

## **10 years of the CSS sponsored and co-sponsored Education Activities/ Outreach Efforts**

Brief Record:

The first NSF/Control workshop for high school teachers of mathematics and science in Chicago in June of 2000. NSF, IEEE Control Society and KU Math Department sponsored this national workshop. The workshop was very successful and NSF and IEEE Control Society decided to continue with similar, but local, workshops for high school students and teachers of mathematics and science. Here is a list of the workshops, programs, and panels for K-12 students and teachers that the CSS Control Education has organized since 2000.

2010 – ACC, Workshop for Middle and High School Teachers and Students (60 participants expected)

2010 – ACC, Special Education Session bringing Faculty and Students together (70 participants expected)

2009 – CDC/CCC, Shanghai, China, Panel Session on “Discussion on control textbooks” bringing faculty and students together (70 participants)

2009 – ACC, St. Louis, MO, Workshop for High School Teachers bringing teachers and NSF G-K12 Fellows together, (50 participants)

2009 – ACC, St. Louis, MO, Panel Session on “Preparing Tomorrow’s Scientists and Engineers for the Challenges of the 21<sup>st</sup> Century” bringing faculty, teachers and students together (more than 75 participants)

2008 – ACC, Seattle, Washington, Workshop for High School Teachers (30 participants)

2008 – CDC Cancun, Mexico, Special Education Session “Discussion on international changes in control engineering education (30 participants)

2007- Organizer and Chair of Panel Session on Stochastic Control in Financial Engineering Education (100 participants, expected), NY, ACC.

2006 - the NSF Workshop for 650 Middle and High School Teachers and Students, held at CDC in San Diego, in December.

2006- the Panel Session on New Directions of Control (100 participants expected), San Diego, December.

2006 - Teachers and Students and College Students, held at the 7th IFAC Symposium on Advances in Control Education, in Madrid, Spain in June (about 150 participants).

2006 – ACC, Minneapolis, Minnesota, the Panel Session on Control Engineering Education Initiatives, (100 participants).

2005 - Seville, Spain, the Panel Session on Math, Science and Technology in Control Engineering Education (100 participants).

2005 - Workshop for Teachers and Students held at IFAC Congress in Prague, Czech Republic in July (about 100 participants).

2004 - the Workshop for High School Teachers, held in Radom, Poland in June (15 teachers).

2004 - the Workshop for the Oregon Polytechnic High School Teachers and Students, held in Oregon, in

June in conjunction with ACC (over 700).

2004 - Beginning and Continuing Mentoring and Assisting in Graduates and Undergraduates with K-12 Partnership Programs in Math, Science and Engineering for KU, other universities, groups and organizations.

2003 - the NSF Workshop for 300 Middle and High School Teachers and Students on "Ideas and Technology of Control Systems," held at the CDC in Maui Hawaii, in December (300 students and 20 teachers).

2003 - the NSF Workshop for Women in Control on "After Graduation: Women in Control Taking a Leadership Role including K-12 education" December, Maui, Hawaii (80 participants).

2003 - the NSF Workshop for High School Teachers at the ACC in Denver held in June (50 teachers).

2002 - the NSF Workshop for High School Students at the CDC in December, Las Vegas (200 participants).

2001 - the Workshop for High School Students and Teachers in Radom, Poland held in September (200 participants).

2001 - the NSF International Workshop on Stochastic Theory and Control with participation of the High School Teachers, participants of the First Chicago Workshop , University of Kansas, October 2001 (5 teachers).

2000 - Organizer of the Panel Session on Partnership in Math and Science Education between K-12 Teachers from local schools and KU Faculty of Math and Science, held at KU in April (100 participants).

2000 - Organizer and Chair of the First NSF National Workshop for High School Teachers of Math and Science, held at the ACC in Chicago, in June (70 participants).

16 years of Education Activities/Outreach at KU.

I have been very active in outreach projects. During 1994-96, I established a partnership in mathematics education between Sunset Hill Elementary School and the KU Math Department. For this two year period I taught an algebra and probability class to fifth and sixth graders at Sunset Hill four times a week, in addition to my usual teaching load at KU. My fifth and sixth graders won 17 awards at Kansas Regional Math Contests during those two years. For the past 16 years, I have organized a mathematics workshop for fifth graders in Lawrence each April at KU. The number of students attending these annual workshops has varied from about 40 students to about 90 students (one year she had over 200 students). I organize the activities, presentations, demonstrations, and other details of these workshops in cooperation with many principals and classroom teachers. I also established the Mathematics Awareness Month Competition for 3-12 grades at KU that brings 300 students from almost 100 schools from Kansas and other states.

For more information about KU Outreach Activities visit:

<http://www.math.ku.edu/info/info-mathawareness.html>