

OCTOBER 2010
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Special points of interest:

Save the Date for the Fall Event – November 13, 2010

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From the Chair

It is fall again and with this season comes many activities and opportunities.

It has been a summer full of planning for our upcoming events, such as our event on Electric Vehicles, our Career Workshop, and our Section's fall social event. You should have received emails keeping you abreast of our exciting activities this fall. You can also stay informed by visiting our web-site: www.ieee-denver.org.

However, our planning does not stop with events. Fall is a ripe opportunity to reach out to other members of IEEE to engage them with opportunities of involvement and networking in the coming year.

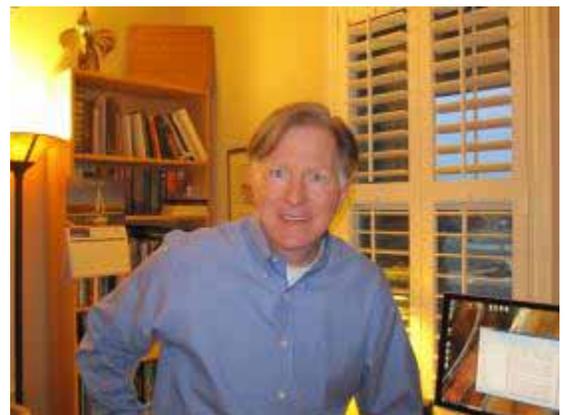
Our economy is still weak but I can definitely see growth and opportunity appearing each and every day. The best way to learn of those opportunities is by networking through professional organizations, like IEEE – and networking is so much easier when you are talking with people who are in the same profession as you. You learn of growth, change, and openings. You also make it easy for others to get to know you – and think of you as opportunities arise.

We spend most (in some cases all) of our waking hours working in our profession. As such, it is definitely a good investment of your time to get to know more people in that profession so that you can grow through opportunities.

IEEE has countless opportunities, at so many different levels and in so many areas, that naturally prosper networking – volunteering, mentoring, or helping in the coordination of activities, just to name a few. These opportunities allow you to refine your leadership skills, keep you abreast of trends in your field (or related fields), and provide you with experiences that inherently make you a more valuable professional.

As this fall approaches, consider your profession and the opportunities that IEEE has to offer. Whether you are local or remote, get involved – the opportunities are great.

Rick Robinson
2010 Chair
IEEE Denver Section



Rick Robinson
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Electric Vehicle Workshop at CU Boulder

It was a bright and sunny fall morning and well over 120 IEEE members and their guests turned out to see a demonstration of electric vehicles at the University of Colorado on Saturday, September 25. As the cars arrived, you couldn't help but notice how quiet they were as only the light crackle of their tires on the pavement was heard. Occasionally, you could hear the whine of gears in a transmission, a blower fan or the high pitched sound of a PWM controller. We had seven cars of different types including production cars and conversions of existing vehicles and three electric bicycles.

Denver Section Vice-Chair, Bob Faus was the MC for the event and announced each speaker to come up and give a short presentation on their vehicle. Most notable were appeals to all of us in IEEE to continue pushing the technology in this area along with promotion for all forms of alternative energy. Dr. Ewald Fuchs, professor of electrical engineering at CU, gave the final talk on "The Pros and Cons of Electric Vehicles". Dr. Bill Emery, also a CU professor and the coordinator of this event, gave the wrap up and thanked everyone for coming out.



Ewald Fuchs—"The Pros and Cons of Electric Vehicles"

Special thanks to Dan Lubar, Louis Tsai, Bob Wilson and Rick Robinson for all their help.

The cars and participants are as follows:

- 1972 Porsche 914 conversion, Solectria, 3 Phase AC Induction Motor, Azure Dynamics Controller, PbS Batteries, beautifully built by George Tomasevich
- 1995 GMC Sierra Pickup, DC Motor, Curtis Controller, LiFePo batteries, very clean conversion built by Duke's Garage in Denver, owned by Brad Dahm
- 1957 Porsche Speedster Replica built by Dukes Garage. Bright blue and professional electric conversion. LiFePo Batteries
- Toyota Prius factory plug-in. Not available until 2012! We were delighted to see this car and the PHEV from Bryan Flansburg at the CU Transportation department and Steve Doresam from Boulder Toyota.
- Production Toyota Prius PHEV. This car is part of a CU-Xcel Energy and Toyota joint program to study usage. 104 families in Boulder have been chosen at random for the study. Their charging history as well as their use patterns will be monitored and evaluated by CU faculty and students.
- 2009 Tesla Roadster - This car was a stunning metallic burgundy and owned by Larry Germann who filled us all in on the nuances of driving with regeneration.
- Toyota Prius Plug-In conversion, very professional, owned by David Farmer
- 3 Electric Bicycles brought by Greg Duran of Small Planet EV.

Gerry Dameron from Boulder Electric Vehicle gave a nice talk on the cost savings of electric trucks.



Electric Vehicle Event



Larry Germann -
Tesla Roadster

“... only the light crackle of their tires on the pavement was heard.”



1957 Speedster
Replica



Fall Social at Wings Over the Rockies

The Denver section will be having its Fall Event this year at the “Wings over the Rockies” museum on November 13th. This lunch event will be held inside the museum's facilities and IEEE members are encouraged to bring their families as the museum has quite an array of displays and many different aircraft--not to mention the Eisenhower room that contains material 2nd only to the Eisenhower museum in Key West Florida.

The catered lunch will feature Russ Harrison from IEEE*USA which represents US IEEE members in policy and legislative matter in Washington DC and Russ runs the Government Activities Committee at IEEE*USA, traveling to many parts of the US to talk to IEEE members about government involvement.

Russ will be speaking about the importance for IEEE members to be more aware of the need (and even the moral obligation) for IEEE members to take action when they see a divergence in government policy from sound engineering or scientific practices. Russ will also talk about some examples of how this skill can be important to your career or to the company you work for as well.

IEEE Day - Celebration Begins 7 October 2010

[IEEE Day](#) is a global event planned for 7 - 8 October 2010, to celebrate the achievements of IEEE members - past, present, and future - on the anniversary of the first time IEEE members gathered to share their technical ideas in 1884.

IEEE geographic units (Regions, Sections, Chapters, Affinity Groups, Student Branches, etc.) are encouraged to participate by providing local events for their members and encouraging the use of social networking to communicate members' technological achievements, interests, and successes. Don't forget to go to the IEEE Day [Facebook](#) or [LinkedIn](#) Web page and tell us what you are planning for IEEE Day. If you haven't done so already, please also [take the IEEE Day survey](#).

Use IEEE Day to share information about yourself and your work and get to know your fellow members.

2011 Executive Committee Nominations Due

The Section is actively seeking self-nominations for 2011 Executive Committee Positions. Here is your chance to get more involved with your profession!

There are opportunities in leadership, finance, student activities, professional, governmental activities, membership development and many others.

The elected positions include Vice-Chair (Chair elect), Secretary, and Treasurer. The appointed positions are: Membership Development, Electronic Communications, Pre-College and Education Activities, University Student Branch Activities, Industry Relations, Professional & Career Activities (PACE), Awards and Recognition, Conferences' Publications,

Strategic Planning, Public Relations, Publicity, Government Liaison and Finance & Audit.

The Denver Section has 4200 members. It has been recognized as the leading IEEE Section in the central United States. We need your enthusiasm to keep our programs active!

If you are interested, contact a member of the Election Committee before **October 6, 2010**:

Jim Jefferies (JJefferies@ieee.org),
Pankaj Goyal (PGoyal@ieee.org)
or Jim Look (Jim.Look@ieee.org)

Colorado Governmental Affairs

Death and taxes, two inevitable events we all face in life, but along the way there are also a multitude of smaller events we can choose to accept, decline, or modify their shape. The IEEE-Denver section is starting to monitor more closely state level government policy decisions that affect, directly and indirectly, engineering education and the engineering business environment in Colorado.

The current backdrop of Colorado budget balancing difficulties has been and will continue to dominate the overall policy decisions of the state's governing branches. The collection and matching of General Funds to the financial obligations for the upcoming budget year (FY2011-12) will be of contentious debate in which state funding for K-12 and higher education will play a large role. Three ballot measures for voter approval have been introduced for the November elections that will greatly impact state funding for education. They are:

- Amendment 60 - Colorado Property Taxes
- Amendment 61 - Colorado State and Local Debt Limit
- Proposition 101 - Colorado Motor Vehicle, Income, and Telecom Taxes

Research the specific details of these proposed initiatives at: <http://ballotpedia.org>. In conjunction with General Funds appropriations, Colorado has sought additional education funds at grant programs in the federally sponsored American Recovery and Reinvestment Act (ARRA). Recently, Colorado competed with other states for Science, Technology, Engineering and Mathematics (STEM) grants in the Race to the Top Fund. Unfortunately, Colorado was

dealt a set back when it did not qualify as a final candidate. However, Colorado was awarded \$100 million in grants in the 2nd and final round of the NTIA BTOP program. The total amount of the award after matching funds are added is \$146M. These funds will be used to build out infrastructure to community anchor institutions to make higher speed broadband more affordable and accessible in rural and under-served communities across Colorado. The project plans to improve broadband access for as many as 230 community institutions. As many as 3.8 million people stand to benefit, as well as 50,000 businesses.¹

Additionally, voters will choose representatives for the Colorado State Board of Education. The Colorado State Board of Education provides guidance on education issues, and the Colorado Department of Education (CDE) administers education details for the Board. The Board is comprised of seven members that represent each of the state's congressional districts and the term for each board member is six years. The Board and CDE are dedicated to increasing achievement levels for all students through setting high academic standards, challenging assessments, and establishing accountability measures that tie the accreditation of school districts to student achievement.

¹ The Colorado Independent, The American Independent News Network, 9/13/10



IEEE Denver Section Federal Government Update

Highlights of important federal legislative and regulatory developments that affect U.S. engineers and other technology professionals

It is truly remarkable to consider how many really hard questions and issues are "queued up" in Washington DC these days ... despite the fact that they are queued up because DC is in the throws of mid-term election grid lock. (i.e., by anyone's measure there is an amazing lack of legislative work because many law makers are focusing on the election.)

None the less, there are a number issues that are being looked at in DC that concern many IEEE members

Continued on next page

“... we find ourselves in a country where much has changed--and a great deal has not.”

here in the Denver section and across the US.

- Reorienting NASA's human space flight program has been held up by Congress's appropriations process. Congress still needs to finish FY2011 and it looks like this will only be able to happen after the election in November.

- Not everything is completely gridlocked though. There's been some movement by the House Commerce Committee on so called Network Neutrality legislation which is supposed to secure the internet by keeping it a domain where innovation and openness are the norm.

- On a related note, in September a report from the National Academies titled "Rising Above the Gathering Storm, Revisited: Rapidly Approaching Category 5" was released. It records the progress made in 5 years since first release of this title. In short, some feel that U.S. government and industry are letting the crucial strategic issues of U.S. competitiveness slip below the surface. The first release of this report cautioned: "Without a renewed effort to bolster the foundations of our competitiveness, we can expect to lose our privileged position." Since that time we find ourselves in a country where much has changed--and a great deal has not.

- The "America COMPETES Reauthorization Act of 2010" is still in process. This bill is the basis of many federal programs that fund pure scientific research and other technology-centric programs managed by federal laboratories like those here in Colorado. Many of Colorado's federal labs could be directly affected should this Reauthorization Act fail to pass the Senate. As of the end of June it passed the House with the help of Colorado's 7th CD representative and has now been referred to the Senate Committee on Commerce, Science, and Transportation.

- House Hearing on Standards for Health IT: Meaningful Use and Beyond - The House Science and Technology Committee has scheduled a hearing for September 30th on the issue of health IT. Witness testimony will be available online.

- On the Federal Agency front, the FCC finally finished its work on the TV Whitespace ruling in September enabling the TV spectrum freed by the DTV transition. It remains to be seen whether that spectrum will align well with the FCC's National Broadband Plan released earlier this year.

- The Department of State's Hillary Rodham Clinton announced the Global Alliance for Clean Cook stoves, a new public-private initiative to create a thriving global market for clean and efficient household cooking solutions. Along with EPA Administrator Lisa Jackson and other Founding Partners, Secretary Clinton outlined partnership and financial commitments of the Alliance. Led by the United Nations Foundation, the Global Alliance for Clean Cook stoves will address one of the greatest threats facing developing countries and their populations—the extraordinarily high exposures to toxic smoke from indoor fires and inefficient cook stoves. These stoves cause nearly 2 million deaths each year with young children and adult women suffering the vast majority of this terrible burden.

Eta Kappa Nu Becomes Official Honor Society of IEEE

Effective September 1, 2010, IEEE announced that Eta Kappa Nu (HKN), a non-profit, public-service organization comprised of nearly 200 university Chapters, is now the official honor society of IEEE. IEEE-HKN will recognize scholarship and academic excellence in student leaders, young professionals, and eminent scholars in the technical fields of interest of IEEE.

The completion of the merger makes HKN an organizational unit of IEEE. It will be headed by the IEEE-HKN Board of Governors, which is elected by the Chapters of HKN and is responsible for HKN's customs and rituals, criteria for membership, and managing resources. All of the existing 200 HKN Chapters will continue to operate as they have in the past. Beginning in 2011, new HKN inductees would also join IEEE as members.



ETA KAPPA NU

Electrical and Computer Engineering Honor Society

AUGUST MEMBERSHIP HIGHLIGHTS

August marked the end of the 2010 membership year, with IEEE membership being up 10,182 members, +2.8% year-over-year growth. As of August, IEEE is 22,300 new members short of the 400,000 member-mark. The 2010 membership year retention rates include a nominal decrease in higher-grade retention, with student retention improving.

Year-over-year Society memberships were up by 12,774 in August 2010, a 4.1 percent increase. Nineteen Societies gained members, with three Societies driving 77% of the gains. Ten Societies lost members, while memberships in nine Societies stayed the same.

Denver Section Retention - 86.3%

Let's Welcome the New Denver Section Senior Members:

Angus,	Allan
Carbo,	Timothy
Faus,	Robert
Fritz,	Jason
Fulton,	Thomas

Glover,	Fred
Good,	Michael
Gruber,	David
Haines,	Jonathan
Hansen,	Fred
Herman,	Owen
Hinman,	Steven
Kar,	Mukta
Lindseth,	Bradley
Mclean,	James
Rabe,	Daniel
Ramirez,	Raul
Shihadeh,	Elias
Skaar,	Daniel
Webster,	Joseph
Weibel,	M. Curtis
Werahera,	Priya
Yunker,	Bryan
Gerecht,	Eyal
Perkins,	Michael
DRuzanski,	Evan
Vivekanandan,	Jothiram

CONGRATULATIONS!

Call for Nominations - Recognizing Outstanding IEEE Volunteers and Contributors

You can help recognize the efforts of outstanding volunteers by nominating someone for one of the prestigious [Member and Geographic Activities \(MGA\) Awards](#). Each prestigious award has a unique mission and criteria and offers the opportunity to honor distinguished colleagues, inspiring teachers, and corporate leaders, for their member engagement initiatives.

If you know someone who has made substantial contributions to the MGA Mission (Inspire, Enable, Empower and Engage Members of IEEE) at the local level, through innovative projects, exemplary leadership, service, or by fulfilling the goals as related to transnational activities, consider nominating them for one of the following awards:

- MGA Achievement Award
- MGA Innovation Award
- MGA Leadership Award
- MGA Larry K. Wilson Transnational Award
- MGA GOLD (Graduates of the Last Decade) Achievement Award

Please complete the [Online Award Nomination Form](#). The deadline for nominations is 15 October 2010.

In addition to these individual MGA Awards, MGA also presents Friend of IEEE Member and Geographic Activities Awards, which specifically recognize support provided to IEEE and its members, in support of its goals, by firms, divisions of firms, or individuals. Nominators can submit Individuals or Organizations for Friend Awards, and awards can be earned at the Supporting or Sustaining level. Please complete the [Online Award Nomination Form](#). There is no deadline for these awards, which are presented throughout the year.

Please [e-mail MGA Awards](#) with any questions about the MGA Awards and Recognition Program.

IEEE Denver Section

Mission Statement

Enrich the professional and personal lives of the Rocky Mountain Region members, developing them into valued contributors to society through quality programs, continuing education, career development and community service; in collaboration with IEEE, industry, government and academia.



The IEEE Denver Section is comprised of over 3600 engineers and technical professionals in the Denver - Boulder area.

<http://www.ieee-denver.org/>