



IEEE Boise Section
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 Newsletter
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Section News

2016 Boise Section Annual Elections

Voting closed Friday, December 18. A total of 29 votes representing 6% of our Section were tallied to elect these candidates:

- President--Sean Collison
- Vice President--Hao Chen
- Secretary--Ellen McKinney
- Treasurer--Steven Cozine

A special thank you these volunteers for their willingness to serve our Section and profession.

Computer Society Annual Banquet

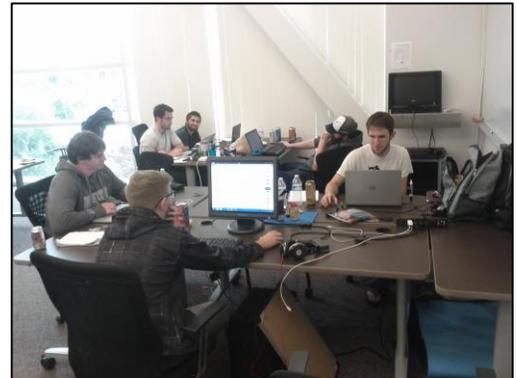
The annual Boise Computer Society banquet was held on November 3rd. Our guest speaker was Dr. Tim Andersen, the department chair of Computer Science at Boise State University. Dr. Andersen spoke on the role of computer science in fostering research, innovation, economic development, and job creation nationally and in Idaho. A recording of his talk is available at <http://www.screencast.com/t/Uw4rQAJYe>.

IEEEExtreme Programming Competition



The IEEEExtreme programming competition is an annual global challenge in which teams of IEEE Student members, supported by an IEEE Student Branch, advised and proctored by IEEE members, compete in a 24-hour time span against each other to solve a set of programming problems.

Four teams from BSU competed in the IEEEExtreme competition in November. They competed against about 2000 other teams worldwide including 192 other teams in the US. Two BSU teams,



DankMemeDealership and The Time Lords, finished in the top 15% worldwide. Congratulations to all the teams for enduring this challenging contest.

The Boise section supported the competition with food, beverages, and snacks for the team and proctors. A big thank you to our volunteer proctors – we couldn't have done this without them!

PES Talk: Cyber Physical Systems Security for the Power Grid

On October 26th, Dr. Chen-Ching Liu (IEEE PES Distinguished Lecturer from Washington State University) presented a timely topic “Cyber Physical Systems Security for the Power Grid”. He pointed out that reliable and secure operation of power system is of paramount importance to national security and economic well-being. The power grid today is a highly automated network, wherein a variety of communication networks and information systems are interconnected to the physical grid for the purpose of monitoring, protection, control, and market functions. Numerous publications - from government, industry, and academics - have indicated the growing concern of cyber threats to the electric power grid and the critical need to protect the grid against cyber-attacks. As a result, cyber security of the power grid — encompassing attack prevention, detection, mitigation, and resilience — is among the most important R&D and educational priorities of today and in the future.

PES Talk: Putting the “Smart” in Smart Grid: the Role of Demand Side Management in Grid Balancing

On November 13th, Dr. John Gardner (Professor, Boise State University) explained that the rapid growth of the renewable energy industry, particularly wind and solar, has brought about great benefits and great challenges. The ability of the US electrical distribution system (i.e. “The Grid”) is being taxed by the large percentage of variable generating sources, particularly by the rapid

changes in output that they can experience. While a great deal of attention has been paid to the role of bulk energy storage in the form of batteries to help solve this problem, Dr. Gardner showed how the Internet of Things applies to household and commercial appliances and HVAC systems to help respond to the challenges.

PES Talk: Advanced Technology for Humanity – Engineering is Not Enough

On December 4th, Mr. David L. “Kip” Sikes, P.E. talked about how technology in different cultural contexts affects and enables people to improve their quality of life. Additionally, he discussed engineering careers, what employers need, and how you can get involved and create local opportunities.

Swan Falls Dam Tour

This past November, the IEEE Boise Section Young Professionals, jointly with the IEEE Boise PES Society, arranged for a tour of the Swan Falls Hydroelectric Project on the Snake River. The tour was well attended by more than 20 IEEE Members. The tour included a walkthrough of the newer hydroelectric plant given by Idaho Power Staff, and also a self-guided tour of the original hydroelectric plant next to the new one. The Boise Section is also looking to arrange a tour of the Lucky Peak Dam this upcoming year.



IEEE Rising Stars Conference

The IEEE Boise Section sent our Young Professionals Chair, Emeth Thompson, and five students from Boise State University to the Rising Stars Conference in Las Vegas in early January. IEEE Boise Section Chair, Sean Collison, who was on the conference organizing committee attended as well. The Rising Stars Conference brought together the most promising students and young professionals from within the region to network and be inspired by each other. A representative from HP in Boise was also present at the conference to help recruit and review students' resumes.



Team from Lake Hazel Middle School wins IEEE award at Future City Idaho competition

The “Catania e Futuro Luminoso” team from Lake Hazel Middle School in Meridian received the IEEE Special Award at the Idaho Future City Regional Competition held on Saturday, January 23rd. The award was given for the most comprehensive use of Smart Grid technology in their city.

The Future City Competition is a national, project-based learning experience where students in 6th, 7th, and 8th grade imagine, design, and build cities of the future. Students work as a team with an educator and engineer mentor to plan cities using SimCity™ software; research and write solutions to an engineering problem; build tabletop scale models with recycled materials; and present their ideas before judges at Regional Competitions.



This year's competition included 31 teams from 22 different schools. Participants came from all over Idaho including American Falls, Blackfoot, Boise,

Caldwell, Cascade, Craigmont, Hailey, Homedale, Jerome, Kuna, Meridian, New Meadows, and Riggins as well as Battle Mountain, Nevada and Park City, Utah. The first place team was Boise's Sacred Heart Catholic School's Future City Mottainai. The “Catania e Futuro Luminoso” team was one of the finalists, placing 4th overall. Regional winners represent their region at the National Finals in Washington, DC in February.



The IEEE-Boise section was proud to be a regional sponsor of Future City again this year. Congratulations to all the teams, and a huge thank you to our IEEE Special Awards Judges, Mark Rau

and Denise Korman, who made our section's participation in this event a huge success!

Upcoming Events

IEEE Workshop on Microelectronics and Electron Devices

Date: Friday, April 15th, 2016
Time: 8:00AM – 6:00PM
Location: Student Union Building, Boise State University



<http://www.ewh.ieee.org/r6/boise/wmed2016/WMED2016.html>

Abstract: Micro Advance Registration Deadline: April 1, 2016

The 2016 **IEEE Workshop on Microelectronics and Electron Devices (WMED)** will be held at Boise State University Student Union Building on April 15, 2016. This international workshop is designed to provide a stage for discussion, review and deliberation on different aspects of silicon and non-silicon technologies that include device technology, future and current challenges in IC processing and advanced design techniques. The workshop is divided into different sections that include invited talks from university and industry, tutorials, contributed papers and a poster session. This year's workshop is a perfect opportunity for students and professionals to share their ideas and technical know-how with technologists and engineers from all around this region. WMED will host some of the distinguished professors and technologists who have spearheaded some of the most exciting technologies and ideas in their respective fields.

Speakers:

- Dr. Seung H. Kang, Qualcomm – *Emerging Memory Architectures for IOT (Internet-of-Things) and Wearables*
- Dr. Leon O. Chua, UC Berkeley – *Twenty Things You Did Not Know About Memristors*
- Dr. Subu Iyer, UCLA – *Will the Chip Industry Benefit from the Internet of Everything?*
- Dr. Michael Current, Current Scientific – *Process and Metrology Challenges for Nano-scale Electronics*
- Larry Smith, Qualcomm – *Principles of Power Integrity and PDN Fundamentals*
- David Porter, Micron – *Low Power and High Reliability Mobile Design Trend*
- Dr. Jung H. Yoon, IBM – *Big Data Analytics and Semiconductor Quality*
- Dr. R. P. Jindal, U of Louisiana – *Material, Device, Circuit and System Considerations for Almost Noise-Free Signal Detection*

WMED–2016 will also have a High School program in conjunction with the main conference in order to support the effort of encouraging STEM education among High School students in the Treasure Valley area. WMED has conducted the High School program for the last eight years successfully. This year's High School program will be a half day event which will include the keynote talk, hands-on activities, and a panel discussion consisting of engineers of all ages who will relate their experiences and take questions from the students about careers in engineering.

IEEE Ski/Snowboard Day in Utah, March 2016

The Utah and South Idaho sections are currently making plans for a no-host IEEE Ski/Snowboard Day at Snowbird on Sunday, March 20th. If you are interested in attending this event, please contact Chris Gunning at cgunning@ieee.org. This will be held the day after the IEEE Region 6 NE/NW Area meeting in Salt Lake City.

Volunteers Needed for FIRST Robotics Competition

FIRST Robotics Competition (FRC) is an international high school robotics competition. The Boise FRC will be held March 30 - April 2 at Taco Bell Arena. Technical folks are needed to serve as referees, judges, and robot inspectors. Non-technical volunteers are needed for help with check in, tear down, crowd control, queuing etc.

To volunteer, go to https://my.usfirst.org/FIRSTPortal/Login/VIMS_Login.aspx to create an account. Then "Apply for an Event". Click "FRC" "USA" and then "ID". Choose "Idaho Regional" from the list that appears.

You will be given all the training you need. Every volunteer must go through a background check, which can take several days to process, so please sign up as soon as possible.

Contact Suzie Steiner at (208) 869-2403 or suzie@openlabidaho.org for more information.

Miscellaneous

K-12 STEM Grants

It's time IEEE Region 6 is doing a big push on STEM activities this year. To support this, the Boise Section is offering STEM grants of \$100 and higher to section members. Acceptable topics are flexible. Do you have a good idea? Something you would like to do with your kid's school, or the school district in which you live? Find a second IEEE member and let us know. We have budgeted to award several.

To apply please submit the following information:

- Member 1 Name:
- Member 1 IEEE number:
- Member 2 Name:
- Member 2 IEEE number:
- Proposed Topic Name:
- Proposed Topic Description (100-500 words).
- Proposed School or youth group:
- Budget:

Applications will be evaluated on a revolving basis for the remainder of the year. If it goes well, we'll continue it next year.

Submit your application to Elisa Barney Smith EBarneySmith@BoiseState.edu.

IEEE Senior membership

Are you interested in becoming a senior member of the IEEE? Read on to find out the benefits, eligibility requirements and how to apply.

IEEE senior membership is recognition of your technical and professional excellence. As a newly elevated senior member, you will receive an engraved plaque, and a letter of commendation can be

sent to your employer. You will be eligible to hold executive IEEE volunteer positions, and you will get a \$25 coupon to use to join an IEEE society.

To be eligible, you must meet qualifications for IEEE membership including being an engineer, scientist, educator, technical executive or originator in any IEEE-designated field. You must have been in professional practice for at least ten years and have shown significant performance over a period of at least five years. Note that educational experience is credited towards time in professional practice (three years credit if you hold a bachelor's degree, four years for a bachelor's and master's degree, and five years for a doctorate).

Information on the application process is available on the IEEE senior member website. As part of the application process, you will need to identify three current senior members to serve as references. For help getting the process started and finding references, contact the Boise Section membership development chair, Hilly Penton hpenton95@aol.com.

Call for Section Treasury Auditors

The IEEE Boise Section is looking for volunteers to help audit our finances for the year. If you are interested, please contact Sean Collison scollison@gmail.com or Steve Cozine cosine222@gmail.com.

Getting the Most from your Membership

All IEEE members are invited to participate in a New Member Orientation session designed to help members get the most out of their membership. It's open to anyone, not just new members. Webinars are held on the fourth Thursday of each month at both 9:00 AM ET and 3:00 PM ET.

To register for a New Member Orientation, see the Welcome to IEEE web page: www.ieee.org/start. Email Denise Maestri for more information. d.maestri@ieee.org.

Company Liaisons

Do you work at a company that employs engineers within our section? We invite each company to have one 'Company Liaison' to join our section's operational committee. These Liaisons provide a point of contact to send information from the Section OpComm to members working at these companies and to return information as to how the needs of their engineers can be met by the section. Company Liaisons are included in e-mail discussions from the OpComm, and are encouraged to help advertise section events to members and non-members at their place of employment beyond the Section newsletters. They are invited along with all the section members to attend OPCOMM meetings and give us input. If you are interested in being a company liaison, please contact ieee.boise.chair@gmail.com.

The Lighter Side: Computer Programming to be Officially Renamed “Googling Stackoverflow”

Washington DC – The IEEE have produced a report today where they strongly recommend that from now on, the discipline of Computer Programming should be officially renamed to “Googling Stackoverflow”.

“We are recommending a root-and-branch name change to this discipline”, said President of the IEEE, Thomas M. Conte. “We are even going to change the official name of the IEEE Computer Society to the IEEE Quick Look At StackOverflow Society”.

“We are furthermore recommending that all universities across the planet should cease to award Bachelors degrees, Masters or PhDs in computer programming or software engineering and instead they should award these degrees in Googling Stackoverflow.”

“We are also considering renaming “P-values” to “Reviewer Pacifiers”.

Source: <http://www.theallium.com/engineering/computer-programming-to-be-officially-renamed-googling-stackoverflow/>

Your 2016 Officers

IEEE Boise Section		
Chair	Sean Collison	scollison@gmail.com
Vice Chair	Hao Chen	haochen@boisestate.edu
Secretary	Ellen McKinney	emckinney@alumni.uidaho.edu
Treasurer	Stephen Cozine	cosine222@gmail.com
PACE Chair	Kristen Hopper	kmmcnair@ieee.org
Membership Development	Hilly Penton	hpenton95@aol.com
Webpage Editor	Yasmin Sahaf	yasamin.sahaf@hp.com
Young Professionals/GoLD Chair	Emeth Thompson	emeth.thompson@gmail.com
Newsletter Editor	David Scott	scottdj12321@gmail.com
Boise EDS Chapter Chair	Tony Liu	zengtao.liu@gmail.com
Boise PES Chapter Chair	Milorad Papic	mpapic@idahopower.com
Boise Computer Society Chapter Chair	Yue Wang	yue.wang.us@ieee.org
Boise SPS Chapter Chair	Jun Guo	junguo@u.boisestate.edu
Boise SSCS Chapter Chair	Vishal Saxena	vishalsaxena@boisestate.edu
Boise Life Member Group	Robert Hay	roberthay@boisestate.edu
Boise SIGHT Group	Kip Sikes	kip.sikes.us@ieee.org
Student Branch at Boise State University		
President	Jeff Riordan	ieee.bsu.officers@gmail.com
Vice President	Seth Townsend	
Secretary	Haseeb Nain	
Treasurer	Nodira Turaeva	
Student Branch at Northwest University		
President	Mitchell Kamstra	mkamstra@nnu.edu
Vice President		
Secretary		
Treasurer		
Region 6 Northeast Area		
Chair	Chris Gunning	cgunning@ieee.org
Vice Chair	Peijung Tsai	pei-jung.tsai@l-3com.com



You make a difference when you join the IEEE.