



## **Madison Section Newsletter**

**Vol. 23, No. 8**

**Serving IEEE Members of South Central Wisconsin  
November 2020**

Newsletters are archived online at [IEEE-Madison](#)

### **Upcoming Meetings**

**IEEE Webinar: "UW MADISON REVIEW OF COVID-19 RESEARCH"  
Wednesday, November 18th at 7:00 PM On-Line**

[Event Info](#)

**IEEE-Madison PES/IAS: " CEDAR RAPIDS AREA AUGUST DERECHO STORM:  
ELECTRICAL GRID IMPACTS AND RECOVERY"**

**Thursday, November 19th at 4:00 PM On-Line**

[Event Info](#)

**IEEE-Madison PES/IAS: "A New Grid Model Repository and New Ways to  
Securely Share Grid Data for Research and Industry"**

**Wednesday, December 2nd at 12:00 Noon On-Line**

[Event Info](#)

**Section ELECTIONS: Help Us!**

**Review of Past Meetings**

**News/Announcements**

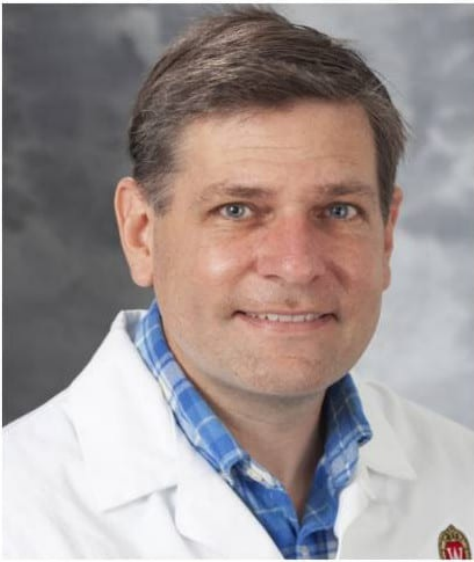
**IEEE-Madison Slack Channel**

**Sponsored Content: Join IEEE**

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### **Upcoming Meetings**

**IEEE Webinar: "UW MADISON REVIEW OF COVID-19 RESEARCH"**



- Wednesday, November 18th at 7:00 PM
- Virtual Meeting Review Video
- Location:  
On-Line (Link will be emailed from you registration information)
- Please Register at the IEEE-Madison [event page](#).
- Sponsored by IEEE-Madison Engineers in Biology and Medicine Chapter

**Video:** This will be a video presentation via WebEx

The event is a video presentation of a recent update from Dr. William Hartman, medical director of the UW Health Preanesthesia Assessment Clinic and Professor and Dietram A. Scheufele, the Taylor-Bascom Chair in Science Communication and Vilas Distinguished Achievement Professor at the UW-Madison and in the Morgridge Institute for Research. Dr. Hartman covers research and clinical trials of Convalescent Plasma, Covid-19 Vaccine and Monoclonal Antibody studies at UW-Madison. Dr. Scheufele examines the formation of public attitudes and policy dynamics surrounding emerging science in the era if Covid-19.

Topics include:

**Convalescent Plasma Studies**

**Monoclonal Antibody Studies**

**Covid-19 vaccine Trials**

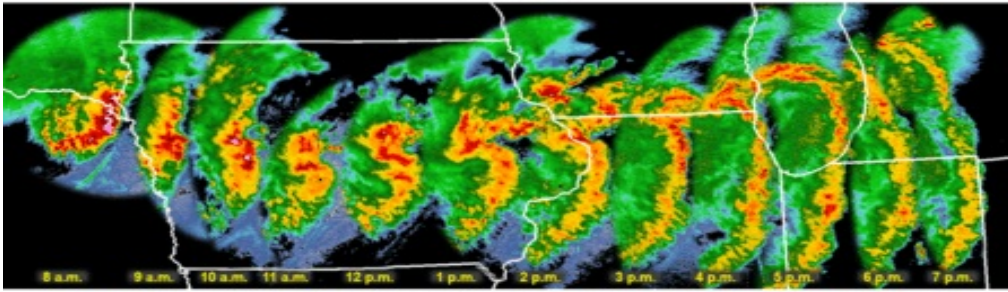
**Scientific Communication Issues for Covid-19**

**Bio: William Hartman, MD/PhD** is Assistant professor of Anesthesiology, School of Medicine and Public Health, and Medical Director of UW Health Pre-Op Clinic. He is the Principal Investigator for the UW COVID-19 Convalescent Plasma Program (Adult and Pediatric Programs) and the Principal Investigator for the UW-Regeneron Monoclonal Antibody (Antispike) Clinical Trials. He is also involved in the clinical trial of the Astra-Zenca covid-19 vaccine at UW.

**Dietram A. Scheufele** is the Taylor-Bascom Chair in Science Communication and Vilas Distinguished Achievement Professor at the University of Wisconsin-Madison and in the Morgridge Institute for Research. His research examines the formation of public attitudes and policy dynamics surrounding emerging science. He is an elected member of the German National Academy of Science and Engineering, a lifetime associate of the National Research Council, and a fellow of the American Association for the Advancement of Science, the International Communication Association, and the Wisconsin Academy of Sciences, Arts & Letters. His consulting experience includes work for DeepMind, Porter Novelli, PBS, WHO, and the World Bank.

## **Joint Cedar Rapids, Madison PES/IAS: "DERECHO STORM: ELECTRICAL GRID IMPACTS AND RECOVERY"**

- Thursday, November 19th at 4:00 PM
- On-Line Presentation by Corey Proctor of ITC Midwest and John Boston of Alliant Energy
- Location:  
On-Line (Link will be emailed from your registration information)
- Please Register at the Joint Cedar Rapids/Madison [event page](#).



This long-lasting, severe wind thunderstorm complex (known as a derecho) produced hundreds of reports of damage along with likely a few tornadoes.

**Talk:** A rare derecho storm created straight line winds gusting between 126 – 140 mph in Linn/Benton Iowa counties with concentrated damage in the Cedar Rapids Iowa area. Cedar Rapids and Madison Power & Energy Societies are offering this virtual event focusing on the power system damage. Join us to hear the impacts and recovery of the power transmission network managed by ITC and the power distribution system managed by Alliant Energy.

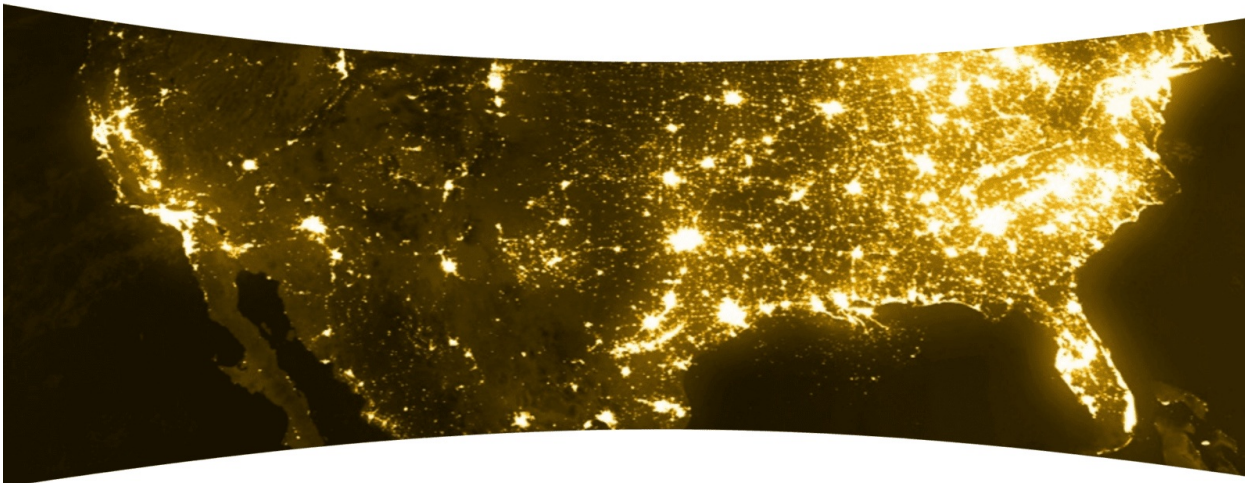
The August 10 2020 derecho storm intensified and centered on Linn County/Cedar Rapids Iowa. Damage extended from Nebraska and beyond Indiana. Severe building and tree destruction took out the power and communication grids.

Join this event to learn of the impact and recovery on power transmission and distribution systems in the area. ITC Midwest and Alliant Energy are the presenters.

Read about the storm here: [Midwest Derecho](#)

## IEEE-Madison PES/IAS Webinar: "A New Grid Model Repository and New Ways to Securely Share Grid Data for Research and Industry"

- Wednesday, December 2nd at 12:00 Noon
- Virtual Talk by Terry Nielsen of GridBright
- Location:  
On-Line (Link will be emailed from you registration information)
- Please Register at the IEEE-Madison [event page](#).



**Talk:** New control, optimization algorithms, and other research and development projects are being developed by research institutions and vendors to address new issues such as grid resilience, grid modernization, and increased penetration of distributed energy resources. However, due to the sensitivity of data sets and models that often contain critical infrastructure information and/or personally identifiable information, new research projects and vendor products cannot be easily tested on real grid data. Furthermore, if research projects and products do manage to test using sensitive data, the complete test datasets and related results cannot be shared, restricting the ability to independently validate results and perform peer review. For these reasons, in 2016, ARPA-E funded the GRID DATA project to develop new, large and realistic grid models that are public and can be used by researchers, vendors, and utilities.

A result of this project was the creation of the BetterGrids.org Grid Data Repository that contains many new, large and realistic publicly available grid models. As a follow-on and currently on-going project, ARPA-E funded another research project to reduce complexity, cost, and friction when vendors, utilities, researchers and grid business entities need to share data that does include sensitive information.

**Bio:** Terry Nielsen is an Executive Vice President and Board Member at GridBright. He has over 30 years of experience in defining and developing software solutions for the utility industry. His experience includes the development, implementation, and integration of Energy Management Systems (EMS), Network Model

Management Systems, Distribution Management Systems (DMS) and Outage Management Systems (OMS). Terry has been teaching courses annually at EUCI and DistribuTech on ADMS, DERMS, and OMS for over five years. Terry is also currently the technical committee chair for the BetterGrids.org Grid Model Repository that serves the power systems research community.

Terry is a Senior Member of the IEEE and an active member of the several IEEE working groups. Terry has a BS in Electrical Engineering from Iowa State University.

## IEEE-Madison Section Elections

- **Officer/Volunteer Solicitation:** Please let us know if you would like to volunteer for IEEE Madison. We welcome anyone interested in helping out, or in being considered for an elected office. Email Nate <tothnj@ieee.org> if you are interested.

## Upcoming Meetings

- **PES/IAS Chapter Meetings:** Two virtual meetings have been scheduled. The first meeting is a talk on the August Derecho wind damage in Iowa. This meeting is jointly hosted by the Cedar Rapids and Madison PES/IAS Chapters. The second is on sharing grid model data and is joint with the Madison PES/IAS Chapter and the Arrowhead PE31 Chapter.
- **IEEE-Madison EMB-18 Chapter Meeting:** This Virtual Meeting via WebEx will present a pre-recorded UW-Madison Alumni Association video of Covid-19 Research at UW-Madison. Dr. William Hartman discusses some of the early, ground breaking research using Convalescent Plasma and Monoclonal Antibodies to mitigate covid-19 infections and the current clinical vaccine trials. Dr. Scheufele discusses why it is hard to have the public understand the complex, changing science of covid-19 and how to help communicate the results to the public.

## Review of Past Meetings

- **October 21st ECN Meeting:** Tarek Lahdhiri gave a very good talk on how to cope in this new virtual and hybrid engineering environment brought about due to covid-19 -- Over 40 people participated in the event. It was recorded and is available for review below.

**Topic:** "TODAY'S ENGINEERING WORKPLACE AND HOW IEEE-USA CAN HELP"

**Duration:** 96 minutes

**WebEx Recording:** [WebEx Recording: Viewing Link](#)

- **October 29th PES/IAS Chapter Meeting:** "Reaching the Full Potential of Integrated Machine Drives" by Thomas Jahns was an excellent review of the current state-of-the-art of integrated drives/motor technology. He also discussed the fact that the exciting new wide band-gap semiconductors offer the possibility of switching from voltage control to current control on motor drives. A more complete review of the talk by Don Neumeyer is available at this [link](#). Dr. Jahns also provided a link to his complete talk slides at his UW "Box" account linked [HERE](#). You will have to sign up for a UW "Box" account to access it.

## News/Announcements

- **Volunteers:** We need volunteers for: YP, ECN, LMAG, PES/IAS, Section and EMB.

## 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 - Nate Toth
- Section Vice Chair - Hugh Schmidt
- Section Treasurer - Tom Kaminski
- Section Secretary - Mike Stemper
- 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: 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 (Nate Toth at [tothnj@ieee.org](mailto:tothnj@ieee.org)) 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](http://IEEE.ORG).

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