

Overview of ASC 2014

October 31, 2014 (HE92). The 2014 Applied Superconductivity Conference was held at the Charlotte Convention Center in Charlotte, NC, from August 10 to August 15 and was chaired by Elie Track. The attendance was commensurate with the previous two ASCs, with 1624 attendance records including 128 exhibitor representatives. The theme of the conference was “race to energy efficiency” with symbolism drawn from the auto racing referred to as NASCAR (National Association for Stock Car Auto Racing).



Photo 1. Conference Chair Elie Track (center) with Program co-Chairs Kathleen Amm and Michael Parizh opening the 2014 ASC in racing suits, symbolizing the “race to energy efficiency.”

The energy efficiency theme was featured in a number of presentations, including the welcome address by Lee Mazzocchi of Duke Energy, the keynote presentation by Ronald (Ron) Schoff of the Electric Power Research Institute (EPRI), the plenary presentation on high performance computing by Oleg Mukhanov of Hypres, as well as indirectly by the plenary presentations about niobium mining by Tadeu Carneiro of CBMM and about the recently approved Magnetically Levitated Train (MAGLEV) project connecting Tokyo to Nagoya by Naoyuki Ueno of the Central Japan Railway Company



Photo 2. Welcome address by Lee Mazzocchi of Duke Energy (left) and keynote presentation by Ronald Schoff of EPRI (right)

The 2014 ASC set a record in the number of plenary presentations, 12, with 2 each day from Monday to Thursday and 4 on Friday. The program committee, chaired by Kathleen Amm and Michael Parizh, selected an impressive roster of plenary speakers covering topics of general interest to the ASC community of electronics, large scale and materials. All plenary talks were videotaped thanks to CSC sponsorship, and will be made accessible as soon as possible. Slide presentations of several plenary talks appeared in Superconductivity News Forum (SNF) No. 30, and more may appear in No. 31.

The conference opening on Monday began, as has been the tradition, with a remembrance of major scientific contributors to superconductivity that passed away recently. This was followed by the IEEE CSC awards which also set a record this year with a total of 12 awardees in addition to the 2014 CSA Roger Boom award which went to Danko van der Laan of Advanced Conductor Technologies, LLC.



Photo 3. Current and past winners of the Roger Boom Award of the Cryogenic Society of America (CSA). Top row, left to right: (unknown), Justin Schwartz, Philippe Masson, Chris Rey. Bottom row, left to right: Werner Huget, Danko van der Laan, Terry Grimm, Laurie Huget

The award in the field of materials is under a new category and is named after Dr. James Wong of Supercon, Inc. The winners of this award were Peter Lee of Florida State University and Venkat Selvamanickam of the University of Houston. In the category of large scale, the awardees were Arnaud Devred of ITER, Bruce Gamble of AMSC, Evangelos Trifon Laskaris of GE, and Justin Schwartz of North Carolina State University. In the category of electronics, the awardees were Cathy Foley of CSIRO and Kent Irwin of Stanford University. The service award went to Paul Chu of the University of Houston and Harold Weinstock of the Air Force Office of Scientific Research. The entrepreneurship award – now in its third cycle - went to Chris Rey of Energy-2-Power Solutions.



Photo 4. IEEE Distinguished Awards winners for 2014. Top row, left to right: Antonio della Corte (CSC President-Elect), Arnaud Devred, Chris Rey, Justin Schwartz, Bruce Gamble, Kent Irwin. Bottom row, left to right: Marty Nisenoff (CSC VP of Awards and Recognitions), Catherine Foley, Paul Chu, Harold Weinstock, Peter Lee, Venkat Selvamanickan



Photo 5. Past and current winners of the IEEE CSC Car Rosner entrepreneurship award. Left to right: Bob Fagaly (committee selection Chair), Chris Rey (2014), Stu Berkowitz (2012), Terry Grimm (2010)

The IEEE CSC Van Duzer best paper in a regular issue of the Transactions on Applied Superconductivity was also presented to all co-authors of the selected papers – for 2013 and 2012 – on Friday morning. For 2012 there was a tie between 2 papers. The selections and their authors are listed on the IEEE CSC website.



Photo 6. Winners of the IEEE CSC Van Duzer best paper award for 2012 and 2013 with Alan Kleinsasser, CSC VP of Publications Alan Kleinsasser (far right), Marty Nisenoff, CSC VP of Awards and Recognitions (far left), and Antonio della Corte, CSC President-Elect (top left)

New for 2014 was an ASC Best Student Paper and Presentation competition organized by a committee chaired by Deep Gupta. A pre-selection was made, based on submitted extended abstracts, and the finalists made presentations to a panel of judges on Monday evening. The winners in each category (small scale, materials, large scale, and a special Alexander Shikov category) were then selected by the judges and announced on Friday morning. The list of winners is available on the IEEE CSC website and their slide presentations and extended abstracts in SNF No, 30.



Photo 7. Winners of the best student paper/presentation at ASC-2014, a new activity chaired by Deep Gupta (far right), Conference Chair Elie Track (far left) and Marty Nisenoff (2nd left).

Student support continues to be a major imperative for ASC and IEEE CSC. Besides travel support, a relatively significant contribution is through the IEEE CSC graduate study Fellowship, now in its third year. The six winners of this Fellowship were presented their certificate and monetary support on Friday morning. The selection committee was chaired by Kathleen Amm

who founded this effort three years ago. Starting with 2015, the new chair of the selection committee will be Nate Newman of Arizona State University.

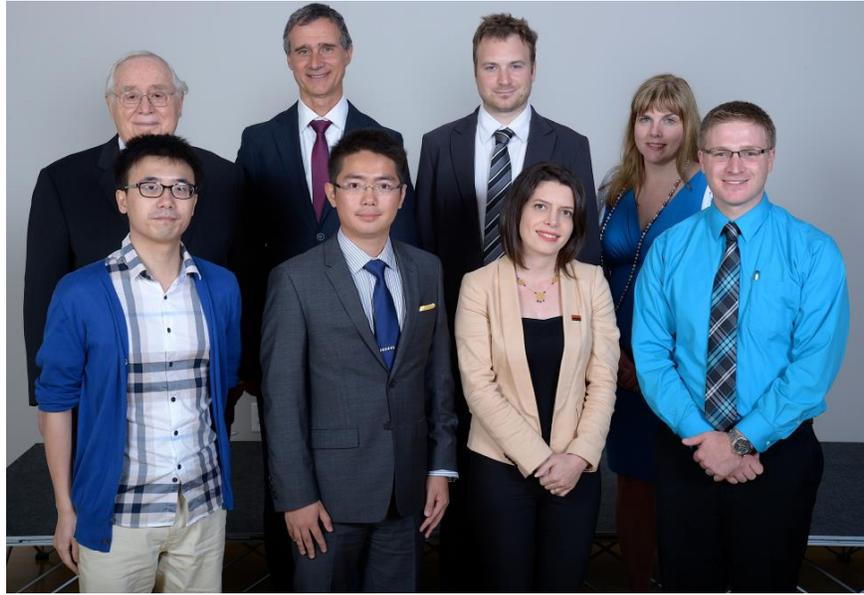


Photo 8. Winners of the 2014 IEEE CSC graduate study Fellowship, along with Marty Nisenoff, CSC VP of Awards and Recognitions, Antonio della Corte, CSC President-Elect, and Kathleen Amm, Chair of the selection committee. The students are Emmanuele Ravaioli, Nathaniel Allen, Golsa Naderi, Zizhu Peng, and Ziaohang Zhang. (Roberto Bonifetto was unable to attend)

A total of 1653 abstracts were submitted from 45 countries. Of those, 1330 presentations were made after selection, withdrawals and no-shows. These included 12 plenary presentations, 424 oral presentations and 894 posters. A number of sessions were designated as memorial sessions and those started with a 15-minutes recollection of the life and work of the particular contributor. ASC-2014 memorial sessions were held for Alexander Shikov, Hiroshi Maeda, John Clem, and Tsukasa Kiyoshi.

Two special evening sessions were held on Wednesday to commemorate 50 years of niobium titanium (NbTi) and 50 years of SQUIDs. The sessions consisted of a set of presentations as well as a panel discussion.

All plenary presentations as well as the presentations at the two Wednesday special evening sessions were video recorded and those videos will be posted for streaming on the IEEE CSC website in a few months for the benefit of the superconductivity community. This activity is sponsored by the IEEE Council on Superconductivity.

A total of 792 manuscripts were submitted to the IEEE review process and, upon review and possible revisions, appearance as a special issue of the IEEE Transactions on Applied Superconductivity (TAS). The editorial work for review of the submitted papers is in full swing, under the leadership of the Special-Issue Editor-in-Chief Lance Cooley and already a number of the papers that have completed the cycle of review, possible revisions, and acceptance, are posted on IEEE Xplore. The Special Issue will appear in print as the June issue of the Transactions on Applied Superconductivity (TAS) and all ASC-2014 attendees will receive a corresponding CD.

The social highlights included a city tour provided at no cost to the attendees on Sunday and which proved to be very popular and successful. The banquet speaker on Thursday was Jorge Cham which many recognized as the author of the comic strip “Piled Higher and Deeper” and the website www.phdcomics.com. Jorge’s humor with a customized context for superconductivity proved to be of great entertainment value to the attendees.

Charlotte – the Queen city as it is often called – proved to be a pleasant venue and a pleasant surprise for most attendees. The weather was unseasonably pleasant with very moderate temperatures that were much cooler than normal for that time of the year.

The next ASC will be at the Denver Convention Center in Denver, Colorado, September 4 to 9, 2016, and will be co-chaired by Kathleen Amm and Al Zeller.

Elie Track
ASC 2014 Chair,
CSC President