

## Bringing Home the Gold: US Physics Team Wins One Silver and Four Gold Medals

College Park, MD, July 22, 2009. Defying all the research studies proclaiming that U.S. students lag far behind the rest of the developed world in science and math, the five student representatives of the United States Physics Team competed with teams of high school students from 70 nations and struck gold winning four gold medals and one silver medal at the 40th International Physics Olympiad held in Merida, Mexico in July of 2009.

Students from China won five gold medals, coming in first on the overall medal count; while India and Korea also won four gold medals and one silver medal, tying for second with the United States on the overall medal count. Taiwan, Russia, and Romania each earned three gold and two silver medals. Countries winning at least two gold medals included Singapore, Kazakhstan and Japan; countries winning at least one gold medal included Thailand, Indonesia, Hungary, Hong Kong, Turkey, Serbia, Israel, Poland, and Slovakia.

Traveling to Merida, Mexico for the 40th International Physics Olympiad were:

David Field, of Andover, MA, a sophomore at the Phillips Andover Academy in Andover, MA;  
 Bowei Liu, of Fremont, CA, a sophomore at Mission San Jose High School in Fremont, CA;  
 Marianna Mao, of Fremont, CA, a senior at Mission San Jose High School in Fremont, CA;  
 Anand Natarajan, a senior at The Harker School, San Jose, CA;  
 Joshua Oremán, a senior at Harvard Westlake School, Los Angeles, CA;  
 Paul Stanley, Academic Director, Dobson Professor of Physics and Astronomy at Beloit College;  
 Warren Turner, Senior Coach, Assistant Professor at Westfield State, College in Massachusetts.

The three graduating seniors will be going to Harvard (Marianna), MIT (Joshua), and Stanford (Anand) next year.

The US team gold medal winners included Anand Natarajan (with 14th highest theory score), Bowei Liu, Joshua Oremán (with 11th highest overall score), and Marianna Mao (with 6th highest experimental score). David Field won the silver medal. The overall highest score this year was Handuo Shi from China, marking the first time in the history of the Physics Olympiad that the top score was obtained by a female. Accompanying the US Physics Team to Mexico was Academic Director Paul Stanley of Beloit College and Senior Lab Coach Warren Turner of Westfield State College.

“They all did very well,” said Paul Stanley, Academic Director. “ Much of the success of the traveling five can be attributed to the collegial, supportive atmosphere of training camp; I thank each of the nineteen team members for working so hard to make this one of the best teams ever!”

The three theoretical problems this year included a question on the tidal drag affecting the moon, a question on laser cooling and optical molasses, and a question on the mass to radius ratio of stars and estimating a lower limit to the size of a star. The two experimental problems included measuring the wavelength of light using a razor blade and vernier calipers, and determining the index of refraction difference of a birefringent material. 316 students from around the world took part in the examination.

The US physics team has participated in the International Physics Olympiad since 1986. On four occasions the team has won four gold medals: in Australia (1995), Singapore (2006), Vietnam (2008), and Mexico (2009). The United States hosted the International Physics Olympiad in 1993. In 2010 the Olympiad will be held in Croatia.

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The US Physics Team is sponsored by the generous support of private donors and the member societies of the American Institute for Physics:

Acoustical Society of America

American Association of Physicists in Medicine

American Association of Physics Teachers

American Astronomical Society

American Crystallographic Association

American Geophysical Union

American Physical Society

AVS: Science & Technology of Materials, Interfaces, and Processing

Optical Society of America

The Society of Rheology

#### **MORE ON THE WEB**

Main website of the U.S. Physics Team: <http://www.aapt.org/olympiad2009/>

History of the physics team, including past winners: <http://www.aapt.org/Contests/olympiad.cfm>

The official website of the International Physics Olympiad: <http://ipho2009.smf.mx/home>.

**About AAPT:** AAPT ([www.aapt.org](http://www.aapt.org)) is the leading organization for physics educators—with more than 10,000 members worldwide. Our mission is to advance the greater good through physics teaching. We provide our members with many opportunities for professional development, communication, and student enrichment. We serve the larger community through a variety of programs and publications. AAPT was founded in 1930 and is headquartered in the American Center for Physics in College Park, Maryland.

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