

Report from The Technical Committee on Education

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The Committee with its 20 members lists its activities on its web page
<http://www.math.ku.edu/ksacg/AACC/tce.html>

The Committee reports the following major activities that took place in Maui, HI:

1. Workshop for 150 Middle and High School Students and Teachers:

Title: Ideas and Technology of Control Systems

Time: Wednesday, 12 December 2012, 9:00 am – 3:00 pm

Location: Haleakala I, Grand Wailea Hotel

Organizing and Program Committee:

All members of the AACC Technical Committee on Education

Assisted by: University of Hawaii and University of Kansas

Purpose: This outreach event is designed to increase the general awareness of importance of systems and control technology and its cross-disciplinary nature among high school students and teachers. Control is used in many common devices and systems: cell phones, computer hard drives, automobiles, and aircraft, but is usually hidden from view. The control field spans science, technology, engineering and mathematics (STEM). The success of all STEM fields depends on attracting the most gifted young people to science and engineering profession. Early exposure to middle and high school students and their teachers is a key factor. The goal of these outreach efforts is to promote an increased awareness of the importance and cross-disciplinary nature of control and systems technology.

The workshop activities included 15 presentations including two practical demonstrations by control systems experts from our technical community, discussions, and the opportunity for teachers and students to meet researchers and educators from academia and industry. The talks were designed to be educational, inspirational and entertaining showing the excitement of the control field. All students praised very highly and enthusiastically all presentations.

The schedule and the program of the workshop can be found on its web page:

http://www.math.ku.edu/ksacg/workshops/CDC_2012/cdc2012workshop.html.

2. The Committee held its One Hour Semiannual Meeting starting at 3:00 pm on December 12, 2012 in Maui, HI:

Topics of Discussion:

- Attracting more students to the field of controls.
- Making controls research and the impact of controls more visible online.
- Educate the online audience.
- CDC2012 Workshop for High School Teachers and Students: What worked well? What can we do better next time?
- Collaborating in redesigning basic courses in the control field.

The Committee reports that the following major activities will be held at the ACC 2013:

1. Special Session:

On Ideas and Technology of Control Systems Workshops for High School Students and Teachers and Related Educational Activities for attracting students and young researchers to control field and its outreach programs, in a 13 year history, with participation of all members of CSS and AACC Technical Committees on Education and with all presenters at the workshops held at CDCs and ACCs for the last 13 years. Some selected short talks would be presented as a sample of plain talks prepared for a wide range of the public.

2. Workshop on Ideas and Technology of Control Systems

for 100 Middle and High School Students and Teachers as well as for children of the participants of the ACC 2013.

3. Semiannual Meeting of the Committee.

In the meantime the Committee will be working on preparing a video with some selected presentations from the Workshops. The committee will also collect educational resources to make them available to the participants of the workshop online.

Acknowledgement: The members of the Committee express their deep gratitude to the AACC for its generous support for the educational activities and the outreach program.