



# IEEE Boise Section Newsletter Aug 2010



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## Upcoming Events:

### Friday, September 17<sup>th</sup> – IEEE Boise section Annual picnic

Time: 5:00 PM – 9:00 PM

Location: Boise Municipal Park

**Event description:** The picnic is open to all the Boise section members and their families. Venue is the municipal park located on Boise River at 500 S Walnut St. This will be a wonderful chance to socialize and network among the section members.

## Note from the editor:

Here is a brief description of the main events in the past three months. The Boise EDS-IEEE chapter held the eight IEEE workshop: WMED-2010. It is one of the most important events for the Boise EDS chapter. Shyam Surthi, the EDS chapter chair has written a comprehensive article reporting all the key lectures and presentation from this event. There was a presentation on *Improving Engineering Economic Outlook* in the May social OpComm meeting. Joe Rekiere, the section PACE chair, has provided an article summarizing that. Greg Gatlin, the section GOLD chair has an article on the Idaho TECH event. I would also like to thank Tyler Rowe, Mark Bussert and Greg Gatlin for their contributions to this bulletin.

I hope everyone enjoyed the summertime. In the coming months of fall 2010, we have several events in pipeline, we hope they will be planned out in the upcoming opcomm meetings. We welcome the new IEEE Student branch officers for 2010-2011 (details in the ‘announcements’ section) and hope to see an enthusiastic student participation over the next year.

## **Announcements**

### EDS Chapter Gains Senior Members

By Shyam Surthi

Continuing with the Senior Member elevation campaign the Boise EDS Chapter undertook, we are pleased to announce the promotion of three of our members. Since the campaign was kicked off in mid-2008, we have been able to encourage some of the most senior member in the local IEEE community to apply for the elevation and succeed in attaining this very prestigious ranking within the IEEE society. Please join us in congratulating them for this special honor. Their names and the month in which their application was approved are listed below:

April 2010: Thy Tran and Bhaskar Srinivasan

May 2010: David Hwang

### New IEEE Student branch officers

By Tyler Rowe

The IEEE student branch officers for 2010-2011 are Tyler Rowe, president, Thanh Tran, vice president, David Van Arnem, secretary, and Brian Pierre, treasurer. Tyler Rowe is a senior in Electrical Engineering from Pocatello, Idaho. In addition to being an officer of the IEEE student branch, he also is an officer of Eta Kappa Nu, a member of Tau Beta Pi, and a member of the Boise State University Honors College. He currently is working as an undergraduate research assistant under Dr. Jim Browning, and a teaching assistant for Professor Carol Sevier. After graduation, he plans to continue his education pursuing a Master of Science in Electrical Engineering at Boise State University.

Thanh Tran is currently working on a master's degree at Boise State University. She says that her experiences with IEEE student branch have been good as an undergraduate. "It has always been the place where I could help and get help to work toward my goals, and I would like to take this opportunity to be part of the IEEE club this year to get students to be more involved in IEEE and to network with professionals sharing the same interests." She enjoys learning new things to enhance her knowledge. Her goal after graduation is to work in the image processing related field and to continue her education to a higher level.

David Van Arnem is entering his senior year in the Electrical Engineering program at BSU, and he will also be obtaining a Computer Science minor. His main interest is firmware development, specifically for hardware with visual aspects such as graphics processing units (GPU). He is currently working on a research project for Dr. Elisa Barney Smith modeling scanner degradation, and he will also be taking an image processing course in the fall. His career interest is working for a GPU development company, though a scanner or printer company is also an option.

Brian Pierre is a senior in Electrical Engineering from Laramie, Wyoming. He is a member of Tau Beta Pi, and president of Eta Kappa Nu. He participates in athletics as a distance runner on Boise State's cross country and track teams obtaining multiple First Team All-WAC honors. He is currently working as an intern for Schweitzer Engineering Laboratories, and flew in zero gravity in Spring of 2010 as a part of NASA Reduced Gravity Education Flight Program. Brian also had the opportunity to study abroad in Germany during the summer of 2010.

### IEEE Boise Section Elections Announcement

By Mark Bussert

IEEE Boise Section Officer Elections will be held in December. If you are interested in becoming an officer of the IEEE Boise Section, please submit your name to any member of the Elections Committee. The Elections Committee consists of an unbiased group of IEEE Boise Section members who are not running for Boise Section Officer Positions. The Boise Section Officer positions described below are all available for nominations within the Boise Section.

#### **Boise Section Elections Committee, 2010:**

Mark Bussert

[mbussert@ieee.org](mailto:mbussert@ieee.org)

Joe Rikiere

[jprieee@aol.com](mailto:jprieee@aol.com)

Elisa Barney Smith

[EBarneySmith@boisestate.edu](mailto:EBarneySmith@boisestate.edu)

**Chair:**

The Section Chair is the Chief Operating Officer of the Section and is responsible for ensuring that the Section (including Section Technical Chapters and Section Affinity Groups) are fulfilling the Section Mission and Goals.

**Vice Chair:**

The Section Vice Chair assists the Section Chair in managing the operations of the Section in the best interest of the local members and provides leadership, guidance and a sense of purpose for other Section volunteers.

**Secretary:**

The Section Secretary acts as the gateway between Section members and IEEE Officers and takes ownership of Section records and correspondence.

**Treasurer:**

The Treasurer works with the Section Leadership in developing a budget and monitoring adherence to it, while keeping Treasurer records and financial data up-to-date.

All officers shall be elected annually by the Section membership. The term of office for all officers shall normally be one year, but may continue until a successor has been duly elected and takes office. The term of office will date from 1 January through 31 December. The consecutive period of service in any one office shall normally not exceed two years. Such exceptions require approval by the Region Director who will annually report such exceptions to the MGA Board. An individual may be re-elected to a position previously held provided at least one year has passed since he or she held that office. (Source MGA Operations Manual – 9.4.F.7)

***Other Volunteer Positions: (Please contact the Elections Committee if you are interested)***

**Membership chair:**

Manages section membership database and promotes membership retention and recruiting.

**PACE (Professional Activities Committees for Engineers) Chair:**

Promotes the professional status of the electrical engineering profession and of IEEE membership and provides a mechanism for communication of members' views on their professional needs.

**Newsletter Editor:**

Compiles and publishes articles for the Boise Section Newsletter.

**GOLD (Graduates Of the Last Decade):**

Maintain communication with members that graduated within the last decade by providing events and activities that are valuable to IEEE members.

**Webmaster:**

Maintain and host the Boise Section Website, while catering to the needs of the IEEE Boise Section and Boise Section Chapters.

**Boise Joint Chapter of Power & Energy and Industry Applications Societies**

The Boise Joint Chapter of Power Engineering and Industry Applications Societies is re-organizing to become one of the most active chapters within the IEEE Boise Section. Bi-monthly meetings will be announced soon for members interested in being a part of this exciting IEEE opportunity. The PEIS Chapter will be hosting at least two technical events in 2010. NonPEIAS members are always welcome and encouraged to attend PEIAS activities.

Please visit the PEIS Chapter website below for events calendar of upcoming events on topics such as power engineering, renewable energy, and smart grid communications throughout September, October and November. Please take the posted survey and provide feedback on events you are interested in. If you are interested in serving as an officer of the Boise Joint Chapter of PEIS, please contact the PEIS Chapter Chair, Mark Bussert at [mbussert@ieee.org](mailto:mbussert@ieee.org).

PEIS Chapter Website:

<http://ieeeboise.org/chapters/peis/>

## Section News

### WMED-2010: A Successful IEEE Workshop

By Shyam Surthi

WMED 2010 was held at the Boise State University's Student Union on April 16th. This is the eighth workshop held by the Boise EDS-IEEE chapter. William Kueber (2010 Workshop General Chair) gathered a management team of new and continuing volunteers had been set in place early in the process last year. The workshop's focus is semiconductor devices, but the topics covered are wide ranging and appeal to a large cross section of the workshop audience. The WMED attendance this year was 188 students and professionals representing many areas in the Pacific Northwest region. Such strong participation even in a down economy shows that the workshop is still filling its mission of providing a high quality EDS-IEEE workshop to the region.

This year the workshop had a total of six invited speakers. For a second year the workshop is proud to have an IEEE Fellow, Dr. Tahir Ganhi from Intel Corporation, give an invited talk. Dr. Ganhi's talk addressed the challenge of continued device scaling in the nanoscale era and how that scaling will continue in the future. Dr. Peter Hartwell of Hewlett-Packard Labs in Palo Alto presented his talk on HP's CeNSE project. This efforts consists of billions of MEMS sensors networked to exchange information about the environment. Dr. James Lu from RPI rounded out the morning session with a talk on 3D chips and how TSVs (Through Silicon Vias) will change how the industry approaches semiconductor scaling in design and manufacturing. After lunch, Dr. C.R. Wronski from Penn State University, one of the co-inventors of the amorphous thin film solar cells, gave a talk on photovoltaic cells.

The workshop this year featured two technical tutorials. One tutorial by Dr. Todd Marquart of Micron Technology discussed the new challenges that are facing reliability engineers as scaling begins to push physical boundaries. The other tutorial by Dr. Kaustav Banerjee focused on nanotubes and how they can be used to extend scaling.

In addition the workshop featured twelve accepted technical papers presented by the authors and six posters from regional universities. This year the best paper award goes to Abhijeet Paul from Purdue University for the paper "Atomistic Study of Ultra-scaled Electron and Hole SiGe Nanowire FETs". The best poster award is awarded this year to Chris Gagliano of Boise State University for "A Compact Delay-Locked loop for Multi-Phase Non-overlapped Clock Generation". The workshop encourages engineering student participation by providing a limited number of Student Travel Awards to defray the cost of traveling to be workshop. This year's recipients are Hari Krishnan Kirshnamurthy of Washington State University (Pullman), Ali Mesgarani of University of Idaho (Moscow), and Abhijeet Paul of Purdue University (West Lafayette).

The workshops success this year is due to the hard work of the volunteers that plan and execute the workshop each year. The IEEE Boise EDS Chapter officers and members believe in the concept of WMED to provide quality speakers and papers in semiconductor technology. Along with the professional workshop attendees, this year the workshop also invited local high school seniors to spend the morning at the workshop to see what real engineers are doing, and to challenge them to give serious thought to becoming an engineer.

The workshop is receiving technical co-sponsorship support from the IEEE EDS. In addition Micron Foundation provides a substantial amount of funding for the workshop each year and the workshop would not be possible without this generous support. Other sponsors of the workshop are IEEE Boise Section and the Boise State University College of Engineering. The workshop website provides details of the events that took place during this major annual event: <http://www.ewh.ieee.org/r6/boise/wmed2010/WMED2010.html>

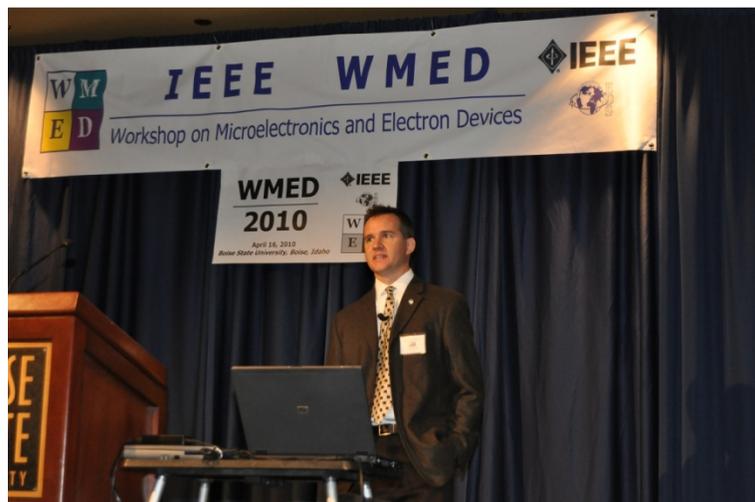
The WMED-2011 will be held in April 2011. Please visit the website for further details: <http://www.ewh.ieee.org/r6/boise/wmed2011/WMED2011.html> or contact: Vishwanath Bhat, 2011 IEEE WMED General Chair, Tel: 208-363-2492, Email: [vkbhat@micron.com](mailto:vkbhat@micron.com). If you are on LinkedIn join the WMED group to discuss topics for next year's WMED.



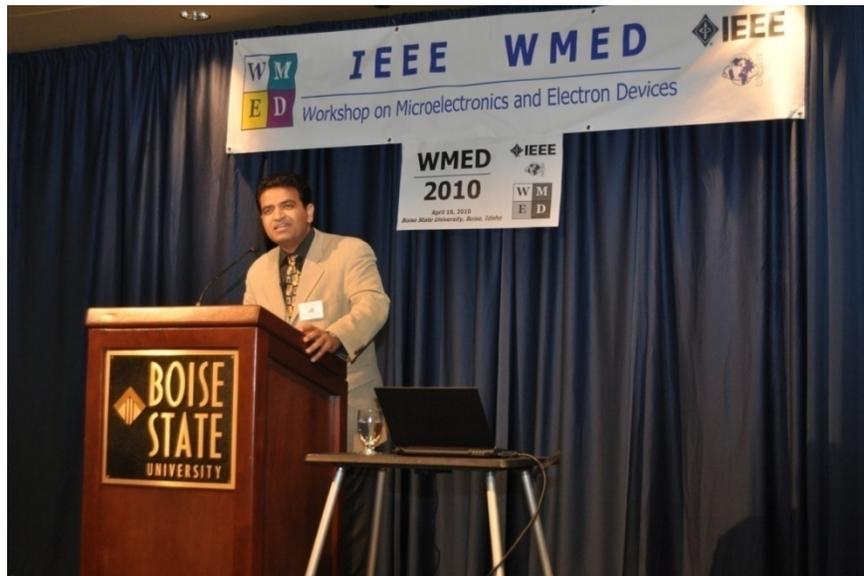
William Kueber, WMED-2010 General Chair, welcoming the attendees in the opening session of the workshop on 4/16/2010



The 180+ attendees at WMED-2010 rated the workshop high on all accounts and asked some focused questions to each of the invited speakers



In the morning session, Dr. Peter Hartwell (HP Labs) presented an engaging discussion on the Central Nervous System for the Earth, a system with networked nanoscale sensors and actuators



In the afternoon tutorial session, Dr. Kaustav Banerjee (EDS Distinguished Lecturer, UC – Santa Barbara) presented a thorough discussion on Carbon based Nanomaterials as interconnects



William Kueber, the WMED-2010 General Chair, presenting the ‘Student Travel Award’ to one of three recipients, Hari Krishnan Kirshnamurthy, during the morning session



During the breaks, lunch hour shown above, the attendees got an opportunity to network with the technical experts and regional researchers and engineers

## May Social meeting

By Joe Rekiere

The May social included a presentation about *Improving Engineering Economic Outlook*. The presentation given by Joe Rekiere, the section PACE chair, surveyed the current and additional efforts at the National, State and Local levels to improve the economic outlook for engineers. The main areas of need include improving STEM, (Science, Technology, Engineering and Mathematics) for K-12 education, increasing funding for basic research, Increasing scholarship and funding for higher education and providing incentives for innovation. To learn more follow the link to the presentation slides located at [https://docs.google.com/present/view?id=dfcs78mn\\_20d6nxftdh](https://docs.google.com/present/view?id=dfcs78mn_20d6nxftdh)

## IEEE Volunteers at Idaho TECH event

By Greg Gatlin

The IEEE GOLD chapter and the IEEE Boise Student chapter had several volunteers attend the Idaho Tech: Mars Rover Challenge event sponsored by the NASA Idaho Space Grant Consortium on April 24<sup>th</sup>, 2010 in Meridian, Idaho. The Mars Rover challenge is a wonderful educational science and engineering program that enables 5<sup>th</sup> and 6<sup>th</sup> grade students to design and construct a motorized Mars Rover model assembled from Legos. Each team of 4-6 students were judged on several different categories, including weight, design, notebooks, poster presentation, hill climb, obstacle course, and blindfolded driving of the Mars Rover. The volunteers assisted with judging and helping to setup and take down for the events. It was exciting to see the different designs and how the students came together as a team and learn something about engineering and science in the process of a fun event. The event was from 9:00am until 2:00pm with pizza and beverages provided for lunch, and everyone enjoyed the event.

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## **Notes:**

### **IEEE Official LinkedIn Group**

IEEE has its own official LinkedIn group.

The following is excerpted from the main page of the IEEE LinkedIn group.

This group contains Members of the IEEE, a non-profit organization and the world's leading professional association for the advancement of technology. Managed by IEEE staff, this is the only global IEEE group on LinkedIn that is verified against the official IEEE membership database. Active IEEE membership is required. For immediate approval, an IEEE email alias should be selected and confirmed as the contact email during the group application process.

If you do not have an IEEE.org email alias please visit <http://elecomm.ieee.org/> to obtain it. Be sure to add it to your LinkedIn profile prior to applying for the group to assure an instant approval; note that Linked In will first send a verification message that must be opened to confirm the address.

FYI - If an IEEE.org email domain is not provided during the group application process you could face a significant delay as they manually review all submissions sent with a different email domain. Approval in this case is based on matching Name and Email provided during the LinkedIn groups application process to the IEEE membership database.

[http://www.linkedin.com/groups?home=&gid=23804&trk=anet\\_ug\\_hm](http://www.linkedin.com/groups?home=&gid=23804&trk=anet_ug_hm)

Also, IEEE Boise section has its own group(name: IEEE Boise Section) in Linked In now. This is intended to be a general purpose group that IEEE Boise section members can join.

### **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. The main responsibility of these people is to provide a point of contact to send information from the section Operations Committee 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 email discussions from the OPCOM, 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 OPCOM meetings and give us input. If you are interested in being a company liaison, please contact Mark Bussert ([mbussert@ieee.org](mailto:mbussert@ieee.org)).

### **Do We Have Your Correct E-mail?**

If you haven't been receiving the newsletter or event notices electronically, check what we have for your email address on your mailing label. Please notify both the IEEE ([address-changes@ieee.org](mailto:address-changes@ieee.org) or <http://services1.ieee.org/membersvc/coa/intro.htm> and the Boise Section Chair ([mbussert@ieee.org](mailto:mbussert@ieee.org)) so we can add you to our electronic mailing list (we get address corrections only once a month from the IEEE). Plans often come about for events between newsletters. To assure that you get timely information about IEEE Boise events, please make sure we have your correct email address in our address database.

### **How can the Boise Section better meet your needs?**

The Boise Section officers would like to make the best use of our dues to meet the needs of the engineers in the Boise section. The section currently provides for or partly subsidizes speakers, banquets and picnics through the use of your annual dues. If you have ideas on how to best meet the needs of the sections engineers, contact one of the officers.

### **Volunteering – IEEE Members Get Involved**

Getting Started:

- Contact your local IEEE section and chapters
- Learn about the IEEE Educational Activities Board
- Get Involved with the IEEE Standards Association
- Participate in a technical society or technical council
- Get involved with the IEEE Technical Activities Board
- Shape and promote USA technology policy and professional activities through IEEE-USA
- Organize an IEEE Conference

See *How to Volunteer* at [www.ieee.org/web/volunteers/home/index.html](http://www.ieee.org/web/volunteers/home/index.html)

### **Your 2010 Officers:**

#### IEEE Boise Section:

Chair: Chris Gunning

[cgunning@ieee.org](mailto:cgunning@ieee.org)

Vice-Chair: Shyam Surthi

[ssurthi@micron.com](mailto:ssurthi@micron.com)

Secretary: Kristen Hopper

[kmmcnair@ieee.org](mailto:kmmcnair@ieee.org)

Treasurer: Randy Wolff

[rrwolff@micron.com](mailto:rrwolff@micron.com)

Membership: Jaydip Guha

[guhajaydip@yahoo.com](mailto:guhajaydip@yahoo.com)

GOLD Chair: Greg Gatlin

[ggatlin@micron.com](mailto:ggatlin@micron.com)

PACE: Joe Rekiere

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Web Page: Kevin Turner

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Newsletter Editor: Satya Saripalli

[ssaripalli@ieee.org](mailto:ssaripalli@ieee.org)

#### Boise EDS Chapter:

Chair: Shyam Surthi

[ssurthi@micron.com](mailto:ssurthi@micron.com)

#### Boise PE&IA Chapter:

Chair: Mark Bussert

[mbussert@ieee.org](mailto:mbussert@ieee.org)

#### Boise Computer Society Chapter:

Chair: Denise Korman

[d.a.korman@ieee.org](mailto:d.a.korman@ieee.org)

#### Student Branch at Boise State University:

Chair: Cameron Stewart

[ieee@boisestate.edu](mailto:ieee@boisestate.edu)



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<http://ieeoboise.org/>