

INTEL INTERNATIONAL SCIENCE AND ENGINEERING FAIR

A program of Society for Science & the Public

Young Scientists Take on Big Challenges

Competing in 17 science and engineering categories, students at Intel ISEF 2010 presented original research to panels of esteemed judges, demonstrating their understanding of science fundamentals, as well as their intellect and creativity, in areas such as energy, transportation, environmental sciences, medicine, health sciences, chemistry, and behavioral and social sciences, among others.

Meet some of the innovators at Intel ISEF 2010:



Chaimaa Makoudi, USA

Makoudi explored the effects of quantum dot sizes on solar cells to determine their efficiency for creating solar energy.

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Gary Kurek- Canada

Kurek developed multi-functional wheelchairs to improve autonomy for physically-disabled people.

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Asil Shaar and Nour Alarda- Palestine

Shaar and Alarda improved the function of laser canes for the blind.

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Hoi Ming Chu-China

Chu examined the possibility of using discarded sawdust to create cellulosic ethanol, a clean biofuel.

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Mikkel Madsen, Denmark

Madsen conducted tests on one of the most lethal bacteria afflicting cystic fibrosis patients.

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Dylan Dalrymple, USA

Dylan Dalrymple focused his research on the creation of inexpensive, 3-D sensors for robotics use.

[Learn More >](#)

Watch videos covering a range of INTEL ISEF Projects



Green Energy Projects at 2010 Intel ISEF

Intel ISEF finalists investigate alternative technologies through their green energy projects.



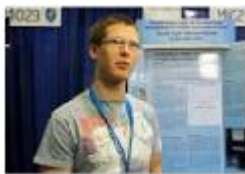
Engineering Projects at 2010 Intel ISEF

Budding engineers probe improvements in everything from solar cell output to affordable, 3-D robotic sensors in their Intel ISEF projects.



Mobility Aid Projects at 2010 Intel ISEF

To help disabled people gain autonomy, Intel ISEF finalists work to increase the function of mobility aids.



Medical Projects at 2010 Intel ISEF

Young scientists at Intel ISEF seek to improve life for others through medical innovations.



Technology Projects at 2010 Intel ISEF

Young innovators at Intel ISEF demonstrate how their research can advance foot prosthetics, liquid lenses, and quantum computing.

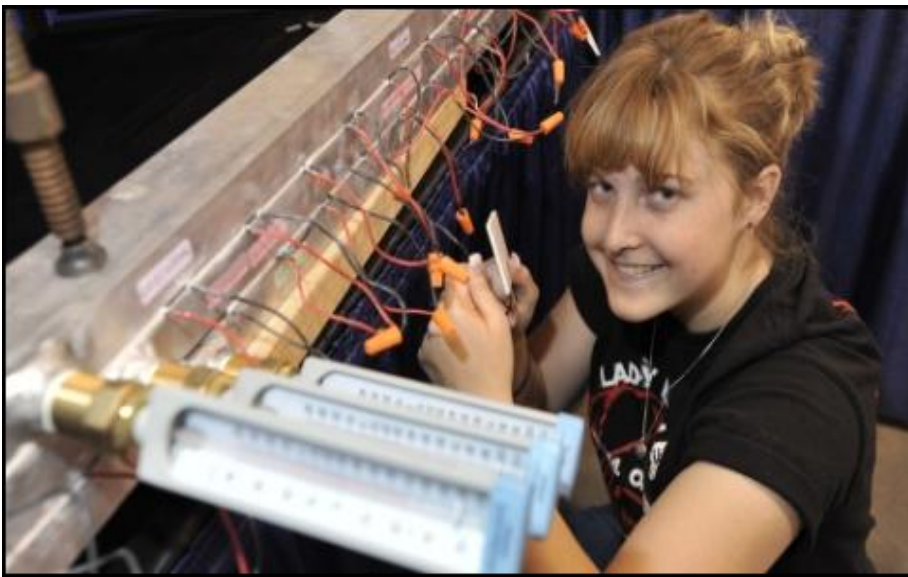
INTEL ISEF in San Jose, California

Take a look at their week in pictures

- More than 1,600 high school students from around the world gather to compete at Intel ISEF in San Jose, CA.



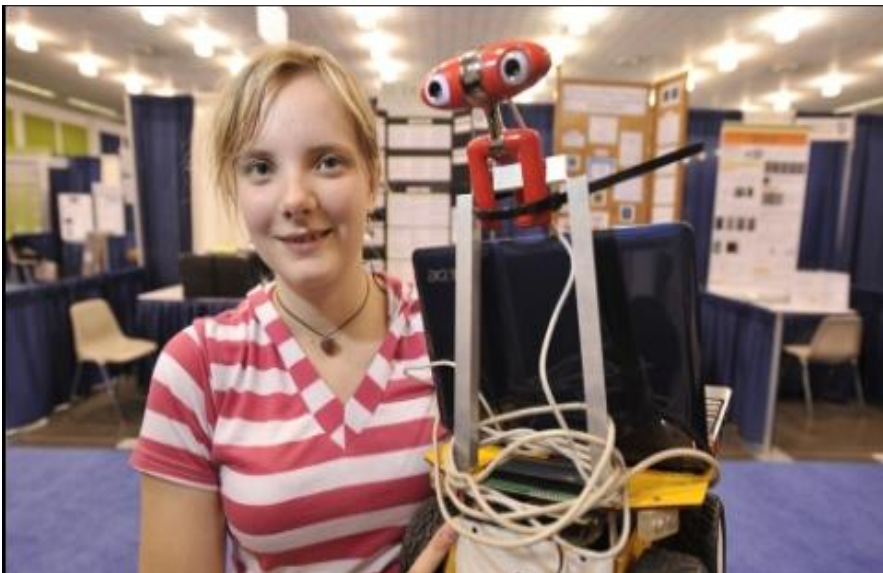
- Christy Farnsworth, Paonia, Colorado, sets up her alternative energy project at Intel ISEF.



- Gary Kurek, Alberta, Canada, sought to improve autonomy of wheelchair-bound people via technology enhancements in his Intel ISEF project.



- Monika Svedirohova, Czech Republic, shows off her intelligent robot, capable of recognizing and fetching objects.



- Hoi Ming Chu, Hong Kong, explains how cellulosic waste like sawdust can be converted into ethanol, a clean fuel.



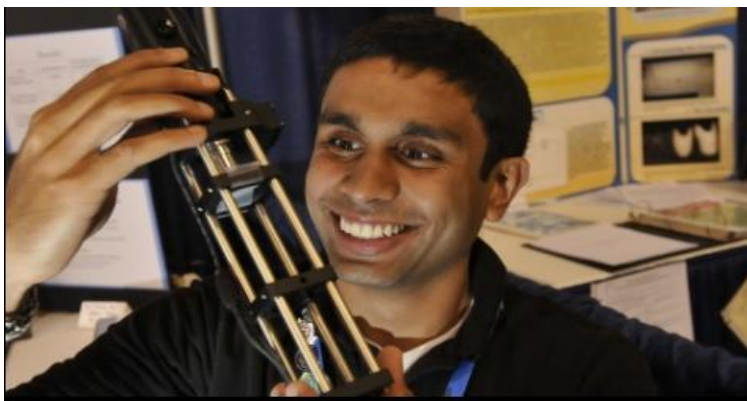
- Katherine Bomkamp, Waldorf, Maryland, proposes the incorporation of a thermal biofeedback mechanism in prosthetic limbs to eliminate phantom pain for amputees.



- To improve the quality of drinking water in impoverished communities, Karoline Lopes Martins, Brazil, developed a low-cost, solar-powered water treatment system.



- Harikrishna Rallapalli, Pleasanton, California, examines the use of Green Florescent Protein as a marker in the analysis of cancer stem cell lineage.



- Jacqueline Hung and Chi-Chieh Lin, Taipei, China, focused their research on finding effective methods for synthesizing FeSe nanocrystals and analyzing their properties and superconductivity.



- Intel VP and CIO Diane Bryant shares advice with future leaders during the ‘Women in Science & Technology’ panel.



- Intel President and CEO Paul S. Otellini visits with young ‘rock stars’ before opening ceremonies.



- Intel President and CEO Paul Otellini and Google Cofounder and President Larry Page field questions from Intel ISEF finalists via tweets and texts during the opening ceremonies.



- Four Nobel Prize winners share insights with Intel ISEF finalists during an ‘Excellence in Science and Technology’ panel.



- Intel ‘rock star’ Ajay Bhat poses with a group of Intel ISEF finalists.



- Held in conjunction with Intel ISEF, the Educator Academy gives to gave 165 educators from 24 countries a hands on view of Intel ISEF, offers expert shop talks.



- Intel ISEF Top Award Winners. L-R: Kevin Ellis, Amy Chyao, and Yale Fan. Chyao received \$75,000 and Gordon E. Moore Award. Ellis and Fan each received \$50,000 and Intel Foundation Young Scientist Award.



The Intel Foundation Young Scientist Award Winners

On May 14, 2010, Intel Corporation and the Society for Science & the Public honored the top winners at Intel ISEF. Amy Chyao received top honors, including a USD 75,000 college scholarship and the Gordon E. Moore Award, given for the first time in honor of Intel co-founder and retired Chairman and CEO. Kevin Michael Ellis and Yale Wang Fan were honored with Intel Foundation Young Scientist Awards and USD 50,000 college scholarships.

In addition, more than 500 Intel ISEF competitors received scholarships and prizes for their innovative research. This included 17 "[Best of Category](#)" winners who received USD 5,000. Intel also awarded USD 1,000 grants to the winners' schools and the Intel ISEF-affiliated fairs they represent.

Gordon E. Moore Award Winner



Amy Chyao, 16, of Richardson, Texas, was awarded top honors for her work to develop a photosensitizer for photodynamic therapy (PDT), an emerging cancer treatment which uses light energy to activate a drug that kills cancer cells. Amy received USD 75,000 and the Gordon E. Moore Award.

Intel Foundation Young Scientist Award Winners

Other top honors went to Kevin Ellis, 18, of Vancouver, Washington and Yale Fan, 18, of Beaverton, Oregon, each of whom received USD 50,000 and the Intel Foundation Young Scientist Award.



Kevin Ellis, a senior at Catlin Gabel School in Portland, Oregon, developed a method to automatically speed up computer programs by analyzing the programs while they are running so that work could be divided across multiple microprocessors.



In his research, Yale Fan, a senior at Catlin Gabel School in Portland, Oregon, demonstrated the power of quantum computing in solving "NP-complete" (NPC) problems, among the toughest to solve using traditional computing