SIEMENS News Release

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BRILLIANT MINDS OF WESTCHESTER COUNTY, NEW YORK HONORED FOR RESEARCH ON OPTICS AND BIOCHEMISTRY IN NATION'S PREMIER HIGH SCHOOL SCIENCE COMPETITION

Siemens Competition Regional Winners Declared at Carnegie Mellon University; Will Compete for $100,000 at National Finals

Nityan Nair of Hastings-on-Hudson, New York, Wins Top Individual Prize; Eugenia Volkova of South Salem, New York, and Alexander Saeboe of Katonah, New York, Win Top Team Prize

PITTSBURGH, PA, November 15, 2008 — Research in optics and biochemistry scored top marks this evening for Nityan Nair and the team of Eugenia Volkova and Alexander Saeboe in the Region Four Finals of the 2008 Siemens Competition in Math, Science & Technology, the nation's premier high school science competition.

The Siemens Competition, a signature program of the Siemens Foundation, 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, New Jersey. "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 Carnegie Mellon University, host of the Region Four Finals.

Individual Winner

Nityan Nair, a senior at Hastings High School in New York, won the individual category and a $3,000 college scholarship for his research that used low-cost methods to potentially improve the use of optical vortices in nanomechanics. The project may provide the ability to manipulate small particles in ways never done before and could facilitate the development of quantum computing. His project is entitled *Diffraction with a twist: Forming fractional optical vortices using spiral zone plates*.

"Mr. Nair's research combines two important topics in contemporary optics: optical vortices and the Fresnel zone plate. He found a novel way of solving the mathematics that describes the focusing of light by discovering an easier method to design and build optical vortices. This enables him to predict a beautiful optical phenomenon, analogous to whirlpools in a river, called optical vortices," said Dr. Stephen Garoff, Associate Department Head of Physics at Carnegie Mellon University. "Mr. Nair's project was particularly impressive because it demonstrated his independence, intellectual curiosity and the depth of his knowledge of this very complex phenomenon."

Mr. Nair was a finalist in the 2008 New York State Math League. He is President of the school's math club. He serves as Secretary General of the Westchester Model United Nations Conference. Mr. Nair has received the Scholar Athlete Team Award. He has written two essays selected for publication by the American History Summer Institute.

Both of Mr. Nair's parents are physicists, attributing to his piqued interest in the field. For him, conversation at the dinner table frequently revolves around scientific discoveries and famous scientists. His mentor for this project is Dr. John Noe, Executive Director, Laser Teaching Center Department of Physics & Astronomy, Stony Brook University.

Team Winners

Eugenia Volkova, a senior at John Jay High School, in Cross River, New York and Alexander Saeboe, a senior at Somers Central High School in Lincolndale, New York, won the team category and will share a $6,000 scholarship for their research that evaluates an alternative contrast agent for Magnetic Resonance Imaging (MRI) that exhibits low toxicity and would be useful for long term imaging needed for disease diagnosis. Their project is entitled *Comparison of Gadolinium Molecular Imaging Probes and Manganese Imaging Probes for the Detection of Atherosclerotic Plaque by Magnetic Resonance Imaging.*

"Ms. Volkova and Mr. Saeboe's project proved that in Magnetic Resonance Imaging, manganese is a promising substitute for gadolinium which is toxic if used for long term studies," said Dr. Gordon Rule, Professor, Department of Biological Sciences at Carnegie Mellon University. "This team's multidisciplinary research project was extremely complex and required mastery of several different scientific concepts and techniques. Their highly integrated approach to this project, inquisitive ambition and effective team work stood out."

Ms. Volkova received the Science Service Award in 2008. She has participated in the New York State Science Olympiad and won first place in her region in the Disease Detectives events in both 2008 and 2007. She is a member of the French, Spanish, and General National Honors Societies.

Mr. Saeboe is a senior at Somers Central High School. He heard about the Siemens Competition when he first moved the United States from Norway at the age of 12. Since then he has been actively involved in all aspects of science research with the ultimate goal of making it to the regional finals. He is treasurer of the Green Power Club at his high school.

The team conducted their research at the Mount Sinai School of Medicine where they both volunteer during the summer. Their mentors for this project include: Dr. Karen C. Briley-Saebo, Dr. Zahi A. Fayad, Dr. Venkatesh Mani and Claudia Calagno at the Mount Sinai School of Medicine.

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:

- Angi Guo, Stuyvesant High School, New York, NY
- Hyunsik Moon, Horace Mann School, Riverdale, NY
- Preya Shah, Ward Melville High School, East Setauket, NY
- Stephanie Wang, Roslyn High School, Roslyn Heights, NY

Regional Finalists in the team category were:

- David Zheng, Jericho Senior High School, Jericho, NY
- Jeffrey Xu, Landon School, Bethesda, MD
- Megan Garber, North Shore Hebrew Academy High School, Great Neck, NY
- Elias Goodman, North Shore Hebrew Academy High School, Great Neck, NY
- Sarajane Gross, North Shore Hebrew Academy High School, Great Neck, NY
- Ashley Khalili, North Shore Hebrew Academy High School, Great Neck, NY
- Daniel Younger, North Shore Hebrew Academy High School, Great Neck, NY
- Lara Fourman, Plainview-Old Bethpage John F. Kennedy High School, Plainview, NY
- Sanchita Singal, Herricks High School, New Hyde Park, NY

The Siemens Competition
The Siemens Competition was launched in 1998 to recognize America's best and brightest math and science students. In another record-setting year, 1,893 students registered to enter the Siemens Competition 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: California Institute of Technology; Carnegie Mellon University; Georgia Institute of Technology; Massachusetts Institute of Technology; University of Notre Dame; and The University of Texas at Austin.

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

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.

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.

NOTE TO EDITORS: Broll and photos of winners available on request.

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