

THE MOUNTAIN ENGINEER



 **IEEE**
WNC SECTION

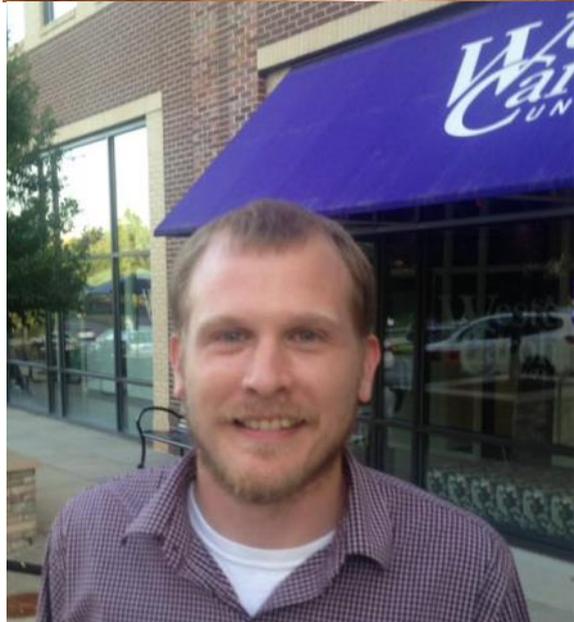


Winter Newsletter Dec. 2017

Hey everyone. You should go to Facebook and join the IEEE Western North Carolina Section group. Drop us a few posts of your activities and discover some of ours. The following link should get you there:

<https://www.facebook.com/groups/263814570483897/>

Our educational meeting on 3D printing in July was incredibly informative and drew a huge audience.



Nathan Thomas of Western Carolina University Did an outstanding job helping interested members learn about the technology. His presentation covered the information and issues that a person will encounter on their path to beginning to use the technology. With topics of materials, machines, challenges and best practices. Lots of people are interested in this new technology and want to embrace it but just need a little more info and Nathans presentation did that. Let us know if you took the plunge and are doing some 3D printing after the class. Show us some pictures of your handy work on the [IEEE Western North Carolina Section](#) FaceBook page. Pictured to the left is IEEE logo that Nathan had made as an example and below that our instructor himself. Thanks Nathan!!! And Thanks WCU for supporting Nathan.



The MOVE Truck came to Town

In August the eclipse brought the MOVE truck to Western North Carolina to work with the Red Cross activities in Murphy / Andrews region. And we were lucky enough to have them come out and spend the next day in Asheville at the WCU Campus in Biltmore Park. The Truck was open for the public and even WLOS news came out and did a report about the truck and the MOVE project. The MOVE truck assists is an IEEE Project that assists in disaster relief effort by providing communication services to partner agencies. To learn more about the Move truck visit the [IEEE Western North Carolina Section](#) Facebook page and you can find more links.

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Our own Charles Lord came out in August and gave us an educational class on the “Internet of Things” (IoT). He helped clarify this latest buzz word in automation and embedded systems. He explained the meaning of technology, the applications of it and concerns for cyber security that surround it. It great to have a pro like Charles in our section and Charles plans to hold more Educational meetings on the subject of “IOT”. Thanks Charles for contribution of knowledge to the section.



Understanding your Heat Pump and A/C System

Big thanks to our professionals at ABTech who hosted an educational meeting for the section on their campus and shared their professors time with us to help us understand our heat pump and A/C Systems. Richard Gibson and Kent Green explained the basic operation of these systems and the parts of these systems and how to identify them. And even gave us hints and information regarding failures and

short comings of these systems. We think everyone learned a lot from the presentation and would like to especially thank Professor Gibson for his contribution to the education of section.

Senior Member Round Up



October’s Senior member round up netted Stan Frady to become a senior member this year. Wait, Stan he wasn’t a senior member already? Stan has done a couple of great presentations for the chapter over the last few years. Although pickins were slim we all had a great time eating pizza together at Belle’s Pizzeria and get Stan’s Application and referrals together. We all also enjoyed getting know Chris Burnette better who recently passed over to senior member in a previous round up. Thanks A.J. Burke for organizing the event.

IEEE WNC and Local Consultants Network IoT Cybersecurity presentation-

A dive into the Internet of Things (IoT) and cybersecurity needed for tens of billions nodes, millions of terabytes data that the Internet of Things (IoT) holds for helping to automate much of our world as well as making us work smarter and more efficiently was conducted in a presentation at UNC Asheville Tuesday night, Nov 14. Unfortunately, those billions of nodes and exabytes of data are each a potential security risk that can potentially bring much of the network down and wreak havoc. This presentation as targeted tat designers of IoT devices and systems to consider security as part of the design and implementation of the IoT from start of the product or service until the finish. During the presentation a look at where these security issues exist and what can be done in the design, test, installation, and maintenance of IoT components to minimize those risks was accomplished. IEEE WNC Facebook event reference: <https://www.facebook.com/events/2017485691814926/>

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UNC Asheville (UNCA) Student Technical Presentation: UNCA's Formula SAE® Electric Race Car Design and Development

IEEE Western North Carolina Section conducted a joint meeting with SAE Carolina (Society of Automotive Engineers). The presentation was made by a group of UNCA students consisting of Mechatronics Engineering Students from the UNC Asheville Motorsports Team. The team gave a report on their first venture into an electric race car competition and the lessons learned during the 2017 car building process. The 2017 competition vehicle was on display. In addition, the team presented the proposed future electric race car design for the 2018 competition. The UNCA team consists of volunteer students. This is an extra-curricular project that must be done in the student's spare time. Various members of the team discussed plans for the next vehicle including vehicle design improvements, Scheduling improvements and a financial plan for the 2018 project. The team is now proceeding with the new design and discussed the development and validation testing programs for the 2018 competition vehicle.



SOCIALS



In July a number of our members met to enjoy comradery and beer at Hilman Beer and again met in November at the Thirsty Monk in Biltmore Park