

The 2012 Applied Superconductivity Conference

November 18, 2012 (HE68). The 2012 Applied Superconductivity Conference, held at the Portland Convention Center in Portland, Oregon, USA, from October 7 through October 12, set a record in attendance with 1,646 registered attendees representing 52 different countries. The Conference was chaired by Steve Gourlay of the Lawrence Berkeley National Laboratory (LBNL), Berkeley, California, USA. The Program Committee was chaired by GianLuca Sabbi also of LBNL.

ASC 2012 marked the beginning of the second century of superconductivity. The last century has seen tremendous expansion of the field, from an extraordinary physical phenomenon confined to the laboratory to a broad variety of applications. It was clear from the level of participation, that the field of applied superconductivity is doing quite well after 100 years. The program committee did an excellent job in capturing the theme of “The Next Century of Superconductivity” in their choice of plenaries and the general technical program.

The technical program started on Monday, October 7th, with a plenary talk by Dr. Barry Muhlfelder from Stanford University titled “Gravity Probe B: Testing General Relativity in Space with Superconductive Gyroscopes” (photos 1 and 2).



Photo 1. Steve Gourlay, Chair, introduces Barry Muhlfelder.
Courtesy of CSA, photo © by Katharine Kimball



Photo 2. Barry Muhlfelder delivering his plenary talk.
Courtesy of CSA, photo[©] by Katharine Kimball

This was followed by the [IEEE CSC Awards](#) ceremony. The CSC website and also ESNF (“People” Section) provide details on these awards. [The Roger W. Boom Award](#) of the Cryogenic Society of America was also presented.

At the end of the ceremonial session, Bruce Strauss remembered major scientific contributors to superconductivity that passed away recently.

This was followed by another plenary talk titled “Beyond the Helium Conundrum,” by Bartek Glowacki from the Institute of Power Engineering, Warsaw, Poland & University of Cambridge, Cambridge, UK.

Later during the day, all the awardees were honored at the Awards Luncheon sponsored by CSC, where they also presented short acknowledgement talks. The group photo 3 shows all the CSC awardees. Group photo 4 shows those authors of Van Duzer Prize papers 2010 and 2011, who were present at the luncheon, together with the Editor-in-Chief of IEEE Transactions on Applied Superconductivity, Justin Schwartz, and the CSC V-President Publications, Alan Kleinsasser.



Photo 3. CSC Awardees, from left to right: standing Stuart Berkowitz and Michael Greene. Sitting: Bruce Strauss, John Clem and Clark Hamilton. Courtesy of CSA, photo[©] by Katharine Kimball



Photo 4. Authors of Van Duzer Prize papers 2010 and 2011. From left to right: Alan Kleinsasser CSC V-Pres. Publications, , Frank Werfel (2010), Uta Floegel-Delor (2010) and Leonid Kuzmin (2011). Standing at the far right is Justin Schwartz, retiring Editor-in-Chief of *IEEE Transactions on Applied Superconductivity*. Courtesy of CSA, photo[©] by Katharine Kimball

Tuesday morning kicked off a series of talks celebrating the 50th anniversary of the discovery of the Josephson Effect with presentations by D. G. McDonald of Boulder, Colorado, USA and J. M. Rowell of Arizona State University, Tucson, Arizona, USA. Later in the day these were followed by four more

talks on the topic by A. Silver, Colorado, USA, J. Clarke, University of California-Berkeley, Berkeley, California, USA, R. Kautz, National Institute of Standards and Technology, Boulder, CO, USA and K.K. Likharev, Stony Brook University, Stony Brook, NY, USA.

Wednesday morning began with a plenary talk titled "Recent Advances in Iron-based Superconductors: Actors are Ready," by H. Hosono from the Frontier Research Center, Tokyo Institute of Technology, Yokohama, Japan.

Thursday began with a plenary dealing with one of the ultimate applications of superconductivity, the LHC and the search for the Higgs in a talk titled, "Superconductivity and the Quest for the Fundamental Law of the Universe," by R. Aleksan from CEA Saclay, Cedex, France.

The conference was wrapped up with a plenary presentation by M. Beasley from the Geballe Laboratory, Stanford University, Stanford, CA, USA titled, "The Search for New Superconductors from an Applications Perspective."

Over 1,600 abstracts were submitted to the technical program committee chaired by GianLuca Sabbi of the Lawrence Berkeley National Laboratory. Of these, 1,332 were presented at the conference. The number of organized oral and poster sessions was similar as at the preceding ASC meetings. Overall, 814 manuscripts were submitted to ASC for possible publication in *IEEE Trans, Appl. Supercond.* vol 23 (2013). The highest number of manuscripts (188) originated from the US (some in collaborations with overseas). Other countries contributing many manuscripts were Japan (192), Korea (104), China (81) and Germany (38).

Social events of the Conference included three receptions where the participants could socialize, discuss and exchange views. On photo 5 (next page) Herbert Freyhardt (TcSUH, and GWDG, Germany, co-Editor of ESNF, left) and Peter Lee, FSU, co-Chair of the Materials Program Committee, at one of these events.



Photo 5. Herbert Freyhardt (TcSUH, left) and Peter Lee, Co-chair of the Materials Program Committee. Courtesy of CSA, photo[©] by Katharine Kimball.

The next ASC will be held in Charlotte, North Carolina, USA, from August 10 to 15, 2014. The Chair of that conference will be Elie Track of Hypres, Inc.

Steve Gourlay