chair

I have a variety of hobbies. I like to stay busy with rewarding projects, but like them at a comfortable pace. Woodworking brings me nice furniture; rock hunting gets me outdoors and near lakes; slowly learning Python helps keep me intellectually engaged; photography gives me large images to fill the picture frames I make; and exercise helps me stay young and interesting. Leadership in professions, social groups, and hobbies teaches others, which hopefully helps keeps society somewhat equitable and stumbling along.

Don Neumeyer, Secretary-Treasurer for the IEEE-Madison PES/IAS Chapter

I just registered for the Virtual PES General Meeting being July 25-29, 2021. The Advanced Program is open and quite detailed. I figured one could attend for less than a \$1 per session and there is no traveling required! The theme of the 2021 IEEE PES General Meeting is "Managing Energy Business During a Pandemic". The program will feature paper presentations, industry panels, poster sessions, and more. Super Session topics include:

- Grid Resiliency
- Resource and Transmission Adequacy for Future Power System
- Grid Edge - Devices, Control, Applications, and System Operation
- Impact of Climate Change on the Power Grid
- Late Breaking News Session

Browse the Advance Program to plan your personal conference experience and learn about specific session details, such as speakers, descriptions, format, and track at this [Technical Program Link](#)

Tom Kaminski, IEEE-Madison Newsletter Editor

This year is supposed to be the 50th Reunion for my graduation from Worcester Polytechnic Institute in Worcester, Massachusetts. Covid-19 changed the in-person reunion and it has been delayed until at least the Fall of 2021. A lot has changed since 1971! When I was a Freshman, WPI was a male-only college, but nothing in the bylaws said that it could not admit women. In my Sophomore year, WPI admitted two women. Since then, it has graduated many and I am pleased to see that, though still in the minority, women now make up an increasing portion of the graduating class.

I graduated in 1971 -- just as the NASA successful program to land men on the moon was winding down, laying off many engineers -- it was very hard to find employment as an engineer, so I took advantage of a NSF Trainee-ship Program to enter Grad School at the University of Michigan where I got a MSEE degree, studying Circuits and Communications. Then, in 1972 I actually got a job at NASA, Goddard Space Flight Center (Goddard had actually done his early rocketry experiments at Worcester!). It was my dream job -- I was an Instrumentation Engineer in the Lab for High Energy Physics, working on Xray, Gamma Ray, Infrared and Particle detectors for automated space craft.

Over the years, I have changed career emphasis several times, from circuits, to nuclear instrumentation, to computers, to industrial electronics, to teaching. I have joined many IEEE Societies as my interests changed. In the past decade, I have become a volunteer for the IEEE-Madison Section. Volunteering is my way of paying society back for my rich career. It feels good!

Please volunteer for IEEE-Madison -- we need people like you.

IEEE-Madison Student Activities/Women in Engineering

The University of Wisconsin Student IEEE Chapter has proposed that Professor Bulent Sarlioglu be named as their Registered Student Organization (RSO) Advisor and that was approved by the IEEE-Madison Executive Committee (ExComm). The ExComm also approved a motion making Victoria Schrimpf, UW-Madison Undergraduate and RSO Communications Officer as the IEEE-Madison Section Student Representative (SSR). She will work with all of your Section's student organizations (Branches, SB Chapters) to facilitate their engagement in IEEE student activities. We are still looking for a Student Activities Chair (SAC). There is also activity toward forming a Women in Engineering Affiliate Group for the Madison Section. If you are interested in the SAC, in helping to form a WIE Chapter, or have questions, please reach out to Hugh Schmidt, Section Chair (hfschmidt@wisc.edu).

News/Announcements

- **Volunteers:** Consider giving some time to the IEEE Madison community by volunteering. We need volunteers for: YP, ECN, LMAG, PES/IAS, Section Officers, and EMB. In particular we need a volunteer for **Section Secretary** and **Student Activities Chair**. We also are looking for volunteers to start a Madison Section Women in Engineering Affinity Group.
- **Friday Afternoon Club: Investigations continue!**

We investigated several options:

Zoom "Rooms": <https://zoom.us/zoomrooms>

Gather.town: <https://gather.town>

Jitsi "Meet": <https://meet.jit.si>

Spatial Chat: <https://spatial.chat>

Jitsi is very easy to use and is pretty much a cross platform system. It is free and open sourced, but there are limited sharing options for Mac and Linux. It works well on both iPhone and Android phones and almost any browser. Gather.town was recently used for the Biomedical Engineering Departments Student Project Poster Sessions. Over 350 people virtually attended, observed the student projects, and voted on the best ones.

Spatial Chat was the easiest to use with little training required - you only need a browser. It allowed up to three rooms for the "free" service, with up to 25 participants per room. The nicest feature was the ability to put up your own .gif image to note what is in a room. You only hear the people that you are nearest to when chatting and each showed up as an icon with video (if enabled) and audio. Both video and audio could be shut off if you just wanted to observe or listen in. Screen sharing was pretty easy.

IEEE-Madison Slack Channel Established and Open to IEEE Members

- **What is Slack?:** Slack is a messaging application that works on most modern computing platforms, including cell phones. Many organizations use slack to quickly connect with people and conduct business. You can share files and create sub-channels for discussion. IEEE-Madison is using the free version of slack that has limited features.
- **Executive Committee Presence:** Members of the IEEE-Madison Executive Committee have joined a Slack Channel and will be available to discuss issues you might bring up.
- **For more:** See this YouTube Video [on Slack](#).

Also see this site: [What is Slack?](#)

- **Get an Invitation to Join the IEEE-Madison Slack Channel:** at [Slack Channel](#).
- **Access it here:** [IEEE Madison Slack Channel](#)

IEEE Madison Leadership

- Section Chair - Hugh Schmidt
- Section Vice Chair - Mike Stemper
- Section Treasurer - Matt Nowick
- Section Secretary - <open>
- Webmaster - Nate Toth
- PES/IAS Chair - Mike Stemper
- PES/IAS Vice Chair - Dan Ludois
- PES/IAS Secretary/Treasurer- Don Neumeyer
- EMB Chapter Chair - Dennis Bahr
- Life Member Affinity Group Chair - San Rotter
- Life Member Affinity Group Vice Chair - Charles Cowie
- ECN Chair - Matt Nowick
- Young Professionals Chair - Thomas Murphy
- Members at Large: Nate Toth, Clark Johnson, Craig Heilman, Dennis Bahr

Membership Upgrades

Those interested in upgrading their IEEE membership level should be aware that the process has been streamlined with much of it on-line. The application process can start with your application as described on line [here](#). You will have to provide the names and IEEE numbers for three Senior Members in your field. The Madison Section Chair (Hugh Schmidt, hfschmidt@wisc.edu) can help, or attend the informal networking portion of the monthly Section meetings to meet the Section Board members and discuss your intention to elevate.

About IEEE

The Institute of Electrical and Electronics Engineers or IEEE (read Eye-Triple-E) is an international non-profit, professional organization dedicated to advancing technology innovation and excellence for the betterment of humanity. IEEE and its members inspire a global community through IEEE's highly cited publications, conferences, technology standards, and professional and educational activities. It has the most members of any technical professional organization in the world, with more than 300,000 members in around 150 countries. The IEEE consists of 38 societies, organized around specialized technical fields, with more than 300 local organizations that hold regular meetings. Discover what IEEE Member Discounts can offer you. The Member Discounts portfolio consists of insurance products and programs for the home, office and travel, all at excellent group rates and reduced pricing. Visit IEEE Member Discounts to see what's available in your location and enjoy the savings. For more information, please visit: IEEE.ORG.

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