

# IEEE-Boise Section Newsletter

May 2021

From the Chair (Randy Rannow, [pi-boson@ieee.org](mailto:pi-boson@ieee.org))

Thank you for your membership in IEEE. You are receiving this newsletter because you are a member of the IEEE-Boise section. Previous newsletters are on our section web site at <https://site.ieee.org/boise/archive/>.

Please feel free to forward this newsletter to any of your friends and colleagues who may be interested in what IEEE has to offer. Let them know one benefit of joining IEEE is the opportunity to network with other professionals in your local area or within a specific technical interest. There's much more information about the benefits of IEEE membership at <https://ieee.org/join>.

## Upcoming Local Events

Find out more about these upcoming events on our section web site at <https://site.ieee.org/boise>. You can also follow us on Facebook at <https://www.facebook.com/IEEEBoise>.

- Reliability and Resilience in Low-Carbon Power Systems, Prof. Pierluigi Mancarella, co-hosted by IEEE-Boise PES chapter, **May 20**, <https://events.vtools.ieee.org/m/270841>
- Trapping and slowing down photons using black holes in silicon for datacom, sensing, and energy conversion, Dr. Saif Islam, co-hosted by Boise EDS and SSCS chapters, **May 26**, 12pm. More details at <https://sites.ieee.org/boise>.

## Other Upcoming IEEE Events

Learn more about these events at the links provided.

- AI-enabled Wireless Networks, **May 20**, 1pm MDT, <https://events.vtools.ieee.org/m/270829>
- Amateur Radio in 2021, **May 20**, 7pm MDT, <https://events.vtools.ieee.org/m/271192>
- IEEE-USA May Washington Update, **May 21**, 11am MDT, <https://events.vtools.ieee.org/m/271390>
- EMBS Webinar: Cybersecurity – Product Security is Everyone's Responsibility, **May 24**, 1pm MDT, <https://events.vtools.ieee.org/m/270832>
- Raspberry Pi Workshop, May 28, 7pm MDT, <https://fb.me/e/1f1j8lpdl>
- Ask the Experts Part 2: Open Discussion with team of experienced consultants who will provide valuable insight and advice. **June 2**, 10am MDT. <https://events.vtools.ieee.org/m/270047>
- EVOncampus – bringing thought leaders to recent grads and college students, giving them insights into the tech trends and pathways that lead to challenging and fulfilling careers. **June 16**. <https://events.vtools.ieee.org/m/270261>
- COMPSAC 2021, **July 12-16**. COMPSAC is the IEEE Computer Society Signature Conference on Computers, Software and Applications. <https://ieeecomsac.computer.org/>

Find out about more upcoming events at these links:

- **Region 6** (western US) web site: <https://ieee-region6.org/events/category/meetings/>
- **MGA Scoop** - Monthly newsletter about upcoming events and member benefits: <https://mga.ieee.org/news/32-ieee-news>

- **IEEE Virtual Events Calendar** - Major upcoming events and those now available on demand. <https://spectrum.ieee.org/static/ieee-virtual-events-calendar>
- **IEEE App.** For a comprehensive listing of all IEEE events, including chapter, section and student branch meetings, use the IEEE app available on Google Play and Apple's App Store. Download the IEEE app today. <https://app.ieee.org/>

### NNU and BSU Senior Design Showcases

The IEEE-Boise section, in co-sponsorship with IEEE-USA, is pleased to recognize this year's top Electrical and Computer Engineering and Computer Science senior design projects at BSU and NNU.

Congratulations to all the students listed below for their impressive projects and outstanding presentations.

#### NNU Electrical and Computer Engineering:

- Henry Tentinger, Tyler Tan, Marina DeVlieg, and Andrew Marable - Golf ball dispenser using machine vision to complete quality control and exact-count dispensing.

#### NNU Computer Science:

- Aleesha Chavez - Application of Robotic Turf Mowing
- Kamden Brothers - Using Machine Learning to Improve Data Collection of Wildland Fires

#### BSU Electrical and Computer Engineering:

- Derek Ackerman, Jared Dilley, Mason Hix, Danielle Simon - Adaptive Bike Light

#### BSU Computer Science:

- AJ Trantham, Gina Fegler, Samantha Fullmer - RFID-based system to log nest box visits by banded birds

Thank you to the numerous volunteers who provided their time and expertise to judge the projects and select the winners.

### Updates from the Boise State Electrical and Computer Engineering program

- Boise State ECE Department is thrilled to announce that in Fall 2021 it will welcome its first cohort of students to a BS in Computer Systems Engineering. This degree will complement the BS Electrical Engineering that started over two decades ago.
- The ECE Department this past year launched a new course "Intro to Electrical and Computer Engineering." The goal is to expose freshmen students to the major without waiting for them to complete math and science prerequisites. The course combines hands-on projects and career information. A highlight in that (and the Junior Level Engineering Practice course) are having local engineers come talk to the students. If you are interested in speaking to students about your career or career path in either of these courses, please contact Elisa Barney [EBarneySmith@BoiseState.edu](mailto:EBarneySmith@BoiseState.edu).
- We also launched an online Bachelors in Cyber Operations and Resilience (uCORE) <<https://www.boisestate.edu/online/bachelors-cyber-operations-and-resilience>>. This

is not an engineering degree, but was a decision made to share our knowledge to help educate Idaho residents and people around the world in a critical set of skills highly in demand today. This is led by Dr Sin Min Loo. A parallel Masters degree (gCORe) has also been launched <<https://www.boisestate.edu/online/masters-cyber-operations-and-resilience/degree-plan/>>.

- The department also launched a new 1 credit course "Introduction to Electronic Materials" (ECE 245) which aims to introduce students early in their academic career to the fundamental concepts of electronic materials. It is very targeted in understanding the chemistry that enables electronic devices to operate. The course will be offered every semester as an online course, starting this summer during the second 7 week session, June 28-Aug 16. Space in the summer and fall classes is still available. The prerequisite is general chemistry (or equivalent). IEEE members might find this interesting if they have not had this material and want a better understanding of how electronic devices work. Contact Dr. Kris Campbell (<https://www.boisestate.edu/coen-ece/directory/kris-campbell/>) for more information.
- Boise State had a series of graduation ceremonies this past weekend celebrating achievements since January 2020. 31 new PhDs were celebrated, the most ever at Boise State. The ECE PhD program graduated 10 of these PhD graduates. They are currently employed all over the country including Micron, Bastian Solutions, Qualcomm, Air Force Research Labs, and many other places. The BSU PhD program in Computing, which has tracks for Computer Science, Cyber Security, Data Science and Computational Math, Science and Engineering, graduated one PhD student this year.

### IEEE-USA Congressional Visit Day (CVD)

Each year, IEEE-USA arranges meetings for CVD participants with their legislators in Washington (see <https://ieeusa.org/cvd/> .) Three members of the IEEE-Boise Section participated in April and met with staff members from Senators Crapo and Risch and Congressman Simpson. Congressman Fulcher was postponed.

The participants, speaking as private citizens, addressed strategic investment topics in technology, including the Endless Frontier Act, cybersecurity, and high-skill immigration reform. Senator Risch appeared for a few minutes, and when asked about President Biden's Infrastructure investment plan he indicated "there will be enough money to go around". The participants had very good engagement with the congressional staffers and were invited to send specific language for the discussed legislative proposals.

### PES Scholarship Plus

The PES Scholarship Plus program is accepting applications from students pursuing an undergraduate degree in electrical engineering. The scholarship gives students \$2,000 to use towards educational expenses. Apply today and share with others who should apply. Deadline to apply is 30 June. More information is available here: [https://ieee.secure-platform.com/a/page/society\\_awards/powerandenergysociety](https://ieee.secure-platform.com/a/page/society_awards/powerandenergysociety) .

### IEEE Puzzlers

IEEE Puzzlers is a new online community for individuals who like creating and solving mathematical puzzles and brain teasers. Link to IEEE Puzzlers community: <https://ieee-collabratec.ieee.org/app/community/1343/IEEE-Puzzlers/activities>

## Section Volunteers Needed

As an IEEE member in the Boise section, you are invited to participate in our section operations committee (OpComm). We meet virtually at noon on the third Thursday of the month. The meeting link varies, so the best way to stay informed is to subscribe to our IEEE Boise OpComm mailing list. Contact Walter Bruehl ([bruehlwalter@gmail.com](mailto:bruehlwalter@gmail.com)) to be added to the mailing list.

The Boise section is currently seeking volunteers for the following positions:

- Education Activities Chair (Professional education and K-12 STEM outreach activities)
- Student Activities Chair - Your principal responsibility is to promote student activities in all student branches within our section. You will be working with student officers and branch counselors as well as your Regional leadership team to ensure that our section has a strong and vital student activities program.
- Signal Processing Society Chapter Chair
- Membership Development (MD) Chair

If you are interested in any of these positions or volunteering for another role within the section, please contact Randy Rannow at [pi-boson@ieee.org](mailto:pi-boson@ieee.org).

Our current section officers are listed on our website at <https://site.ieee.org/boise/contact/>.

## Future Newsletters

If you have a topic you'd like to suggest or an article you'd like to contribute to a future newsletter, please send it to Chris Gunning at [cgunning@ieee.org](mailto:cgunning@ieee.org). Thank you!