

## **INTERNATIONAL SCIENCE & ENGINEERING FAIR 2005, PHOENIX, ARIZONA**

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The International Science and Engineering Fair (ISEF) was in full swing during the week of 8 May 2005 in Phoenix. It was my privilege to be a Grand Award Judge in the Engineering Division. The fair started on 8 May with the finalists from all around the world arriving and setting up their exhibits. One of the projects that I judged was by three

young ladies from Hunan Province, China which was a wonderful example of applied engineering. They had invented a tool to stop piping under dams, levees and dikes. It was simple and effective. The judging activities began on the 10<sup>th</sup>. The judging lasted two long and interesting days. Each student was interviewed individually by about 12 judges. Each judge had a 15 minute time slot with each candidate that the judge was to



interview. Each judge had from 8 to 12 projects to judge. There were almost 1500 projects. Some of the projects were prepared by teams but most were individual projects. There were approximately 1,000 Grand Award Judges and an additional 500 Special Award Judges. The special award judges were judging for awards sponsored by specific groups or companies similar to the special awards that the Arizona Chapter of the Society of Fire Protection Engineers has sponsored at the Southern AZ Science and Engineering Fair in Tucson, AZ since 1988.

All of the projects at ISEF were award winners at regional, state or country fairs within the last year and were selected to represent the local fair at the international fair. This insured that all of the finalist's projects were of very high quality. Some of the projects have been submitted by the finalists for patents. Of the 11 projects that I reviewed, two had patents pending. The finalists ranged from 9<sup>th</sup> to 12<sup>th</sup> grade, about 75% of the Engineering finalists were male. The ratio of young men to young women overall for the



ISEF was 53% to 47%. It was very exciting to be able to talk with the finalists and have them describe their project with all of the enthusiasm and energy that budding engineers and scientists bring to their work. It was truly pocket protector heaven.

The Special Awards category is open to any organization or individual that wants to become involved. The only requirement that I am aware of is that the sponsor must provide at least one judge. Many of the special awards sponsors, of which there were 80 this year, had several judges. The total number of special award judges was about 500 this year. The time available for judging is very short considering the total number of projects making multiple judges advisable. Your company could become a sponsor very easily.

The competition for the ISEF sponsored awards is very strong as the total monetary value of all ISEF awards this year was \$3 million. In the Engineering Division there was one best of show, 3 first place, 7 second place, 11 third place and 14 fourth place projects designated for individual finalists. There were a total of 122 individual projects and 40 team projects in the Engineering Division.

The 2006 ISEF will be held in Indianapolis, Ind. The 2007 event will be in Albuquerque, NM. US. The fairs are sponsored by major corporations. Intel has been the Title Sponsor for ISEF for the last 8 years and will continue to do so through 2009. Agilent Technologies was the Presented by Sponsor this year. Other major sponsors this year were Shell Oil, Richoh & Merck Research Labs.

There were two projects in the Engineering Division that related to fire protection engineering. They were both well done and received awards from special award judges but neither received an award from the Grand Awards. I reviewed one of the two projects

and have provided a photograph of the finalist, Heather Martin and myself. Heather is a junior @ Jeffersontown High School, Louisville, KY, US. Her project was titled, "The House that Doesn't Burn". She became interested in creating a system that would prevent a wood frame house from being burned in wild land fire situation because of relatives of a friend that lost their home in



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Colorado in one of last years wildfires. Her technique was to add a water based cooling system on the exterior that removed the heat thus saving the wood structure. Her ideas were original and imaginative.

You may volunteer to be a judge at the next ISEF by going to the website. It was s a good time and very rewarding.

There is much more information available on the ISEF at the web site [www.intelisef2005.org](http://www.intelisef2005.org) . If you are even thinking about being a judge, contact ISEF at the web site. They will be very glad to hear from you. I am sure that you will have a good time, I know that I did.