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## **WHIZ KIDS FROM NEW JERSEY AND MASSACHUSETTS HONORED FOR COMPUTER SCIENCE AND BIOLOGY RESEARCH IN NATION'S PREMIER HIGH SCHOOL SCIENCE COMPETITION**

### **Siemens Competition Regional Winners Honored at Massachusetts Institute of Technology; Will Compete for \$100,000 at National Finals in New York**

**Hayden C. Metsky of Millburn, NJ Wins Top Individual Prize  
Christine S. Lai and Diyang Tang of Acton, MA Win Top Team Prize**

CAMBRIDGE, MA, November 8, 2008 —Biology and computer science focused language research won top honors in the Region 5 Finals of the 2008 Siemens Competition in Math, Science & Technology, the nation's premier high school science research competition.

The Siemens Competition is a signature program of the Siemens Foundation and is administered by the College Board. Tonight's winners will receive thousands of dollars in college scholarships and be invited to compete at the National Finals in New York City, where the winners of six regional competitions across the United States will vie for scholarships ranging from \$10,000 to the top prize of \$100,000.

"These students have competed with some of the greatest young minds in our country, and are now on an amazing journey to the finals of the most coveted high school science prize in the nation," said James Whaley, President of the Siemens Foundation based in Iselin, NJ. "The fact that we've experienced a record-setting year, including a 10% increase in both team and individual project submissions and more than a 16% increase in the number of registrations, makes their achievement even more commendable. We congratulate them on their hard work, and look forward to welcoming them to the national event."

The students presented their research this weekend to a panel of judges from the Massachusetts Institute of Technology (MIT), host of the Region 5 Finals.

#### **Individual Winner**

Hayden C. Metsky, a senior at Millburn High School in Millburn, NJ, won the individual category, and a \$3,000 college scholarship, for his computer science project which proposed a novel computer systems method to improve the quality of machine translation from one language to another. His research, titled *Improving Statistical Machine Translation Through Template-based Phrase-table Extensions*, introduced a new approach to automatic translation that yields performance improvements by virtual extension of a given sample translation.

"This is on par with a very good senior thesis at a collegiate level," said Dr. Vivek K Goyal, Esther and Harold E. Edgerton Associate Professor of Electrical Engineering at Massachusetts Institute

of Technology. “Mr. Metsky's creativity impressed the judging panel. He used variations in word order in a new way to address a critical problem in machine translation, which is producing good results for phrases that the system has not seen before.”

Among his various honors, Mr. Metsky has been named the New Jersey Governor's School of Engineering and Technology Scholar and has won the George Washington University School of Engineering and Applied Science Medal. Mr. Metsky enjoys independent software development, and has developed a “Word of the Day” widget, which he nearly sold to a notable online dictionary website. He hopes to conduct research in a computer science related field after completing his undergraduate education.

Mr. Metsky serves as the front page/news section editor of *The Miller*, his school's newspaper, enjoys mentoring math, running cross country and playing the cello in his school Orchestra. His mentors were Dr. Nizar Habash, Associate Research Scientist Center for Computational Learning Systems at Columbia University, and Dr. Paul Citrin, science teacher and advisor in Millburn High School's science research program.

### **Team Winners**

Christine S. Lai and Diyang Tang, both seniors at Acton-Boxborough Regional High School in Acton, MA won the team category and will share a \$6,000 scholarship for their project, entitled *The Localization and Function of Rabex-5*. The team's research analyzes how Rabex-5 helps regulate endocytosis, a fundamental process that enables cells to internalize materials.

“This team's study of endocytosis has many implications for the medical industry, including strategies to regulate cholesterol levels,” said Dr. Mary-Lou Pardue, The Boris Magasanik Professor of Biology at the Massachusetts Institute of Technology. “The judges were impressed by the initiative of the students and the quality of the work.”

Ms. Lai is part of the Science Team, plays violin in her school orchestra, and is actively involved in the community recycling club. Ms. Lai's personal hero is Rosalind Franklin, the researcher who helped understand DNA structure and composition; it is one of the reasons why she would like to be a biological researcher upon completing her education. This is her first science fair or research competition.

Because of the open support from her parents and really good teachers throughout her high school career, Ms. Tang enjoys a deep interest in nearly all of her subjects and can see herself as a career researcher. She is a member of the Academic Decathlon team, and like her teammate is also engaged in a community recycling program. She has been interested in science since watching the NOVA program as child, which has aroused her curiosity and involvement in the field.

The team's mentors include their Acton-Boxborough Regional High School science teachers Mr. David McClung and Mr. Brian Dempsey; as well as Dr. David Lambright, Professor of Cell Biology and Meng-tse Lee, Graduate Student at the University of Massachusetts Medical School.

### **Regional Finalists:**

Regional finalists each received a \$1,000 scholarship. In addition, the Siemens Foundation awards \$2,000 per project to the high school of every regional finalist.

Regional Finalists in the individual category were:

- Akansh N. Murthy, Fox Chapel Area High School, Pittsburgh, PA
- Doris Chen, Tenafly High School, Tenafly, NJ
- Henry W. Zheng, Centennial High School, Ellicott City, MD

- Tai Zheng, Montgomery Blair High School, Silver Spring, MD

Regional Finalists in the team category were:

- Timur Balbekov, New Fairfield High School, New Fairfield, CT and Srikrishna Raghavan, Academy of Science and Technology, The Woodlands, TX
- Austin J. Hess and Nathan J. Heeter, Mechanicsburg Area Senior High School, Mechanicsburg, PA
- Naveen Murali, Staples High School, Westport, CT, Elias Lebovits, Ramaz Upper School, New York, NY, and Daniel Y. Peng, Monta Vista High School, Cupertino, CA
- Jonathan M. Toohill and Nikhil S. Thorat, Massachusetts Academy of Math and Science at WPI, Worcester, MA

### **About the Siemens Competition**

The Siemens Competition was launched in 1998 to recognize America's best and brightest math and science students. This year, 1,893 students registered to enter the Siemens Competition this year with a total of 1,205 projects submitted – this includes an increase of more than 10% in team and individual project submissions and an increase of more than 16 % in the number of registrations.

Entries are judged at the regional level by esteemed scientists at six leading research universities which host the regional competitions: Massachusetts Institute of Technology (November 7-8); University of Notre Dame (November 7-8); University of Texas at Austin (November 14-15); Carnegie Mellon University (November 14-15); California Institute of Technology (November 21-22); and Georgia Institute of Technology (November 21-22).

Winners of these regional events are invited to compete at the National Finals at New York University, December 5 – December 8, 2008. Log on to [www.siemens-foundation.org](http://www.siemens-foundation.org) on December 8, 2008 at 9:30am EST to view a live webcast of the National Finalist Award Presentation in New York City.

### **About the Siemens Foundation**

The Siemens Foundation provides more than \$7 million annually in support of educational initiatives in the areas of science, technology, engineering and math in the United States. Its signature programs, the Siemens Competition in Math, Science & Technology and Siemens Awards for Advanced Placement, reward exceptional achievement in science, math and technology. The newest program, The Siemens We Can Change the World Challenge, encourages K-12 students to develop innovative green solutions for environmental issues. By supporting outstanding students today, and recognizing the teachers and schools that inspire their excellence, the Foundation helps nurture tomorrow's scientists and engineers. The Foundation's mission is based on the culture of innovation, research and educational support that is the hallmark of Siemens' U.S. companies and its parent company, Siemens AG. For more information, visit [www.siemens-foundation.org](http://www.siemens-foundation.org).

### **About The College Board**

The College Board is a not-for-profit membership association whose mission is to connect students to college success and opportunity. Founded in 1900, the association is composed of more than 5,400 schools, colleges, universities, and other educational organizations. Each year, the College Board serves seven million students and their parents, 23,000 high schools, and 3,500 colleges through major programs and services in college admissions, guidance, assessment, financial aid, enrollment, and teaching and learning. Among its best-known programs are the SAT®, the PSAT/NMSQT®, and the Advanced Placement Program® (AP®). The College Board is committed to the principles of excellence and equity, and that commitment is embodied in all of its programs, services, activities, and concerns. For further information, visit [www.collegeboard.com](http://www.collegeboard.com).

**NOTE TO EDITORS: Event B-roll and Photos of winners available upon request.**

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