Kryo 2010

03. - 05.10.2010
in Zeuthen

The annual conference “Kryoelektronische Bauelemente“ (Cryoelectronic Components) was held from October 3rd to October 5th, 2010 at the “Seehotel Zeuthen”. The venue is near Berlin directly at a lake in the village of Zeuthen surrounded by picturesque nature. At the conference, in years past seen as a workshop, the German community active in superconducting electronics and related cryogenics presents progress in current work and also provides a platform for discussion of the latest results presented at international conferences such as the ASC.

This year’s conference was organized by Deutsches Zentrum für Luft- und Raumfahrt (German Aerospace Center, DLR). DLR is Germany's national research center for aeronautics and space and responsible for the planning and implementation of the German space program. About 70 participants attended the workshop. Although primarily a national event, several international guests participated, namely from Bulgaria, Japan and Switzerland.

The conference was chaired by H.-W. Hübers and A. Semenov. It started in the afternoon of Oct. 3rd, the 20th anniversary of Germany’s reunification, and it is worth noting that the German cryoelectronic community is a truly unified community with active research groups from all over Germany. Two tutorials on single photon detection opened the conference. The first tutorial was given by M. Wahl from the Berlin-based company PicoQuant on “Time-resolved single photon detection”. He provided an overview on different techniques of single photon detection and their applications. In addition he pointed out key application areas and emphasized the need for applicable single photon detectors, which combine excellent detection performance with ease of use. The second tutorial was given by A. Semenov on “Superconducting single photon detectors: physics and applications”. This presentation covered the physical principles of such detectors, recent progress, and state-of-the- art performance. Both tutorials were followed by lively discussions, which continued in the evening by some beer, and represented a certain focus of interest at this meeting.

The program of the following one and a half days consisted of 20 oral presentations and 22 poster presentations. The contributions covered SQUID sensors and instruments, detectors and receivers for astronomical and other applications, Josephson junctions, SFQ and RSFQ, and devices for quantum electrodynamics and quantum optics. As in the previous years the conference provided an excellent platform for discussion, exchange of ideas, and generation of new ideas and co-operations. The detailed program of the workshop is accessible here.

The next conference, KRYO 2011, will take place in October 2011. It will be organized by the French “Institut de Radioastronomie Millimétrique”. For the first time it will be outside of Germany, in Grenoble, France.