

Technical Activities Report and Lesson Learned  
from  
“IEEE-USA Annual Meeting & SusTech Conference”  
Double Tree Hotel, Portland, Oregon  
August 1 to 4, 2013  
by

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IEEE Fort Wayne Section on Facebook: <https://www.facebook.com/pages/IEEE-Fort-Wayne-Section/518319168221137>.

IEEE Fort Wayne Section Web site: <http://www.ieeefortwayne.org/>

1. IEEE Fort Wayne Section Facebook and Conference Activity Blog was proposed by Paul Lin for engaging section member on what he learned and saw at the conference: <https://www.facebook.com/pages/IEEE-Fort-Wayne-Section/518319168221137>.
2. 2013 IEEE-USA Annual Meeting & Sustainability Conference, was held from Aug. 1-4, Portland Oregon: "Sustaining Careers and the Profession" of 210,000 engineering, computing and technology professional who are U.S. members of IEEE. The conference will start out with a day and half conference on "Technology for Sustainability (SusTech)." The conference program can be found at: <http://sites.ieee.org/sustech/conference/program/>
3. Paul arrived Red Lion Hotel on July 31, one day prior to the conference. While reading Indiana Economic Development Corporation - IEDC Pipeline <http://www.in.gov/activecalendar/> , added tech news to the Facebook: Enerdel Batteries - new battery technologies (super lithium-ion solution) developed at Indianapolis, <http://www.enerdel.com/> .
4. Paul also gathered and added Portland's Industry Climate and Business Environment and feed them to the section's Facebook. Oregon state recognized its five key industries in which it hold global competitive advantages: Advanced Manufacturing, Clean Technology, Forestry & Wood Products, High Technology, and Outdoor Gear & Active wear .. according to Business Oregon, <http://www.oregon4biz.com/The-Oregon-Advantage/Industry/> and other business info can be found at Oregon Business Development Resources: [www.oregon4biz.com](http://www.oregon4biz.com) .
5. IEEE USA SunTech, Aug. 1 morning activity highlights 6:20 PM, 8/1 by Paul Lin  
It was a very busy and productive day. I attended the following SunTech paper presentations in the morning sessions, 20 min per each presentation, average number of attendees is ranged from 25 to 36:

- 1) Residential Water Heaters as a Grid-Scale Energy Storage Solution using Model Predictive Control, presented by Keley Lajoie, Oregon State University



- 2) On the Usage of Storage Systems in the Response of Ramping Costs and High Penetration of Renewables, presented by Alberto J. Lamadrid, Lehigh University



- 3) Reliability-Driven Optimum Standby Electric Storage Allocation for Power Distribution Systems, presented by Salman Kahrobaee, University of Nebraska-Lincoln

- 4) Information & Communication Technology-Based Solutions in Achieving Building Energy Efficiency (an Intel sponsored research), presented by Haufen Hu, Portland State University



- 5) Advancing Industrial Sustainability through Energy Efficiency Improvements in Motor and Motor-Driven Systems, presented by Baskar Vaiarmohan (EPRI)

- 6) Server Sky – Computation & Power in Orbit, presented by Keith Lofstrom (Server Sky & SiidTech)



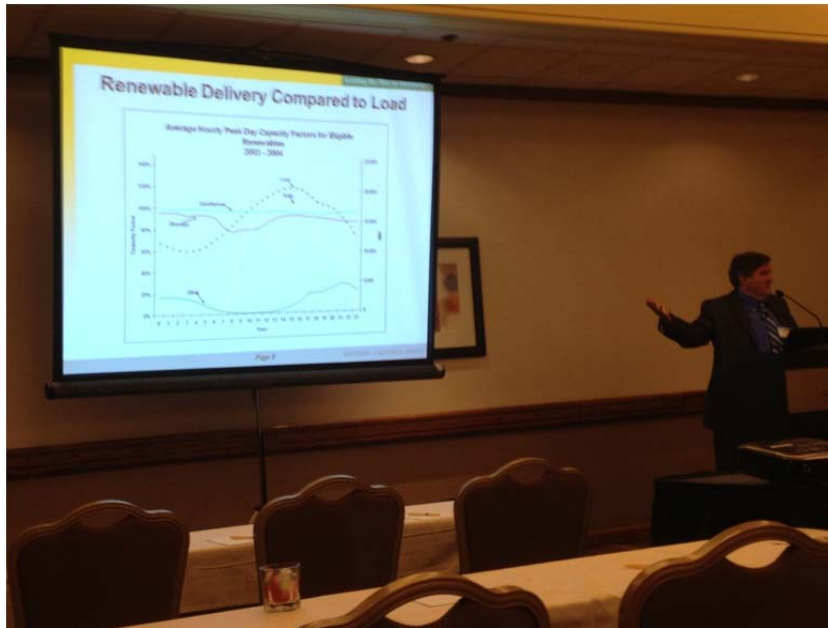
- 7) Piezoelectric Sensor for Taxiway Airport Control Systems, presented by Wei-Da Hao, Texas A&M

6. The lunch started around 12:30 PM, with the keynote speaker, Thomas P. Seager, Arizona State U presented a talk on "Systems Thinking for Sustainability."



7. Then the attended afternoon Invited Speaker presentations from 2:30PM-5:00PM include
  - \* Overview of SCE Solar Programs, by Rudy L. Perez, Southern California Edison





- \* Meeting the Tech Challenges of Integrating Wind Power Plants with the Grid Power Plants with the Grid, Chris Walford, Puget Sound Energy
- \*Energy Harvesting Technologies for Structural Health Monitoring Application, Changki Mo, Washington U Tri-Cities

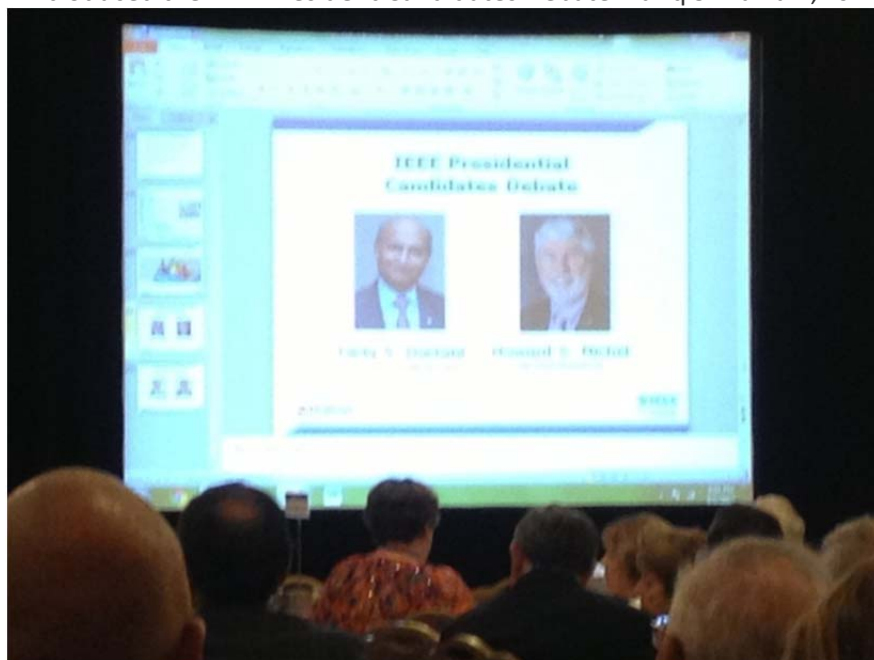


- \*Green Design: Field Lessons in Repairable Consumer Electronics Engineering, Kyle Wiens, iFixt
- Lithium-Ion Battery Pack Research and Development at Brammo, Inc
- \*\* A picture of Rudy Perez, SEC – presentation

8. The 1st day (Thursday), Aug. 1 meeting was ended with an Opening Dinner Ceremony started at 7:30PM, and the agenda: Welcome, by Ed Perkin, Mike Andrews, Lee Oien; Opening Remarks by Marc Apter, 2013 IEEE-USA President:



Marc Apter then introduced the IEEE President Candidates Debate: Tariq S. Durrani, vs. Howard E. Michel:



And then the IEEE-USA President Candidates: Peter A. Eckstein vs. James A. Jefferies. Left the dinning hall at 9:55PM. ... 15 hours working hours for today ... Paul Lin, Vice Chair of Fort Wayne Section.



9. As shown in the Facebook, Paul said “Good morning & happy Friday to all of you! “ and added some info gathered from the conference exhibits to the Section’s Facebook:  
<https://www.facebook.com/pages/IEEE-Fort-Wayne-Section/518319168221137>  
 \* IEEE-USA – Building Careers & Shaping Public Policy, [www.ieeeusa.org](http://www.ieeeusa.org)  
 \* Info form IEEE Consultants Networks: [www.usa.org/communications/ebooks](http://www.usa.org/communications/ebooks),  
[www.careers.ieee.org](http://www.careers.ieee.org) , <http://careers.ieee.org/> , <http://ieeeusa.org/business>  
 \* Student Career Development Activities, [www.ieeeusa.org/committees/SPAC](http://www.ieeeusa.org/committees/SPAC)  
 \* CONNECT myScience, myMath, and myEngineering sites: [www.eweek.org](http://www.eweek.org)  
[www.tryengineering.org](http://www.tryengineering.org), [www.tryscience.org](http://www.tryscience.org), [www.tryscience.org](http://www.tryscience.org), [www.engineeringk12.org](http://www.engineeringk12.org)  
 \* IEEE-USA Engineering & Diplomacy Fellowship program: [www.ieeeusa.org/policy/govfel/state.asp](http://www.ieeeusa.org/policy/govfel/state.asp)  
 \* IEEE-USA Congressional Fellowships program: [www.ieeeusa.org/policy/govfel/](http://www.ieeeusa.org/policy/govfel/)
  
10. SusTech Conference continued its second day program (Aug. 2) with three parallel tracks, from 8:30am-12:00 noon: SmartGrid III, Energy Efficiency II, and Quality of Life. I attended the following invited talks:
  - \* Progress in Technology for Energy Efficiency, by Dan Donahoe, 1000 kilometers LLC
  - \* Green Data Center Technologies Case Study: Using as Little as Possible, as Efficiency as Possible, by Steve Knipple, Easy Street Online Services, Inc.
  - \* The Changing Utility Business Model & Challenge for Energy Efficiency, Mike Weedall, E-Source
  - \* Smart Grid .. A Team Sport, Charles Speicher, McAfee
  - \* Securing the Modern Grid: The Way Forward, Patric Miller, The Anfield Group
 The SusTech Conference is concluded around noon time.



11. IEEE-USA Meeting and Presentations started from the afternoon of Aug. 2., Paul attended one invited presentation and one training workshop:
- \* Your Career in a Sustainable World, by Gary Perman, Oregon Section Chair, Permantech.com
  - \* Conference Organizers Workshop

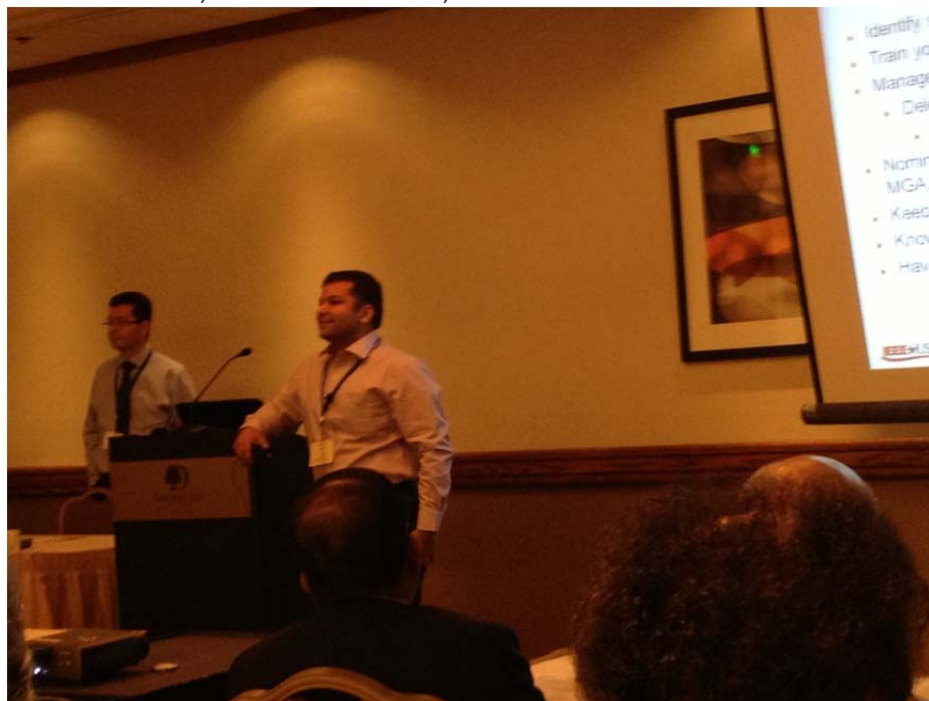




12. On Aug. 2, from 5:45-7:30PM, the Region 4 breakout session was organized and conducted by Region 4 PACE Chair, Tarek Lahdhiri. Note the acronym: PACE (Professional Activity Committee for Engineer). The website of Region 4 Committee Members (leaderships) can be found at: <http://www.ewh.ieee.org/reg/4/committee.php>. And I had the chance to meet James Riess, Immediate Past Director; Karen S Pedersen, Region 4 Director; Robert C. Parro, Director-Elect; Bernie Sander, R4 Treasurer; David Koehler (Doble Engineering Company), East Area Chair; Tim Alt (Rolls-Royce), Central Indiana Section Chair; John Nirschl (Rockwell Collins), Cedar Rapid Section; Ed Barrett, Chicago Section Chair; John Zulaski, Chicago Section (Science Kits for Public Libraries); Hamid Vakilzadian (Univ. of Nebraska Lincoln). The Region 4 attendees had their dinner at Newport Seafood Grill to conclude the day, <http://www.newportseafoodgrill.com/>.



13. From 8:00-8:55 AM, Aug. 3, Saturday, Paul learned quite a lot from attending TRACK 2's presentation on "Professional Activities for Member Engagement," presented by Ravi Todi, IEEE-USA Professional Activities Chair, and Tarek Lahdhire, R4 PACE Chair:





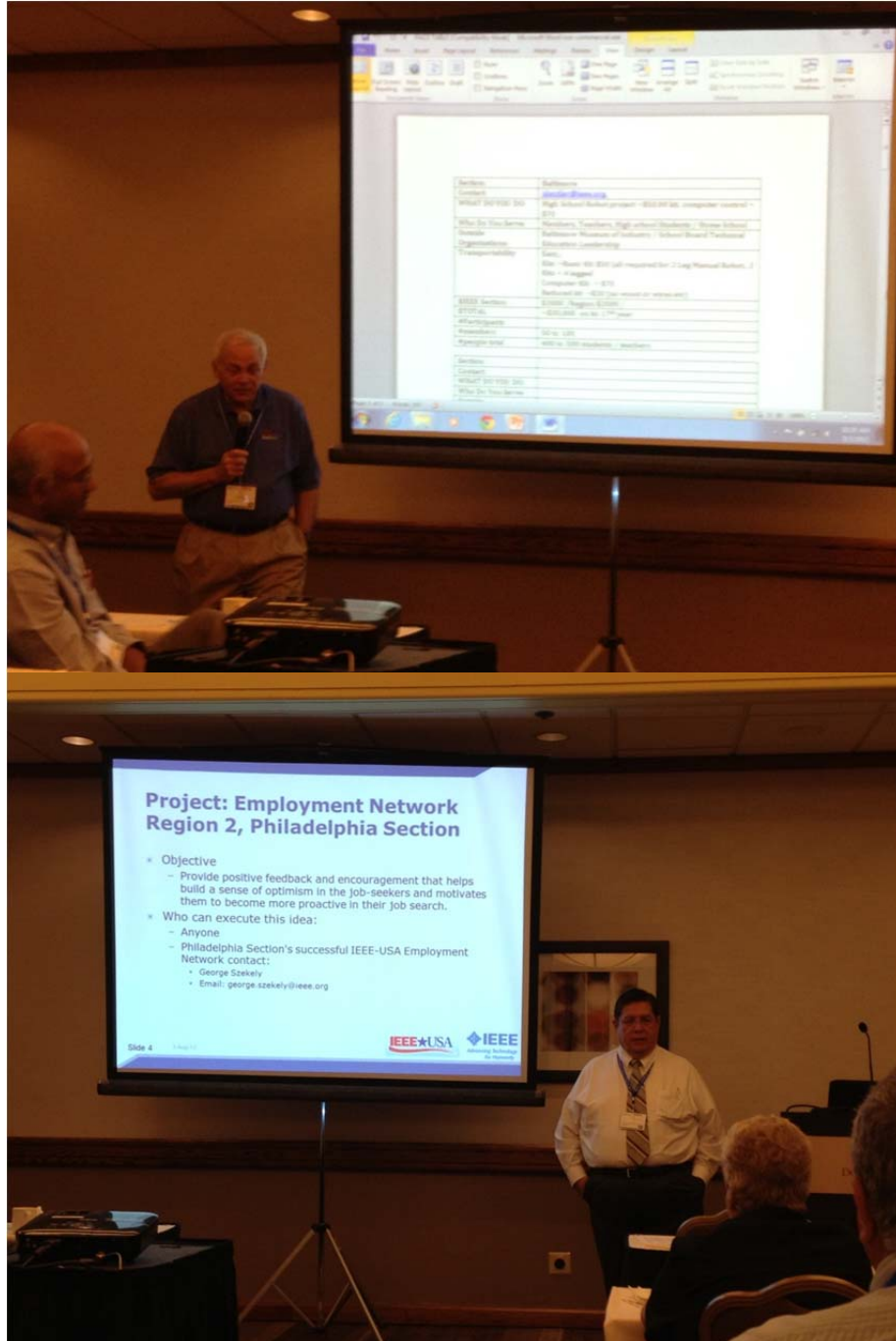
14. Aug. 3, Saturday, Paul attended the TRACK 3' presentation, 9:00-9:40AM, on "Entrepreneurship: Creating your Future," an Open Panel Session with speakers: Mark Wingate (Chair of IEEE-USA Entrepreneurial Activities Chair); Len Van Regenmoter (Principal at Van Regenmoter Consulting); and Steve Morris (Executive Director of OTBC).



15. Paul also learned from attending the presentation, Aug. 3, 10:00-10:50AM, organized by our friends from Region 2 on "PACE Projects Session II," with session speakers: John Dentler (Vice President of Berry Engineering Inc.); Joseph Burns (Region 2 Pre-college Education Representative, NJ), Emilio Salgueiro (Region2 PACE Coordinator, Philadelphia Section); Holly Cyrus (Project Manager, Airport Safety Technology Section, Atlantic City Int'l Airport). See the related web links: IEEE Philadelphia

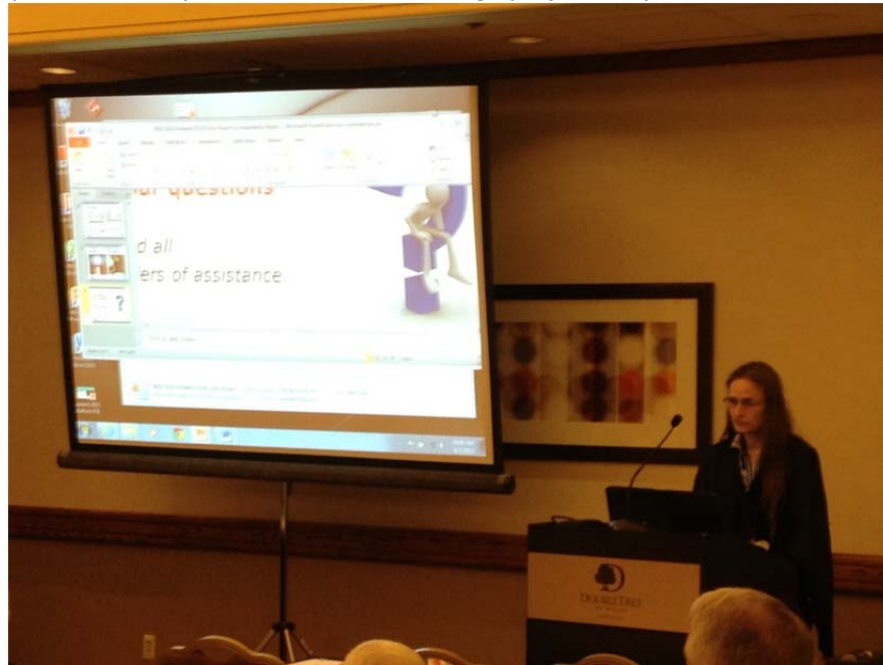
Section, <http://www.ieeephiladelphia.org/>. See the below pictures of John Dentler, and Emilio Salgueiro:

16.





And here is a picture of Holly's talk on Robot Challenge project, <http://www.robotchallenge.com/> ;



17. On Aug. 3, 10:55-11:50AM, "Public Policy and You" was first presented by Chris J. Brantley, Managing Director of IEEE-USA. And the second presenter was Gordon Day, IEEE Past President & Member of the Board of Directors, <http://gwday.net/>.



18. Aug. 3 Lunch speech was delivered by Julie-Ellen Acosta, Boeing Vice President of Structural Technologies, Prototyping and Quality, Phantom Works, on "Workforce Sustainability through Diversity." Joined Boeing since 1985, and currently located in Seattle. ... an excellent speech...Paul went on to find and add the following information found on Boeing Frontiers: "A Winning Formula," [http://www.boeing.com/news/frontiers/archive/2005/june/ts\\_sf07.html](http://www.boeing.com/news/frontiers/archive/2005/june/ts_sf07.html) ; and at LinkedIn, <http://www.linkedin.com/pub/julie-ellen-acosta/20/a84/b7b> .



19. Aug. 3, Saturday, 1:25-2:20PM, "Innovative Conference Techniques: Ignite/TEDx/Unconference," presented by John Prohodsky, Vice-Chair of Oregon Section and Chair of Computer Society Chapter. This is an interesting talk including a group discussion, jokes from <http://theoatmeal.com/> How to get 5 Million People to Read Your Web Site, <http://igniteshow.com/videos/oatmeal-how-get-5-million-people-read-your-website-ep-69>. Toward the end of the talk, Paul Lin also shared our Fort Wayne Section' on Facebook's experience on using Facebook's Blog - many enquiry & excellent publicity for our Section. Here is John Prohodsky's picture.



The attendees James N. Riess, Bernie T Sander, ...

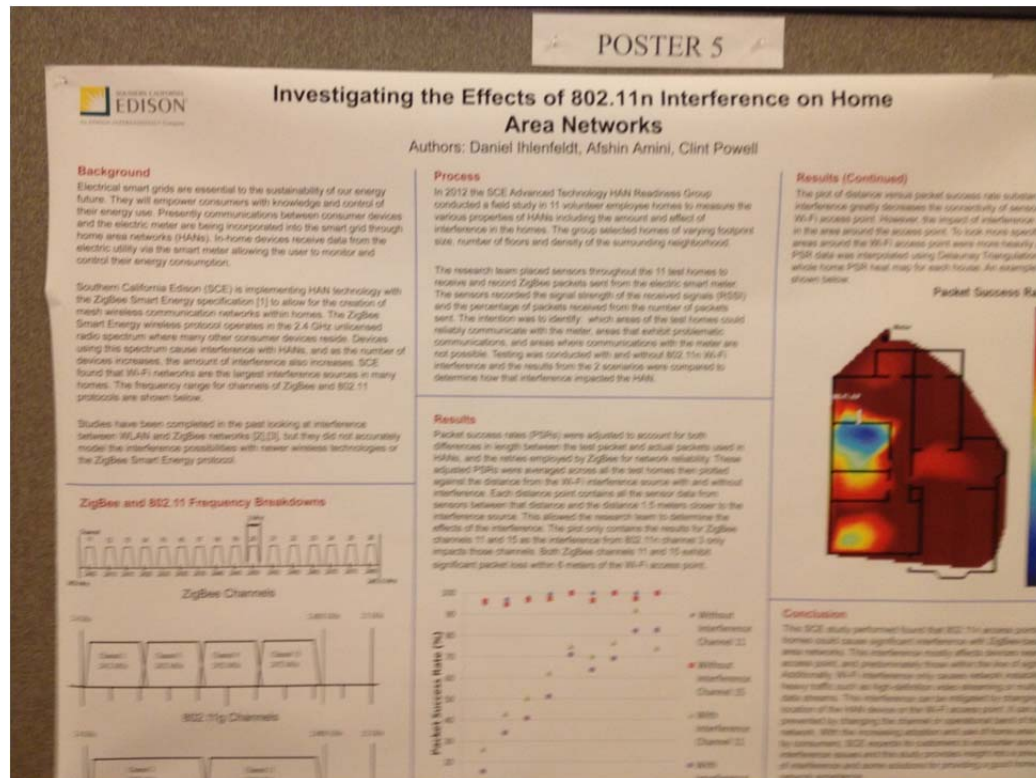
20. Aug. 3, 2:20-3:00 PM, Paul also attended the invited presentation on "Importance of IP in Your Professional Career," presented by Keith Grzelak (partner with Wells St. John PS in Spokane, WA, [www.wsrg.com](http://www.wsrg.com)), a member of IEEE-USA IP Committee and Chair of IPC from 2007-2010. Topics included patents, copyright, trade secret, trademark & service mark.



21. Paul Lin also visited the Poster Session, <http://sites.ieee.org/sustech/conference/program/>
- 1) **"Wind Power Ramping in BPA Area,"** James Mullen (Washington State University – Tri-Cities, USA); Mohamed Osman (Washington State University-Tri-Cities, USA)
  - 2) **"WSN Based Tracking for a Concentrating Solar Thermal Energy System,"** Joshua D Freeman (Amrita University, India); Jibin Varghese (Amrita Vishwavidyapeetham, India); Divya Pullarkatt (Amrita Vishwa Vidyapeetham, India)
  - 3) **"Battery Recharging and Testing Swap Stations,"** Russell Ellis (Portland State University, USA); Caitlin Fackrell (Portland State University, USA); Thatcher Gordon (Portland State University, USA); Phil Lamb (Portland State University, USA); James Morris (Portland State University, USA); Charlie Kawasaki (BETTER, Inc., USA)
  - 4) **"Communication(s) and Technology in Spectrum Implementation with Body Earth,"** John Vinson (Bonneville Power Administration Retired, USA)

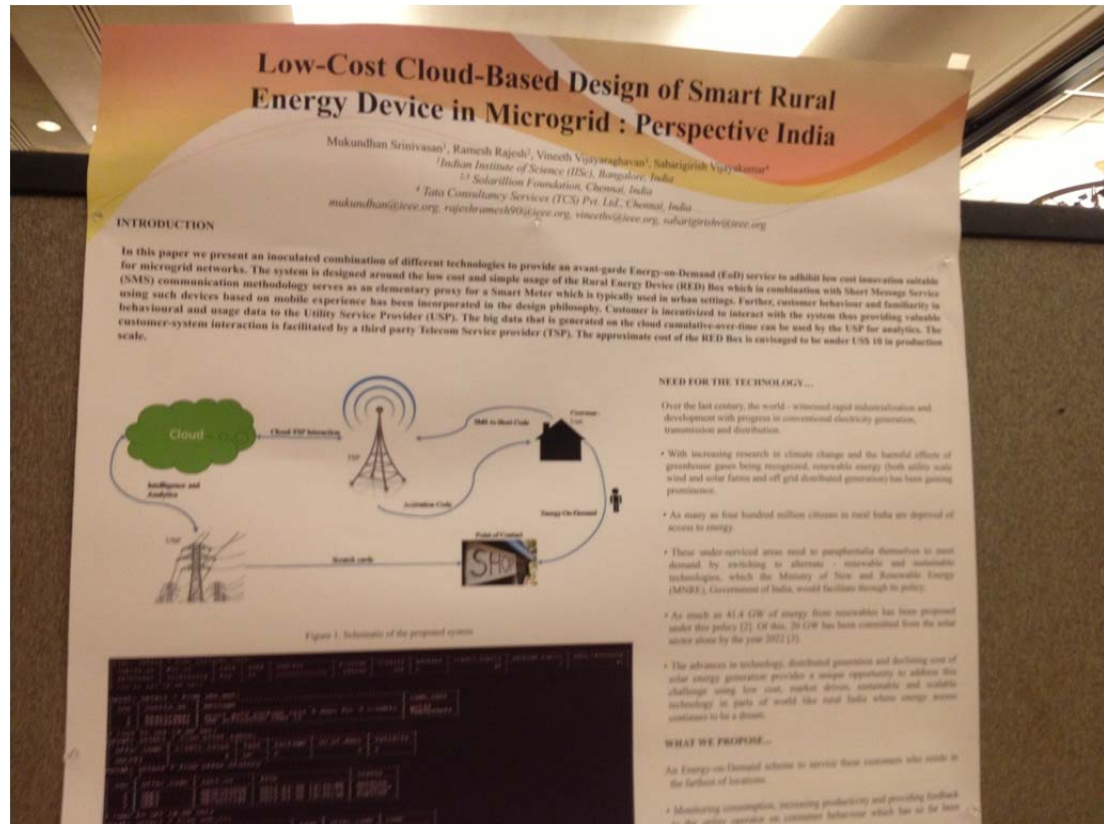


- 5) **“Investigating the Effects of 802.11n Interference on Home Area Networks,”** Daniel Ihlenfeldt (Southern California Edison, USA); Clint Powell (SCE, USA); Afshin Amini (SCE, USA)



- 6) **“Integrating heterogeneous distributed energy resources to manage intermittent power at low cost,”** Shahin Abdollahy (University of New Mexico, USA); Olga Lavrova (University of New Mexico, USA); Nicholas Heine (University of New Mexico, USA); Svetlana V. Poroseva (University of New Mexico, USA); Andrea Mammoli (the University of New Mexico, USA)
- 7) **“Supercapacitor Energy Storage Systems for Voltage and Power Flow Stabilization,”** Arne Bostrom (OSU, USA); Annette von Jouanne (Oregon State University & School of EECS, USA); Ted Brekken (OSU, USA); Alex Yokochi (OSU, USA)
- 8) **“Low-cost solar micro-forecasts for PV smoothing,”** Andrea Mammoli (University of New Mexico, USA); Anthony Menicucci (University of New Mexico, USA); Thomas Caudell (University of New Mexico, USA); Abraham Ellis (Sandia National Laboratories, USA); Steve Willard (Public Service Company of New Mexico, USA); John Simmins (Electric Power Research Institute, USA)

- 9) **“Low-Cost Cloud-Based Design of Smart Rural Energy Device in Microgrid: Perspective India (An Energy-On-Demand Service for Rural India),”** Mukundhan Srinivasan (Alpha College of Engineering & Anna University, India); Vineeth Vijayaraghavan (Panchabuta, India); Sabarigirish Vijayakumar (TCS Pvt Ltd, India); Ramesh Rajesh (The Solarillion Foundation, India)



- 10) **“Variable Energy Resource Induced Power System Imbalances: A Generalized Assessment Approach,”** Aramazd Muzhikyan (Masdar Institute, UAE); Amro Farid (Masdar Institute, UAE); Kamal Youcef-Toumi (MIT, USA)
  - 11) **“X-View: The Reichmuth Framework II,”** Terry Egnor (Energy Resource Management & Energy Resource Management, USA); Howard Reichmuth (Energy Resource Management, USA)
  - 12) **“Study on the Effect of Solar Irradiance Intermittency Mitigation on Electric Vehicle Battery Lifetime,”** Alexander Brissette (University of Colorado, USA); Anderson Hoke (University of Colorado Boulder, USA); Joshua Traube (University of Colorado, USA); Fenglong Lu (University of Colorado, USA); Dragan Maksimovic (University of Colorado Boulder, USA)
  - 13) **“Current Total Harmonic Distortion Calculation of Interior Permanent Magnet Synchronous Traction Motors for HEV/BEV Applications,”** Leon Jin (Oregon State University, USA)
22. In conclusion, Paul welcomes any questions on 2013 IEEE-USA Annual & SusTech Conference and he can be reached at [lin@ipfw.edu](mailto:lin@ipfw.edu); For more info on Prof. Paul Lin’s technical activities & presentations, and courses on the Web, please visit [www.etec.ipfw.edu/~lin](http://www.etec.ipfw.edu/~lin) . Thank you!