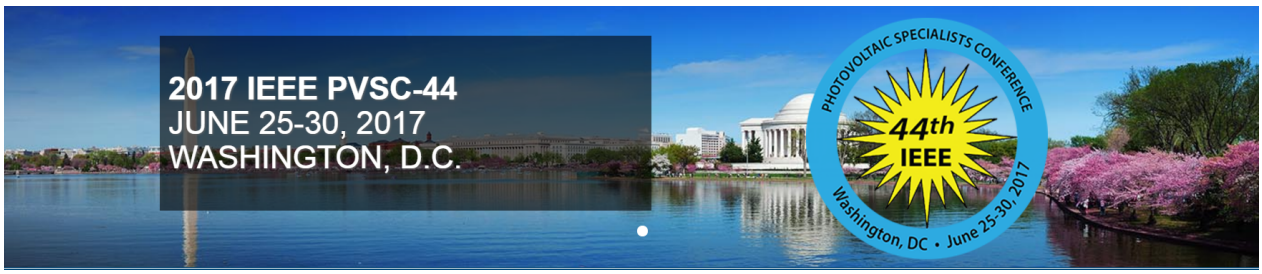


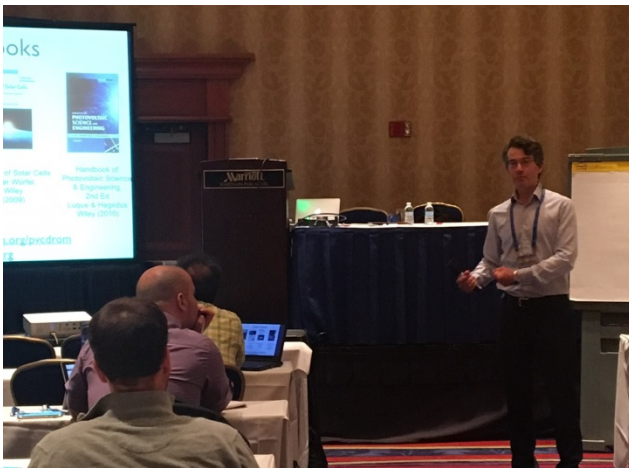
Welcome to the 44th IEEE Photovoltaic Specialists Conference in Washington DC. With over 1250 attendees, this year's conference promises to deliver continuous highlights across all 12 areas, in keeping with the high standards of previous incarnations of the PVSC.

Many of us have already had a chance to take in the gorgeous area surrounding the Wardman Park Marriott, where this year's event is taking place. The National Zoo is a real treat that is within walking distance and there is always the National Mall and surrounds just a short ride away.

As usual this year's PVSC events kicked off on Sunday with 12 tutorials across a wide range of photovoltaic research and applications, spanning fundamentals, all the way to reliability and utility scale installations. Around 340 attendees including those new to PV, those wanting to broaden their knowledge, or just wanting to refresh their knowledge, got a chance to interact with leading researchers in these areas and hear the latest insights. Newer and emerging areas such as perovskites and III-V on silicon integration were covered for the first time, as well as new system topics of building integrated PV and storage. This kicked off some intense discussions amongst attendees. Maybe the next big idea was inspired by these sessions and we'll see the results next time we meet!

Photovoltaics International

In the morning sessions Ned Ekins-Daukes took attendees through the Fundamentals of Photovoltaics, whilst Keith McIntosh gave a tutorial looking into the optical modelling of solar cells and modules. Andreas Cuevas looked at silicon solar cells and how they operate and how to make them, whilst Thorsten Trupke and Martin Schubert looked at some of the most advanced methods for characterizing solar cells. Sarah Kurtz and John Wohlgemuth spoke to attendees on PV module reliability and its important impacts on their life cycle costs, while Erika Brosz and Clifford Hansen looked at the design, modeling and more of utility scale power plants, an area of increasing interest.



After a break for lunch and a chance to explore a little it was on to the afternoon sessions. Characterization of solar cells and modules was covered by Gerald Siefer and Yoshihiro Hishikawa, while Timann Kuhn and Christoph Erban spoke about the integration of PV into buildings. Steve Hegedus provided a nice summary of the CdTe, CIGSe and a-Si/nc-Si technologies. At the same time Myles Steiner and Tyler Grassman ran the tutorial on III-V multijunction solar cell and for the first time on III-V/Si tandems. The apparently ‘hot’ research areas of perovskites and dye sensitized solar cells were covered by Anders Hagfeldt and finally the topic of stationary storage systems, increasingly important for large scale PV, was covered by Kai-Philipp Kairies.

A big thanks to all of those running the tutorials and the chairs Frank Dimroth and Stephanie Tomasulo for giving so much of their time to make the tutorials so worthwhile for all of the attendees.

While all of this was going on, the High School PV Competition was taking place in the main ballroom, with a lively room of discussions between current PV specialists the next generation of PV specialists. We were treated to a look at several novel PV applications such as PV powered UAVs (unmanned aerial vehicles, i.e. airplanes), solar cells for underwater power, a solar system integrated in a water tower, and a solar powered personal computer! Four cash prizes were awarded at the end of the day, with all of the teams expressing their excitement and vowing to continue their research in the next school year and beyond.

Here are the winners and below is a photo of all of the participates and their projects:

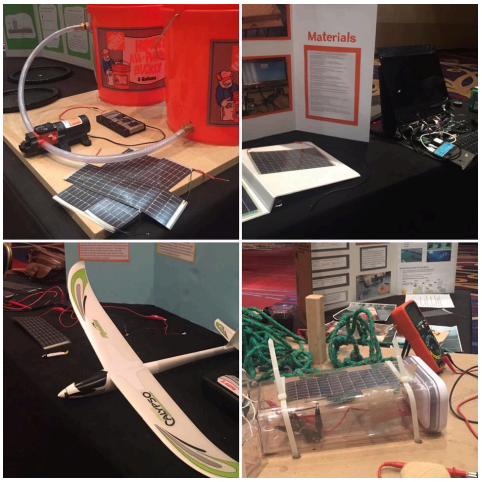
1st Place: Photovoltaic Cell Efficiency at Various Depths – The team tested the voltage output of PV operating under water as a function of depth.

2nd Place: Solar Berry – The team developed a low-cost portable computer based on a raspberry pi, running from portable battery packs charged by PV.

3rd place was a tie between:

Solar Power Water Tower – The student proposed covering water towers with PV to power the pumps used to elevate the water, and developed a pump demonstration.

Flying on Sunshine - Investigated using PV on a model airplane to extend the flight time though battery charging.



Well done to all of the teams and organizers, and thank you to all of the attendees who dropped by to have a look at how the next generation of PV specialists are doing their bit for PV.

So the opening weekend of the 44th IEEE PVSC conference is done! If you don't have tickets for this year's Conference Banquet, which will be held at the amazing Smithsonian Air and Space Museum on Thursday evening, ask about them at the conference registration desk.

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IEEE ELECTRON DEVICES SOCIETY - MEMBERSHIP PROMOTIONS FOR 44th PVSC ATTENDEES

Be sure to stop by the EDS membership booth, located in the registration area, to learn about the EDS membership promotion deals available to PVSC attendees.
EDS members enjoy a host of important benefits including free, unlimited online access to the IEEE Journal of Photovoltaics. So stop by to learn more. Don't miss this opportunity to become part of the EDS community!

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