Winner Announcement

****Strict Embargo: Thursday, May 14, 2009, 9:30 p.m. PST****
*****Do Not Release Until This Time *****

Intel ISEF 2009 Special Awards Ceremony Sponsored by Agilent Technologies

Reno, Nevada, USA – Society for Science & the Public, in partnership with the Intel Foundation, this evening announced awards at the Intel ISEF 2009 Special Awards Ceremony which was sponsored by Agilent Technologies. Student winners are ninth through twelfth graders who earned the right to compete by winning top prize at local, regional, state, or national science fairs. Special Awards are presented by over 60 scientific, professional and educational organizations and include scholarships, summer internships, book and equipment grants, and scientific field trips.

The International Science and Engineering Fair is sponsored by Intel and has been administered by Society for Science & the Public (SSP) since its inception in 1950. SSP is a nonprofit organization dedicated to the public engagement in scientific research and education. SSP's vision is to promote the understanding and appreciation of science and the vital role it plays in human advancement: to inform, educate, inspire.

More information can be found at www.societyforscience.org.

United States Army

Award of three $1,000 U.S. Savings Bonds, a certificate of achievement and a gold medallion.

AS018 **The Effect of the Adipose60 Mutation on the Locomotion of Wild Type and Vestigial Winged *Drosophila melanogaster***
Alyssa Chelsea Ehrlich, 16, South Side High School, Rockville Centre, New York

BE041 **The Effects of Acetylcholine on Memory**
Rebekah Lynn Inez Ivie, 17, Trotwood Madison High School, Trotwood, Ohio

BI019 **Transmissible Spongiform Encephalopathies: Analyzing Copper 2+ Binding in the Octrepeat Region of the Infectious Prion Protein**
Marie Nielsen, 17, Pacific Collegiate School, Santa Cruz, California

CB032 **The Effect of Type A Behavior on Telomere Length**
Annicka Kae Carter, 17, Hillcrest High School, Midvale, Utah

CH022 **Synthesis of Fluorescent Silica Nanoparticles Conjugated with RGD Peptide for Detection of Invasive Human Breast Cancer Cells**
Shamik Mascharak, 15, Santa Cruz High School, Santa Cruz, California

CS030 **Information Distance and Its Implementation in Spam Detection**
Janice Rosalina Zhang, 17, Plano Senior High School, Plano, Texas

EA005 **Role of Sea Surface Pressure in Determining Possible Recurvature of a Hurricane's Path**
Sarah Dunn Ditchek, 17, North Shore Hebrew Academy High School, Great Neck, New York

EE061 **Fine Control of Electromagnetic Levitation, A Second Year Study**
Christopher James King, 18, Creek Wood High School, Charlotte, Tennessee

EM032 **Synthesis of Novel Iron-oxide-silica Hybrid Adsorptive Media for Arsenic Removal**
Brittany Hsu, 16, Jericho High School, Jericho, New York

EN032 **Carbon Nanotube Synthesis and MEMS Fabrication**
Steven Gary Noyce, 18, American Fork High School, American Fork, Utah

ET006 **Comparing Oil Yields of Two Different Chlorella Species (*C. vulgaris* and *C. protothecoides*)**
Alyssa M. Bagadion, 17, CAT/Lakewood High School, St. Petersburg, Florida

EV006 **The Efficiency of Field Sampling Techniques in Determining the Distribution and Abundance of Amphipods in Deep Prairie Wetlands**
Megan Marie Miller, 18, Lincoln High School, Thief River Falls, Minnesota

MA005 **Universal Law for the Distribution of Odd Periodic Cycles within Chaos in Nonlinear Dynamical Systems: An Analysis of Rigid Bifurcation, Year II**
Almas Abdulla, 15, West Shore Junior/Senior High School, Melbourne, Florida

ME032 **Aquaporin-4 Channels Regulate CA1 Hippocampal Long-Term Potentiation**
Ian Barry Mathews, 17, Irvington High School, Irvington, New York

MI003 **Possible Therapeutic Treatments to Block the Action of Plant and Bacterial Toxins, Year Two**
Mansfield Nello Burlingame, 18, Lake Brantley High School, Altamonte Springs, Florida

PH034 **A Relativistic Generalization of the Navier-Stokes Equations to Quark-Gluon Plasmas**
Nilesh Tripuraneni, 18, Clovis West High School, Fresno, California

PS003 **Evaluation of Grape DNA Sequence as Binary Borders for Agrobacterium Mediated Plant Transformation**
Bradley Charles Clement, 18, Lake Brantley High School, Altamonte Springs, Florida

Award of three $1,000 U.S. Savings Bonds, to be shared equally by team members, and certificates of achievement and gold medallions.

BE306 **α-Lipoic Acid: Towards a Novel Neuroprotective Treatment for Alzheimer's Associated Cognitive Dysfunction in a *Drosophila* Model**
Shaunak Krishan Bakshi, 15, Manhasset High School, Manhasset, New York
Peter Hans Massey, 16, Manhasset High School, Manhasset, New York

Alternate to attend the London International Youth Science Forum

ET006 **Comparing Oil Yields of Two Different Chlorella Species (*C. vulgaris* and *C. protothecoides*)**
Alyssa M. Bagadion, 17, CAT/Lakewood High School, St. Petersburg, Florida

One all expense paid trip to London International Youth Science Forum, three $1,000 U.S. Savings Bonds, $500 from the Association of the United States Army, a gold medallion and certificate of achievement.

EV029 **The Use of Bioluminescent Bacteria to Detect Environmental Contaminants**
Li Sallou Boynton, 17, Bellaire High School, Bellaire, Texas

Alternate for the Operation Cherry Blossom trip to Tokyo, Japan

EN032 **Carbon Nanotube Synthesis and MEMS Fabrication**
Steven Gary Noyce, 18, American Fork High School, American Fork, Utah

Winner receives an all expense paid trip to Operation Cherry Blossom in Tokyo, Japan. Each trip winner will also receive three $1,000 U.S. Savings Bonds, $500 from the Association of the United States Army, a gold medallion and a certificate of achievement.

CS035 **Semantic Image Retrieval: Learning Gaussian Mixture Models of Semantic Concepts Using Expectation-Maximization**
David C Liu, 17, Lynbrook High School, San Jose, California

ME028 **Designing Heterologous Influenza Vaccine for New Pandemic Pathogen Emerging in Humans Infected with Avian Influenza**
Alexander Chernyakhovsky, 17, William Mason High School, Mason, Ohio

Office of Naval Research on behalf of the United States Navy and Marine Corps

Tuition Scholarship Award in the amount of $8,000

AS035 **The Isolation and Characterization of the Antibiotic Components Extracted from Marine Sponges**
Bernadette Ann Hritzo, 15, Villa Joseph Marie High School, Holland, Pennsylvania

BE019 **The Effects of Equine Association on the Initial Beneficiary and Benefactor**
Katlin Jayne Hornig, 17, Sargent High School, Monte Vista, Colorado

BI006 **Red Tide Mitigation: Neutralizing Brevetoxin Using the Amino Acid Derivative, Cysteine Methyl Ester**
Collin Northcott McAliley, 15, Cocoa Beach Jr/Sr High School, Cocoa Beach, Florida

CB041 **Exploring a Sequencing-based Human Identification Method as a Replacement for Current Fragment Sizing Technology**
Jennifer Shuen Chen, 15, Lynbrook High School, San Jose, California

CH016 **Combating Cancer: Design and Synthesis of Dual-Warhead Tumor-Targeting Drug Conjugates**
Preya Shah, 17, Ward Melville High School, East Setauket, New York

CS039 **Detecting Cancer: The Fractal Method**
Leah Avi Balay-Wilson, 15, Lincoln Park High School, Chicago, Illinois

EA002 **Mitigation of Soil Liquefaction with Magnetic Fields**
Tanya Nicole Petach, 15, Fairview High School, Boulder, Colorado

EE059 **The Practical Utilization of Wireless Protocol and Swarm Mentality to Improve Overall Efficiency and Effectiveness in Autonomous Robot Platforms**
Carl Edward Lawhon, 17, Pembroke Hill School, Kansas City, Missouri

EM032 **Synthesis of Novel Iron-oxide-silica Hybrid Adsorptive Media for Arsenic Removal**
Brittany Hsu, 16, Jericho High School, Jericho, New York

EN037 **Sustainable Insulation & Conservation: Keeping Heat In & Sound Out**
Raphael James Burne, 16, Maharishi School of the Age of Enlightenment, Fairfield, Iowa

ET043 **Novel Form of Alternative Energy: Mediator-Assisted Self-Repairing Photoelectrochemical Solar Cell**
Sumit Malik, 17, Thomas Jefferson High School for Science and Technology, Alexandria, Virginia

EV033 **Sink or Source: The Role of Street Solids in Heavy Metals Contamination of River Water**
Benjamen Chang Sun, 16, Red River High School, Grand Forks, North Dakota

MA032 **Parameterizing Knots with Chebyshev Polynomials**
Jenna Kay Freudenburg, 18, Kalamazoo Area Math and Science Center, Kalamazoo, Michigan

ME015 **Engineering and Validating Predictive Infection Surveillance Strategies for Methicillin-resistant *Staphylococcus aureus***
Stephen Walter Trusheim, 18, Breck School, Golden Valley, Minnesota

MI015 **The Effectiveness of S2 Pyocins and Oxidative Stress in Combating *Pseudomonas aeruginosa* Biofilm Development**
Lindsey Elizabeth Hastings, 17, duPont Manual Magnet High School, Louisville, Kentucky

PH021 **Optimization of CCD Parameters for High Resolution Lunar Imaging**
Michelle Dawn Wenz, 17, Red Lion Area Senior High School, Red Lion, Pennsylvania

PS048 **The Evidence and Potential Roles of Allelopathic Agents Present in Sweet Potatoes (*Ipomoea batatas*)**
Mason Cole McFarland, 17, Jefferson County International Baccalaureate School, Birmingham, Alabama

Tuition Scholarship Award of $8,000 for original research in an important Naval-relevant scientific area

BI026 **Novel Biosensor Utilizing a Quinone Monolayer in Conjunction with Cyclic Voltammetry**
Joy Elisabeth Lee, 17, Thomas Jefferson High School for Science and Technology, Alexandria, Virginia

CS006 **Post-Processed Adaptive Optics**
James Daniel Brandenburg, 17, Cocoa High School, Cocoa, Florida

EN032 **Carbon Nanotube Synthesis and MEMS Fabrication**
Steven Gary Noyce, 18, American Fork High School, American Fork, Utah

Team Tuition Scholarship Award in the amount of $8,000 to be equally divided among the team members

BI306 **Sunscreen: A Catch 22- Blocking of the Photocatalytic Activity of Titanium Dioxide Nanoparticles by Polymer Coating**
Samantha B. Larsen, 17, Long Beach High School, Lido Beach, New York
Cole J. Blum, 16, Long Beach High School, Long Beach, New York

Scholarships are payable at $2,000 a year for four years. Recipients also receive a certificate signed by the Chief of Naval Research and the Vice Chief of Naval Research, and a U.S. Navy memento. Team award winners receive $1,000 a year for four years.

Air Force Research Laboratory on behalf of the United States Air Force

Established in 1947, the United States Air Force is one of the seven Uniformed Services of the United States. The mission of the Air Force is to deliver sovereign options for the defense of the United States of America and its global interest -- to fly and fight in Air, Space and Cyberspace. The USAF is the largest and most technologically advanced force in the world. Characterized by science and technology, the Air Force is totally committed to rewarding science projects that exhibit these high standards.

Second Award of $1,500

AS035 **The Isolation and Characterization of the Antibiotic Components Extracted from Marine Sponges**
Bernadette Ann Hritzo, 15, Villa Joseph Marie High School, Holland, Pennsylvania

BE028 **Examining the Clinical Utility of the RBANS for Spanish Speakers with Epilepsy**
Gabrielle Alexandra Young, 17, Valley Stream South High School,
Valley Stream, New York

BI009 **Proteomic Characterization of the Extracellular Matrix (ECM) to Identify Tumor Associated Biomolecules, Part Two**
Aarthi Shankar, 17, Rampart High School, Colorado Springs, Colorado

CB009 **Role of CD34+ and CD14+ Cells in Diabetic Vascular Disease**
Sabrina Lakshmi Prabakaran, 18, Home School, Fort Myers, Florida

CH003 **Synthesis and Surface Characterization of Aluminate and Ferrite Spinel Nanoparticles**
Mohamed Alhadi Hamouda, 18, Everglades High School, Miramar, Florida

CS006 **Post-Processed Adaptive Optics**
James Daniel Brandenburg, 17, Cocoa High School, Cocoa, Florida

EA003 **Atmospheric Temperature, Humidity, and Light Intensity to the Edge of Space, Year III**
Molly Elaine Kennon, 17, Cross County High School, Cherry Valley, Arkansas

EE031 **Ionic Propulsion: A New Frontier**
Alexis Emily Block, 15, Nicolet High School, Milwaukee, Wisconsin

EM004 **Analysis of the Phytoremediative Capabilities of the *Salix nigra* and *Salix caroliniana* on Trichloroethylene with a Focus on Phytodegradation and Phytovolatilization, Year Two**
Meredith Celeste Boulos, 17, Episcopal High School, Jacksonville, Florida

EN026 **Design and Use of an Impact Response Device to Assess Structural Integrity**
Devin John Roach, 15, Saint Pius X High School, Albuquerque, New Mexico

ET001 **Effects of Pitch on a Helicopter's Ability to Achieve Maximum Altitude**
Shane William Ward, 15, University School of Nova Southeastern University, Fort Lauderdale, Florida

EV042 **If Water Is Green, Can It Still Be Cleaned?, Phase II**
Kimberly Ann Hulm, 17, Strasburg Public School, Strasburg, North Dakota

MA031 **Efficient True Random Number Generation**
Dylan Freedman, 15, Carmel High School, Carmel, California

ME063 **A Solution for Post-Surgical Pain Control: A Novel Sustained-Release Local Anesthetic Composed of Hyaluronan, Fibrinogen, and Marcaine**
David C Evans, 17, Hillcrest High School, Midvale, Utah

MI028 **Growth of the Amphibian Pathogen *Batrachochytrium dendrobatidis* in Response to the Chemical Properties of Aquatic Environments**
Scott Paul Boisvert, 15, Basha High School, Chandler, Arizona

PH045 **A Time-Dependent Impact Parameter Model Sheds Light on the Evolution of Galaxy Morphology in Compact Clusters of Galaxies**
Keith Austin Hawkins, 17, Glen Oak, Canton, Ohio

PS023 **Genetic Transformation of a Biomass Energy Plant, *Arundo donax L.***
Shireen Dhir, 17, Houston County High School, Warner Robins, Georgia

Second Place Team Award of $1,000 for each member

CH303 **A Comparison of the Effectiveness of Liquid & Solid Deicers When Applied Independently & Concurrently**
Bailie Jo Bryant, 16, Central Lee High School, Donnellson, Iowa
Lynnely Greye Parker, 17, Central Lee High School, Donnellson, Iowa

First Award of $3,000

AS010 **Creating RNAi Anthelmintics**
Elizabeth Lo-Ra Dick, 16, Seguin High School, Seguin, Texas

BE035 **Face Recollection: Developing a Novel Training Program to Increase Recollection Rates in Eyewitness Identification**
Lori Jeanine Schlatter, 17, Camdenton High School, Camdenton, Missouri

BI026 **Novel Biosensor Utilizing a Quinone Monolayer in Conjunction with Cyclic Voltammetry**
Joy Elisabeth Lee, 17, Thomas Jefferson High School for Science and Technology, Alexandria, Virginia

CB008 **Targeting Oncogene PELP-1 Using siRNA Nanoparticles**
Adrian Garcia, 16, John Jay Science and Engineering Academy, San Antonio, Texas

CH008 **Synthetic Approaches to Organometallic Complexes for Electronics Applications**
Ilya Vladimirovich Vinogradov, 17, Paul Laurence Dunbar High School, Lexington, Kentucky

CS049 **Data Mining and Visualization: Predicting the Next Epidemic**
Rowan Matthew Chakoumakos, 18, Oak Ridge High School, Oak Ridge, Tennessee

EA005 **Role of Sea Surface Pressure in Determining Possible Recurvature of a Hurricane's Path**
Sarah Dunn Ditchek, 17, North Shore Hebrew Academy High School, Great Neck, New York

EE011 **Plasma Propulsion III**
Jesse Kane Ellison, 17, Bayfield High School, Bayfield, Colorado

EM016 **Shedding Light on Imidacloprid's Role in Colony Collapse Disorder**
Eliza Helen McNitt, 17, Greenwich High School, Greenwich, Connecticut

EN053 **Graphene: First Practical Production and Applications of the Supermaterial**
Philip Vidal Streich, 18, Home School, Platteville, Wisconsin

ET045 **Optimizing Turbine Blade Efficiency by Manipulating Boundary Layer Separation**
Andrew Kipling Miller, 18, Western Alamance High School, Elon, North Carolina

EV029 **The Use of Bioluminescent Bacteria to Detect Environmental Contaminants**
Li Sallou Boynton, 17, Bellaire High School, Bellaire, Texas

MA017 **Dirichlet Prime Magic Square**
Sarah Lee Sellers, 18, Hedgesville High School, Hedgesville, West Virginia

ME028 **Designing Heterologous Influenza Vaccine for New Pandemic Pathogen Emerging in Humans Infected with Avian Influenza**
Alexander Chernyakhovsky, 17, William Mason High School, Mason, Ohio

MI003 **Possible Therapeutic Treatments to Block the Action of Plant and Bacterial Toxins, Year Two**
Mansfield Nello Burlingame, 18, Lake Brantley High School, Altamonte Springs, Florida

PH006 **A Quantum Algorithm for Molecular Dynamics Simulation**
Yale Wang Fan, 17, The Catlin Gabel School, Portland, Oregon

PS039 **Food or Fuel? Creating Alternative Uses for Soybeans**
Logan James Metzen, 17, Hankinson High School, Hankinson, North Dakota

First Place Team Award of $1,500 for each member

EN307 **Engineering a Chip Based Biosensor for Proteins and Phosphates**
Daniel Eric Younger, 18, North Shore Hebrew Academy High School, Great Neck, New York
Megan Elizabeth Garber, 17, North Shore Hebrew Academy High School, Great Neck, New York
Ashley Khalili, 17, North Shore Hebrew Academy High School, Great Neck, New York

Each winner will receive a medallion, plaque and a certificate of recognition.

United States Coast Guard

The mission of the U.S. Coast Guard Boating Safety Division is to implement programs that minimize the loss of life, personal injury, and property damage of recreational boaters. We present awards to projects that best display potential for improving boating and water safety that may help us further our mission.

First Award of $5,000

EN058 **Float Your Coat: The Use of Neoprene and Closed-Cell Foam to Create a Buoyant Wetsuit**
Katrina Jane Stine, 18, Hilton Head Preparatory School, Hilton Head Island, South Carolina

Second Award of $3,000

CH035 **Damaging Effects of Ethanol vs. Gasoline on Rubber Parts Found in Automobile and Other Internal Combustion Engines**
Michael Tyler Stansell, 17, Paul M. Dorman High School, Roebuck, South Carolina

Third Award of $1,000

EE014 **Developing a Remotely Operated Underwater Device for Rapid Deployment in Flooded Scenarios to Gather Information for S&R**
Avilash Kalpathy Cramer, 16, West Linn High School, West Linn, Oregon

Fourth Award of $500

PH058 **The Dependence of GPS Accuracy on Ionospheric Electron Density**
Cayley Erin Dymond, 13, North Point High School for Science, Technology, and Industry, Waldorf, Maryland

National Institute on Drug Abuse, Friends of NIDA, National Institutes of Health

As a component of the National Institutes of Health, NIDA supports most of the world's research on drug abuse and addiction. NIDA identified Intel ISEF projects that focus on better understanding of the mechanisms of drug abuse and addiction. Awards are sponsored by the Friends of NIDA, a group that supports NIDA's mission, and educates health professionals about advances related to drug abuse.

First Award of $2,500

ME304 **A Cytogenic Analysis of Genetic Mutation Induced by Cigarette Smoke in *Drosophila melanogaster***
Sehar Anjum Salman, 16, Keystone School, San Antonio, Texas
Jada Nicole Dalley, 16, Keystone School, San Antonio, Texas

Second Award $1,500

AS044 **The Effect of Human Methamphetamine Usage on Carnivore Scavenging**
Daniel Jeffrey Martin, 17, Desert Vista High School, Phoenix, Arizona

Third Award of $1,000

CS045 **Complex Evaluation of Danger and Tranquility in Urban Settings: An Immunocomputing Intelligence Approach**
Lucia Mocz, 18, Mililani High School, Mililani, Hawaii

The Addiction Science Award is sponsored by the National Institute on Drug Abuse, National Institutes of Health and Friends of NIDA.

National Oceanic and Atmospheric Administration - NOAA

"The Pulse of the Planet" award will be awarded to the student whose project best relates to the National Oceanic and Atmospheric Administration's (NOAA's) mission goals. This student will receive a fully paid internship at a NOAA research lab or vessel. The winner also receives a plaque, and a certificate signed by the Under Secretary of Commerce for Oceans and Atmosphere.

A fully paid summer internship at a NOAA research lab.

BI006 **Red Tide Mitigation: Neutralizing Brevetoxin Using the Amino Acid Derivative, Cysteine Methyl Ester**
Collin Northcott McAliley, 15, Cocoa Beach Jr/Sr High School, Cocoa Beach, Florida

The Winner also receives a plaque, a NOAA ALL Hazards Weather Radio, and a certificate signed by the Under Secretary of Commerce for Oceans and Atmosphere.

United States Environmental Protection Agency

One finalist will be selected to receive an all-expense paid trip for two to Washington, D.C. for the 2010 P3: People, Prosperity and the Planet Design Competition for Sustainability. While there, the student will be able to display their award-winning project on the National Mall and have the chance to interact with University level students, EPA scientists and researchers.

All expense trip to Washington DC

ET012 **Gone with the Windmills: An Analysis of the Effectiveness of an Oscillating Wind Energy Generator**
Ryan Cherian Alexander, 16, R. C. Clark High School, Plano, Texas

Agilent Technologies

Agilent's Worldwide community involvement programs, known collectively as Agilent Action, tangibly demonstrates the company's values and commitment to corporate citizenship. Agilent supports programs that are designed to increase students' interest and achievement in science education, with an emphasis on women, and populations under-represented in the technology industry. Agilent Action inspires minds and enriches lives in the communities where Agilent people live and work. Agilent Technologies is the sponsor of the Intel ISEF Special Award Ceremony for 2009.

Agilent Technologies is proud to offer a $25,000 award to the student whose research exemplifies the work that Agilent does in close collaboration with engineers, scientists, and researchers around the globe to meet the communications, electronics, life sciences, and chemical analysis challenges of today and tomorrow.

PH033 **Fast Low-Cost Bisphenol-A (BPA) Detector**
Harikrishna Rallapalli, 17, Amador Valley High School, Pleasanton, California

Agilent will provide a paid Summer Internship at an Agilent site that aligns with the student and his/her background. This internship is a minimum of six weeks, not to exceed eight weeks.

EE060 **Multi-Touch Table: An Infrared-Based Touch Interface Designed for Collaborative Data Manipulation**
Ritik Malhotra, 16, Lynbrook High School, San Jose, California

The Agilent Teacher Award will be presented to a teacher of a 2009 Intel ISEF finalist. This award is presented to the teacher who has best proposed how they would use the funds to support their professional development in the sciences and further their support of students in independent research.

The Agilent Teacher Awardee:

Lois Fruen, Minneapolis, MN, teacher of Intel ISEF 2009 finalists, Michael Fuad, Sierra Danforth, Sahar Hakim-Hashemi and Stephen Trusheim

Acoustical Society of America

Honorable Mention

BE017 **Violin or Voice... Brain Food for Alzheimer's Patients?**
Skye Nicole Singleton, 16, Bartlesville Mid-High, Bartlesville, Oklahoma

PH028 **Hey, Can You Hear Me? Using Isobel Contour Mapping to Determine Acoustically Optimum Seating Positions in a Given Classroom**
Chaneg Torres, 15, Redeemer Baptist School, North Parramatta, New South Wales, Australia

First Award of $1,000, in addition the student's school will be awarded $500 and the student's mentor will be awarded $250

PH303 **Engineering a System to Record Head Related Transfer Functions of Sounds from Various Directions**
Jordan David Zesch, 17, Keystone School, San Antonio, Texas
Angad Jolly, 17, Keystone School, San Antonio, Texas

Second Award of $500, in addition the student's school will be awarded $200, and the student's mentor will be awarded $100

CS021 **Do You 'ear Wha' I 'ear?, II: Lowering Voice Frequencies in Real Time to Revolutionize Hearing Assistance Technology**
Nicholas Mycroft Christensen, 17, Wetumpka High School, Wetumpka, Alabama

Each winner will also receive a one-year ASA membership.

American Association for Clinical Chemistry

For the projects that best demonstrate the use of chemistry to diagnose diseases and to treat patients

First Award of $1,500

ME031 **The Effect of Superoxide on ApoB Degradation and Cardiovascular Health**
Josh Adam Elkind, 18, Yorktown High School, Yorktown Heights, New York

Second Award of $1000

ME085 **Study of the Cytotoxicity against Human Lung (A549) and Colon (HCT 116) Carcinomas, Antioxidant and Antibacterial Potentials of Milkfish (*Chanos chanos Forsskal*) Bile**
Angeli Joyce Yap Dy, 14, Capiz National High School, Roxas, Capiz, Philippines

Third Award of $500

ME078 **Development of Anti-HIV Test Kit by Using Immunochromatographic Strip Test Technique**
Chakkrit Jaidee, 17, Maeprikwitraya School, Maeprik, Lampang, Thailand

Fourth of Award $250

ME041 ***Annona muricata*: A New Way to Fight Chronic Myeloid Leukemia**
Rochelle Lee Gotay, 15, Colegio Maria Auxiliadora, Carolina, Puerto Rico

ME319 **Development of a Urine Test for the Early Detection of Cancer**
Janet Song, 17, Methacton High School, Eagleville, Pennsylvania
Benjamin Paul Song, 15, Methacton High School, Eagleville, Pennsylvania

American Association of Pharmaceutical Scientists

The American Association of Pharmaceutical Scientists is a professional, scientific organization of 13,500 members employed in academia, industry, government and other research institutes worldwide. Founded in 1986 AAPS provides a dynamic international forum for the exchange of knowledge among scientists to serve the public and enhance their contributions to health. AAPS offers timely scientific programs, on-going education, information resources, opportunity for networking and professional development. The AAPS is awarding projects which contribute to scientific research relevant to the pharmaceutical sciences.

Award of $3,000

EN313 **Engineering Thermoreversible Hydrogels for Controlled Drug Delivery**
Elias Lebovits, 18, Ramaz Upper School, New York, New York
Daniel Y. Peng, 17, Monta Vista High School, Cupertino, California
Naveen Murali, 16, Staples High School, Westport, Connecticut

The winner will also receive a certificate, a one-year membership in the association including three AAPS journals, reduced rates for meetings and numerous educational materials.

American Association of Physics Teachers and the American Physical Society

Top award winners receive a one-year AAPT and APS student membership, a certificate from both AAPT and APS, as well as subscriptions to AAPT "The Physics Teacher" Journal and other APS journals.

First Award of $1,200

PH022 **Linear Momentum Transfer from Gravitational Waves**
Kaylyn Gail Jackson, 18, Loudoun County Academy of Science, Sterling, Virginia

Second Award of $800

PH037 **CD Photo-spectroscopy: Construction of a Spectroscope Using a Compact Disk, a Digital Camera and Python Image Processing**
Sayuri Sepulveda, 16, Laval Liberty High School, Laval, Quebec, Canada

Third Award of $500

PH047 **WASP 2-b or Not Just 2-b: Does WASP 2 Have More than One Planet?**
Travis Le, 14, Punahou School, Honolulu, Hawaii

Certificate of Honorable Mention

PH015 **Can a Polymer Be Made to Act Like a Metal and Exhibit Magnetic Properties?**
Michael Vincent Di Mascio, 17, Waynesville High School, Waynesville, Ohio

PH025 **Uncovering Elusive Ultra High Energy Particles: Development of a Method for Cosmic Ray Detection**
Glen Andrew Meyerowitz, 18, Northport High School, Northport, New York

PH036 **Identifying T-Tauri Stars Using Small-Scale Optical Telescopes**
Jennifer Lynn Butchart, 17, Oil City Area Senior High School, Oil City, Pennsylvania

PH048 **Subcritical Neutron Multiplication in a 2.5 MeV Neutron Flux**
Taylor Ramon Wilson, 14, The Davidson Academy of Nevada, Reno, Nevada

Each sponsoring teacher of a student who receives an AAPT and APS award also will receive a certificate.

American Chemical Society

The American Chemical Society is a self-governed individual membership organization that consists of more than 158,000 members at all degree levels and in all fields of chemistry. The organization provides a broad range of opportunities for peer interaction and career development, regardless of professional or scientific interests. The programs and activities conducted by ACS today are the products of a tradition of excellence in meeting member needs that dates from the Society's founding in 1876.

First Award of $4,000

CH038 **Design and Development of Ozone Equivalents for the Oxidative Cleavage of Alkenes**
Prem P. Thottumkara, 16, Macomb High School, Macomb, Illinois

Second Award of $3,000

CH013 **Synthesis of Oligosaccharide Precursors of Mycobacterial Arabinofuranosides**
Ksenia G. Fedina, 16, Moscow Chemical Lyceum # 1303, Moscow, Russia

Third Award of $2,000

CH016 **Combating Cancer: Design and Synthesis of Dual-Warhead Tumor-Targeting Drug Conjugates**
Preya Shah, 17, Ward Melville High School, East Setauket, New York

Fourth Award of $1,000

BI026 **Novel Biosensor Utilizing a Quinone Monolayer in Conjunction with Cyclic Voltammetry**
Joy Elisabeth Lee, 17, Thomas Jefferson High School for Science and Technology, Alexandria, Virginia

Honorable Mention Award

CH017 **Combating Cancer: Design and Synthesis of [11C]-DHA-Taxoids for Studies of Drug Pharmacokinetics**
Re-I Chin, 17, Walter Johnson High School, Bethesda, Maryland

CH022 **Synthesis of Fluorescent Silica Nanoparticles Conjugated with RGD Peptide for Detection of Invasive Human Breast Cancer Cells**
Shamik Mascharak, 15, Santa Cruz High School, Santa Cruz, California

CH032 **Design and Synthesis of a Novel T-type Ca2+ Channel Blocker**
Seunghyun Oh, 18, Korean Minjok Leadership Academy, Gangwon, South Korea

CH036 **Novel Ru-Polypyridyl Complexes for Electrochemical Carbon Dioxide Reduction**
Tyler Dane Swenson, 18, Dickinson High School, Dickinson, North Dakota

CH302 **Toward Novel Antimicrobial Drug Discovery Targeting Cell Division**
Samantha Grace McKenna, 17, Plainview-Old Bethpage John F. Kennedy High School, Plainview, New York
Shalini Pammal, 17, Commack High School, Commack, New York

EN053 **Graphene: First Practical Production and Applications of the Supermaterial**
Philip Vidal Streich, 18, Home School, Platteville, Wisconsin

All award winners and honorable mentions receive a t-shirt and a subscription to "Chem Matters".

American Committee for the Weizmann Institute of Science

The International Summer Science Institute at the Weizmann Institute of Science provides students with an opportunity to work alongside top Weizmann Institute researchers, as well as to learn about life in Israel today.

All expense paid four week trip and scholarship to the Bessie Lawrence International Summer Science Institute.

CB013 **Targeting Akt3 Signaling Pathway in Cutaneous Melanoma with Isoselenocyanate**
Natalie D-T Nguyen, 17, Hershey High School, Hershey, Pennsylvania

Trip and scholarship is held at the Weizmann Institute of Science in Rehovot, Israel July 7 - 31. Valid passport required for travel.

American Dental Association

The American Dental Association is the nation's largest dental association and the premier source of oral health information. The ADA has advocated for the public's health and promoted the art and science of dentistry since 1859. The ADA, through the ADA Foundation, is awarding projects which contribute to scientific research relevant to oral health.

First Award of $2,000

ME063 **A Solution for Post-Surgical Pain Control: A Novel Sustained-Release Local Anesthetic Composed of Hyaluronan, Fibrinogen, and Marcaine**
David C Evans, 17, Hillcrest High School, Midvale, Utah

Second Award of $1,000

EN011 **Development of a Novel Antimicrobial Bone Graft Substitute for Cranioplasty**
Catherine Yang Fan, 17, Tom C. Clark High School, San Antonio, Texas

Third Award of $500

ME003 **The Down-Regulation of Sp1 Protein by Tolfenamic Acid in Head and Neck Cancer**
Shannon Somer Stockton, 15, Lake Highland Preparatory School, Orlando, Florida

American Geological Institute

AGI is pleased to recognize three projects that best reflect the study of Earth and the mission of AGI. Founded in 1948, AGI strives to increase public awareness of the vital role that the geosciences play in modern society.

First Award of $1,000

EA302 **Archeological Palynology of the Willamette Valley**
Ian James Love, 16, West Salem High School, Salem, Oregon
Ashley Rachelle Wiens, 18, West Salem High School, Salem, Oregon

Second Award of $750

EV030 **Natural Organics Control Aggregation of Mercury Sulfide Nanoparticles in Freshwater Systems**
Eileen Kao Jang, 17, North Carolina School of Science and Mathematics, Durham, North Carolina

Third Award of $250

EA306 **Dating the Aterian Culture in North Africa: ESR Analyses at Grotte de Contrebandiers, Morocco**
Tiffany L. Yau, 17, Stuyvesant High School, New York, New York
Tenzing Tsomo, 17, Francis Lewis High School, Fresh Meadows, New York

AGI will present their winners with a vast selection of related publications including a subscription to "Earth" magazine

American Indian Science and Engineering Society

For the project that best represents the relationship between science, mathematics, technology, engineering and American Indian, Alaska Natives or Native Hawaiian Culture.

Second Award of $500

PS040 **The Effect of Gathering Bark from *Wiigwaasi-mitig* (Paper Birch)**
Joseph L. DePerry, 17, Bayfield High School, Bayfield, Wisconsin

First Award of $1,000

ME021 **Artemisia: A Homeopathic Insect Repellent?**
Aracella Jade Ramos, 18, Box Elder Public Schools, Box Elder, Montana

Winners will also receive a plaque.

American Intellectual Property Law Association

A national bar association constituted primarily of lawyers in private and corporate practice, in government and in the academic community, with more than 17,000 members. The AIPLA represents a wide and diverse spectrum of individuals, companies and institutions involved directly or indirectly in the practice of patent, trademark, copyright, and unfair competition law, as well as other fields of law affecting intellectual property. The AIPLA is proud to nurture the innovation and scientific achievement of young researchers at the Intel ISEF.

First Award of $1,000

CS025 **Head-Controlled Computer Interface for the Disabled**
John B Hinkel, III, 17, Hopkinton High School, Hopkinton, Massachusetts

EN014 **Suction Socket Fit Improver: Intelligent Variable Silicone Rubber Pad Technology for Above-Knee Prostheses**
Ying Pan, 19, The Affiliated High School of South China Normal University, Guangzhou, Guangdong, China

Second Award of $250

EE301 **Personal Audio Disruption Device**
Matthew Taylor Stegall, 17, HBS Academy, Charlotte, North Carolina
Grant Matthew Edwards, 14, Edwards Christian Academy, Charlotte, North Carolina

PH039 **Versatile Wind Velocity and Direction Transducer**
Olexandr Olenyev, 16, Bahatoprofilnyj Litsey #99, Zaporizhzhya, Ukraine

American Mathematical Society

Karl Menger Award of Excellence

First Award of $1,000

MA037 **Graph Crossings and Cyclic Permutations: Towards a Proof of Zarankiewicz's Conjecture**
Joshua Vekhter, 17, Williamsville East High School, East Amherst, New York

Second Award of $500

MA043 **Infinite Sums of Zeta Functions and Other Dirichlet Series**
Andrei Triffo, 17, Synge Street CBS Secondary School, Dublin, Ireland

PH006 **A Quantum Algorithm for Molecular Dynamics Simulation**
Yale Wang Fan, 17, The Catlin Gabel School, Portland, Oregon

Third Award of $250

MA005 **Universal Law for the Distribution of Odd Periodic Cycles within Chaos in Nonlinear Dynamical Systems: An Analysis of Rigid Bifurcation, Year II**
Almas Abdulla, 15, West Shore Junior/Senior High School, Melbourne, Florida

MA017 **Dirichlet Prime Magic Square**
Sarah Lee Sellers, 18, Hedgesville High School, Hedgesville, West Virginia

MA044 **Controlling HIV from Transformation into AIDs: Mathematical Modeling of HIV Dynamics**
Sohini Sengupta, 17, Ocean Lakes High School, Virginia Beach, Virginia

MA301 **Survival Analysis of Gene Expression Data Using a Hybrid Dimension Reduction Technique**
Sameer Kirtikumar Deshpande, 18, Texas Academy of Mathematics and Science, Denton, Texas
Jeffrey Chan, 16, William P. Clements High School, Sugar Land, Texas
Alicia Zhang, 17, Liberal Arts and Science Academy High School, Austin, Texas

Honorable Mention Award

MA007 **Sequences of Reducible 0,1 Polynomials**
Martin Augustine Camacho, 13, Central High School, St Paul, Minnesota

MA024 **Convergence Acceleration for the Power Series Representation of the Exponential Integral**
Michael Christopher Yurko, 15, Detroit Catholic Central High School, Novi, Michigan

MA027 **"MatheMagical" Pool**
Wenhan Cui, 14, Cookeville High School, Cookeville, Tennessee

MA030 **An Analysis of Erdos's Conjecture**
Matthew Henry Stoffregen, 18, Woodoland Hills High School, Pittsburgh, Pennsylvania

PH034 **A Relativistic Generalization of the Navier-Stokes Equations to Quark-Gluon Plasmas**
Nilesh Tripuraneni, 18, Clovis West High School, Fresno, California

A booklet on Karl Menger will be given to each winner.

American Meteorological Society

The American Meteorological Society promotes the development and dissemination of information on the atmospheric and related sciences, technologies, applications, and services for the benefit of society. Founded in 1919, AMS has a membership of more than 13,000 professionals, students, and weather enthusiasts. AMS publishes nine journals, sponsors more than 12 conferences annually and offers numerous programs and services. These awards are given for the best projects in the area of atmospheric, and related sciences.

First Award of $2,000

PH039 **Versatile Wind Velocity and Direction Transducer**
Olexandr Olenyev, 16, Bahatoprofilnyj Litsey #99, Zaporizhzhya, Ukraine

Second Award of $1000

EA304 **Development of a Novel Method to Forecast Atmospheric Mixing Height, Year Three**
Candice Fay Schwartzenburg, 16, Saint Joseph's Academy, Baton Rouge, Louisiana
Lynne Olivier Chapman, 17, St. Joseph's Academy, Baton Rouge, Louisiana

Third Award of $500

EA305 **A Study on Ozone in a Small Midwestern Town**
Pandora Catharine Wadsworth, 16, Maharishi School of the Age of Enlightenment, Fairfield, Iowa
Yogita Nirmala Singh, 16, Maharishi School of the Age of Enlighenment, Fairfield, Iowa

Honorable Mention Award

EA005 **Role of Sea Surface Pressure in Determining Possible Recurvature of a Hurricane's Path**
Sarah Dunn Ditchek, 17, North Shore Hebrew Academy High School, Great Neck, New York

EA013 **Cook Inlet: Correlation between Air Temperature Trends and Intra-seasonal Sea Ice Extent Variability**
Kelsey Ann Meacham, 15, West Anchorage High School, Anchorage, Alaska

EM316 **Evaluation of Human Thermal Comfort in Outdoor Spaces Using the Wet Bulb Globe Temperature Index Method**
Richa Chetan Date, 17, Corona del Sol High School, Tempe, Arizona
Sunyoo Park, 17, Corona del Sol High School, Tempe, Arizona

Winners receive a certificate, an AMS Journal/Bulletin Archive CD-ROM, and a one-year student membership to the AMS. The student membership includes a subscription to the "Bulletin of the American Meteorological Society" or "Weatherwise" magazine.

American Physiological Society

For the best projects in the physiological sciences which include cellular physiology, animal physiology and neurophysiology.

First Award of $1,500

ME089 **Adenosine 2b Receptor: A Novel Therapeutic Target for Irritable Bowel Syndrome**
Zinan Zhang, 16, Chamblee Charter High School, Chamblee, Georgia

Second Award of $1,000

ME088 **Does Chronic Hyperglycemia Have an Effect on Alzheimer's Amyloid-Beta Pathology in the Brain?**
Jasmine Samaiya Roberts, 15, Paul R. Wharton High School, Tampa, Florida

Third Award of $500

AS020 **Differentiation of Bovine Adipose Derived Adult Stem Cells**
Melissa Severn McDowell, 16, Saint Joseph's Academy, Baton Rouge, Louisiana

ME044 **The Novel Property of the Circulating Hormone AM and Its Binding Protein: Neuroprotection in Hypoxia**
Stephanie Mian Wang, 17, Roslyn High School, Roslyn Heights, New York

Winners will receive a certificate, a t-shirt, and a one-year subscription to APS publications.

American Psychological Association

The mission of the American Psychological Association is to advance psychology as a science and as a means of promoting health education and human welfare. Based in Washington, D.C., APA is a scientific and professional organization that represents psychology in the United States. With over 148,000 members APA is the largest association of psychologists worldwide. The APA is awarding the best projects representing psychological science.

First Award of $1,500

BE029 **How Harry Potter Can Help You Get a Higher SAT Score: The Effects of Context and Familiarity on Vocabulary Retention in Adolescents**
Trisha Paige Nussbaum, 17, Roslyn High School, Roslyn Heights, New York

Second Award of $1,000

BE027 **The Impact of Grade-Level and Gender on High-School Students Self-Regulated Learning Strategies**
Nicole Traci Goldbaum, 18, Plainview Old-Bethpage John F. Kennedy High School, Plainview, New York

Third Award of $500

BE021 **Efficacy of Peer-Delivered Sleep Hygiene Education on Sleep Hygiene Practices, Sleep Quality, and Mood in Evening-Type Adolescents**
Elliot E.A. Prince, 15, Wilsonville High School, Wilsonville, Oregon

BE052 **Socioeconomics and Public Education: An Examination of Factors and Policies that Narrow the Achievement Gap**
Jonathan Dean Loucks, 17, Illinois Mathematics and Science Academy, Aurora, Illinois

BE056 **Give Us a Sign**
Alessandra Fellin Rossi, 17, The Academy of Science and Technology, The Woodlands, Texas

BE058 **Secret Factors Affecting the Doctor-Patient Relationship in Egyptian Governmental Hospitals**
Gina Mamdouh Gayed, 18, Dar El Tarbiah American School, Cairo, Egypt

BE317 **Burnout Syndrome at School**
Estefania Aranda, 16, Escuela de Comercio No. 2 "Gral M.M. de Guemes", Concordia, Entre Rios, Argentina
Cristhian Emmanuel Fink, 17, Escuela de Comercio No 2 "Gral. M. M. de Guemes", Concordia, Entre Rios, Argentina

American Society for Horticultural Science

First Award of $1,000

PS012 **Using *Bacillus subtilis* to Control Septoria and Blossom Drop**
John Jacob Register, 18, Austin High School, Austin, Minnesota

Second Award of $500

PS318 **Total Polyphenolic Contents in Relation to Its Chemopreventive Properties in Turmeric Rhizomes**
Intisar Islam, 16, Little Rock Central High School, Little Rock, Arkansas
Hamza Arshad, 17, Little Rock Central High, Little Rock, Arkansas

Third Award of $250

PS018 **Cloning the *Bastardiopsis eggersii*: A First Step in Preventing It from Extinction**
Maria de las Mercedes Martinez, 15, Academia del Perpetuo Socorro, San Juan, Puerto Rico

Each awardee and his/her school will receive a one-year subscription to ASHS "HortScience" and "Hort Technology" plus a mounted certificate.

American Society for Microbiology

The American Society for Microbiology (ASM) is the largest single life science membership organization in the world. Membership has grown from 59 scientists in 1899 to more than 43,000 members today, with more than one third located outside of the United States. The members represent 26 disciplines of microbiological specializations plus a division for microbiology educators. The ASM's awards honor the most outstanding microbiology projects.

First Award of $2,000

MI009 **The Effects of *Clostridium difficile* Toxins A and B on Porcine Shown Using Laboratory Testing**
Brady John Welu, 17, Marshall High School, Milroy, Minnesota

Second Award of $1,250

MI053 **What Is the Effect of pH and Temperature on Anaerobic Respiration in Yeast Cells?**
Toby Claire Douglas, 16, Oxford High School, Oxford, Mississippi

Third Award of $750

MI034 **A Molecular Phylogenetic Study of Archaea from a Muskeg in Southeast Alaska**
Stephanie Anne Thompson, 18, Mount Edgecumbe High School, Sitka, Alaska

Fourth Award of $500

MI036 **Antibiotics from Eggs of the Spider *Phoneutria nigriventer***
Ivan Lavander Candido Ferreira, 18, ColΘgio Guilherme Dumont Villares, Sπo Paulo, SP, Brasil

Fifth Award of $250

MI020 **A Styrofoam-Decomposing Bacterium from Mealworms**
I-Ching Tseng, 16, National Taichung Girl's Senior High School, Taichung, Taiwan, Chinese Taipei

MI023 **Identification of Genes in *C. albicans* that Contribute to Antifungal Resistance**
Shubhangi Arora, 15, Novi High School, Novi, Michigan

MI031 **Synthesis of Thiazoline-Based Compounds as Possible Antibacterial Agents**
Lauren Marie Jessup, 18, Marian High School, Mishawaka, Indiana

MI044 **Correlating Genetic Signatures with Surface Sugar Expression in *Vibrio vulnificus***
Shilpa Pramod Argade, 17, Scripps Ranch High School, San Diego, California

MI051 **Irradiation Extermination: A Portable System to Eliminate Water-Borne Microorganisms**
Kelli Ann Lynch, 15, Blevins Junior High, Fort Collins, Colorado

MI057 **Confirmation of Biological Activity in Tn5 Mutagenesis of *Burkholderia pyrrocinia* (FL728) Biological Control Agents**
Stephanie Page Hoskins, 16, Lincoln Park Academy, Fort Pierce, Florida

All laureates receive a cash prize and a one-year subscription to Microbe, ASM's monthly news magazine, and access to the members only web resources.

American Society of Pharmacognosy

The American Society of Pharmacognosy is a professional organization involved in the scientific study of naturally occurring molecules with biological significance and applications. Founded in 1959, this year the ASP is celebrating our Golden Anniversary. Winning projects will receive an award of $500 and each student will receive a medallion commemorating our special milestone. For projects involving the study of natural products that are in any relevant category areas including Animal Sciences, Biochemistry, Cellular and Molecular Biology, Chemistry, Medicine, Microbiology and Plant Sciences.

First Award of $500

CB042 **Preparing to Die or Recycling to Survive: Investigating the Relationship Between Apoptosis and Autophagy Using the Natural Product, Palmerolide A**
Katharina Sophie Yandrofski, 18, Frederick High School, Frederick, Maryland

MI012 **Reversing Resistance: Evaluating the Antimicrobial Effects of Flavonoid Extracts on Reversing Resistance to Oxacillin**
James Evan Fenska, 16, Miami High School, Miami, Oklahoma

MI014 **Isolating a Novel Antibiotic from *Bacillus flexus*, a Bacterium Found in the Human Microbiome**
Andrew James Macgregor, 16, Butte High School, Butte, Montana

American Statistical Association

First Award of $1,000

MA301 **Survival Analysis of Gene Expression Data Using a Hybrid Dimension Reduction Technique**
Sameer Kirtikumar Deshpande, 18, Texas Academy of Mathematics and Science, Denton, Texas
Jeffrey Chan, 16, William P. Clements High School, Sugar Land, Texas
Alicia Zhang, 17, Liberal Arts and Science Academy High School, Austin, Texas

Second Award of $500

AS043 **Mathematical Models for the Gender Determination of Philippine Eagles (*Pithecophaga jefferyi*)**
Jovani Saso Tomale, 16, Davao City National High School, Davao City, Davao del Sur, Philippines

Third Award of $250

EN048 **The Effect of Graphene Oxide Nanofillers on Polyvinyl Acetate Tensile Strength**
Kekeli Mauwena Dawes, 15, Spring Valley High School, Columbia, South Carolina

All students receive one-year subscriptions of "STATS" and "Chance". Their schools will also receive a one-year school membership in the American Statistical Association.

American Veterinary Medical Association

The American Veterinary Medical Association established in 1863, is a not-for-profit association representing more than 76,000 veterinarians working in private and corporate practice, government, industry, academia, and uniformed services. Structured to work for its members, the AVMA acts as a collective voice for its membership and for the professional.

First Award of $1,000 and a plaque

AS003 **Copepods and Cholera: An Assessment of Freshwater Copepods Used for Biological Pest Control as a Reservoir for the Cholera Causing Bacterium *Vibrio cholerae***
Madeleine Amanda Ball, 16, Ursuline Academy of Dallas, Dallas, Texas

AS035 **The Isolation and Characterization of the Antibiotic Components Extracted from Marine Sponges**
Bernadette Ann Hritzo, 15, Villa Joseph Marie High School, Holland, Pennsylvania

AS301 **Specific Treatment and Control of Parasites on Game**
Barend Johannes de Beer, 17, Waterkloof High School, Pretoria, South Africa
Jason Dixon, 17, Waterkloof High School, Pretoria, Gauteng, South Africa

EM010 **A Hairy Situation**
Sarah Ida Tedesco, 14, Bradenton Preparatory Academy, Bradenton, Florida

MI020 **A Styrofoam-Decomposing Bacterium from Mealworms**
I-Ching Tseng, 16, National Taichung Girl's Senior High School, Taichung, Taiwan, Chinese Taipei

All winners will also receive a plaque.

Ashtavadhani Vidwan Ambati Subbaraya Chetty (AVASC) Foundation

An educational and medical service foundation dedicated to recognizing academic talent and providing services to the needy. We will award projects that display outstanding creativity, ingenuity and have the potential to alleviate the human condition or mark a substantive advance in the scientific field.

First Award of $1,000 U.S. savings bond

BI010 **An Innovative Strategy for the Protection against Chemo-toxicity and Radiation Poisoning**
Preeti Singhal, 16, Arlington High School, Arlington, Texas

EN053 **Graphene: First Practical Production and Applications of the Supermaterial**
Philip Vidal Streich, 18, Home School, Platteville, Wisconsin

Second Award of $500 U.S. savings bond

BE054 **Brain-Derived Neurotrophic Factor Val^{66}Met Polymorphism Differentially Affects Regional Cerebral Blood Flow**
Katherine Grace Nabel, 17, National Cathedral School, Washington, District of Columbia

CB018 **An *in vitro* Method of Sprouting Angiogenesis Reveals a Relaxation for the Requirement of VegfR2 Signaling for the Formation of Endothelial-like, PECAM-Positive Cells**
Elizabeth Cai, 18, Briarcliff High School, Briarcliff Manor, New York

CB033 **Ship as a Target of miR155: A New Model for Leukemiogenesis**
Aaditya Ganesh Shidham, 18, Upper Arlington High School, Upper Arlington, Ohio

CS043 **Neural Network Modeling: An Innovative Time and Cost Efficient Approach for Anti-Cancer Drug Development**
Monica Roy Chowdhury, 16, Blue Valley High School, Stilwell, Kansas

EM037 **Recycled Composite Material Made from Non-recyclable Multilayer Film Plastic Packaging Waste**
Hetal Kanjibhai Vaishnav, 16, Late Shree S.G. Dholakiya Memorial High School, Rajkot, Gujarat, India

EM322 ***Solanum nigrum* and *Psidium guajava* as a Bio-Pesticide for Cockroaches**
Divya Vastupal Jain, 15, Modern English School, Mumbai, Maharshtra, India
Rithika Sangameshwaran, 14, Modern English School, Mumbai, Maharashtra, India

MA043 **Infinite Sums of Zeta Functions and Other Dirichlet Series**
Andrei Triffo, 17, Synge Street CBS Secondary School, Dublin, Ireland

PH005 **A Novel Method to Determine the Mechanism Behind DNA-DNA Interactions Using Optical Tweezers**
Sujay Tyle, 15, Pittsford Mendon High School, Pittsford, New York

Equivalent awards available for non-U.S. winners.

Association for Computing Machinery

ACM, the Association for Computing Machinery, is an educational and scientific society uniting the world's computing educators, researchers and professionals to inspire dialogue, share resources and address the field's challenges. ACM strengthens the professional's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing for life-long learning, career development, and professional networking.

First Award of $1,000

CS015 **Vision: A Mobile Social Networking Platform Based on Cloud Computing and Augmented Reality**
Xiaowei Zhu, 19, No. 2 Secondary School Attached to East China Normal University, Shanghai, China

Second Award of $500

CS302 **Smart Framework Developed for Web 2.0**
Vojtech Vit, 20, Gymnazium, Praha 6, Arabska 14, Praha 6, Czech Republic
Stepan Sindelar, 20, Gymnazium, Praha 6, Arabska 14, Praha 6, Czech Republic

Third Award of $300

CS022 **The Application of Artificial Neural Networks to the Heuristic Analysis of Computer Viruses**
Nelson Zhang, 15, Shanghai American School, Shanghai, China

Fourth Award of $200

CS014 **Human Visual System-based Adaptive Tone Reproduction for Restoring Imperceptible Details of Digital Images**
Yi-Ping Shih, 18, Taipei Municipal First Girls' Senior High School, Taipei, Taiwan, Chinese Taipei

CS040 **Hybrid Light Rendering**
Matt Swaner Vitelli, 16, Academy for Math, Engineering, and Science, Salt Lake City, Utah

CS042 **Applied Digital Cerebrovascular Segmentation**
Vedant Subramaniam Kumar, 15, duPont Manual Magnet High School, Louisville, Kentucky

All winners will receive complimentary ACM Student Memberships for the duration of their undergraduate education. The ACM's Student Portal Package also includes ACM's Digital Library.

Association for Women Geoscientists

The mission of the AWG is to encourage the participation of women in the geosciences, to exchange educational, technical and professional information, and to enhance the professional growth and advancement of women in geosciences. These awards are presented to projects which exemplify high standards of innovation and scientific excellence in the geosciences, increase awareness of the geosciences, illustrate the interdisciplinary nature of the geosciences and promote sensitivity to the earth's global system.

First Award of $1,500

EA010 **Evaluating Tsunami Risk in Discovery Bay, Washington**
Marley Elizabeth Iredale, 16, Sequim High School, Sequim, Washington

Second Award of $150

EA009 **Mapping Venus: The Use of Magellan Radar Data to Determine the Geologic History of a Circular Low on Venus, How the Area Varies in Space and Time and If It Formed by Endogenic or Exogenic Processes, Phase Two**
Courtney Catherine Jackson, 16, Cloquet Senior High School, Cloquet, Minnesota

EV030 **Natural Organics Control Aggregation of Mercury Sulfide Nanoparticles in Freshwater Systems**
Eileen Kao Jang, 17, North Carolina School of Science and Mathematics, Durham, North Carolina

The award winners will also receive a student membership in the AWG organization which includes a newsletter subscription, a certificate, an AWG t-shirt and a copy of the winners' group photograph.

Astronomical Society of the Pacific and the American Astronomical Society

The Priscilla and Bart Bok First and Second Awards are given jointly by the Astronomical Society of the Pacific and the American Astronomical Society. The main criterion for selecting the two Bok Awards is scientific merit. Observational, instrumental, or theoretical projects are all eligible, as are interdisciplinary projects involving physics, mathematics, computer science, and engineering, etc.

Priscilla and Bart Bok First Award of a $1,000 scholarship

PH045 **A Time-Dependent Impact Parameter Model Sheds Light on the Evolution of Galaxy Morphology in Compact Clusters of Galaxies**
Keith Austin Hawkins, 17, GlenOak, Canton, Ohio

Priscilla and Bart Bok Second Award of a $500 scholarship

PH019 **Determining the Orbital Elements of Minor Planet 23265**
Caroline Julia von Wurden, 17, Los Alamos High School, Los Alamos, New Mexico

The awarded funds are intended to be used by the recipients to further their education and research efforts.

China Association for Science and Technology (CAST)

China Association for Science and Technology (CAST) is the largest organization of scientists and technologists of China. One of its missions is to promote public understanding of science. Having developed science education programs CAST supports youth and adolescents in becoming citizens with high scientific literacy.

Trip to attend the China Adolescents Science and Technology Innovation Contest in July.

AS023 **Identifying and Classifying Evolutionary Interactions between Sweat Bees and Nematodes**
Tara Anjali Adiseshan, 14, Ramana Academy, Charlottesville, Virginia

BE004 **Multiple Choice Testing: A Review of Factors that Affect Test-Taking Effectiveness**
Amanda Gabriela Barillas, 16, Southwestern Educational Society, Mayaguez, Puerto Rico

EE005 **WireWise**
Owen Martin McMeel, 18, St. Mary's Grammar School Magherafelt, Co. Derry, Ireland

EN043 **Sensor for Organic Residues on Aluminum Surfaces**
Christoph Wiesinger, 20, HTL Braunau, Braunau/Inn, Austria

EV024 **Implementation of Thermal Plume Rise in SILAM Atmospheric Dispersion Model**
Riinu Ots, 19, Hugo Treffner Gymnasium, Tartu, Estonia

This award included round trip flights, accommodations and activities for the winners.

Coalition for Plasma Science (CPS)

This award will be given to the best project in the broad area of plasmas. Plasma-related topics include, but are not limited to, lighting, display, materials processing, space physics, terrestrial phenomena (lighting, aurora, etc.), fusion, and basic plasma science. Criteria include overall scientific merit, understanding of the problem, and approach to the topic.

First Award of $1,500

PH316 **Energy from Spark Discharges: Amazing Overunity or Experimental Error?**
Walter Preston Hansen, 17, Bingham High School, South Jordan, Utah
Riley Taylor Densley, 17, Bingham High School, South Jordan, Utah

Drexel University

Drexel University in Philadelphia, Pennsylvania is awarding 8 full tuition scholarships for projects in the categories of Computer Science, Engineering, Medicine and Health and Physics or projects aligned with Drexel's curriculum.

Tuition Scholarship of $150,000

CS030 **Information Distance and Its Implementation in Spam Detection**
Janice Rosalina Zhang, 17, Plano Senior High School, Plano, Texas

EE060 **Multi-Touch Table: An Infrared-Based Touch Interface Designed for Collaborative Data Manipulation**
Ritik Malhotra, 16, Lynbrook High School, San Jose, California

EN003 **Thermogelling Dispersions of Polymer Nanoparticles**
Peter D Hu, 17, Texas Academy of Mathematics and Science, Denton, Texas

EN011 **Development of a Novel Antimicrobial Bone Graft Substitute for Cranioplasty**
Catherine Yang Fan, 17, Tom C. Clark High School, San Antonio, Texas

EN061 **Analysis of Nanofiber-based Scaffolds**
Abigail Rose Lewis, 17, Rockdale Magnet School for Science and Technology, Conyers, Georgia

ET070 **The Application of Multi-Dimensional Flow Vector Probes on the Modeling of Wingtip Vortices**
Mark Thomas Parrish, 17, Chamberlain High School, Tampa, Florida

ME005 **Stealthy Iron Oxide Nanoparticles: Towards the Identification and Eradication of Cancer Cells**
Philip S Schlenoff, 16, Maclay School, Tallahassee, Florida

PH033 **Fast Low-Cost Bisphenol-A (BPA) Detector**
Harikrishna Rallapalli, 17, Amador Valley High School, Pleasanton, California

Scholarships are renewable for up to 5 years pending maintenance of a 3.0 GPA and full-time status. Each scholarship is valued at $150,000. Scholarships will go into effect upon admission to the University.

Florida Institute of Technology

Florida Institute of Technology is the only private technological University in the southeastern United States. Florida Tech, located on the Space Coast near Kennedy Space Center, offers full undergraduate and graduate programs in engineering, science, psychology, business, and aeronautics.

Scholarship Award of $12,500 per year, renewable annually

BE045 **The Effects of Processing Style on PSAT and GPA Scores**
Alyssa Cathryn Tapley Dougherty, 17, Santa Catalina Upper School, Monterey, California

BE046 **Comparative Study of the Effect of Classical and Rock Music in Fact Retention in Adolescents 15 to 17 Years Old**
Selena Marie Rodriguez-Rivera, 16, University Gardens High School, San Juan, Puerto Rico

BI019 **Transmissible Spongiform Encephalopathies: Analyzing Copper 2+ Binding in the Octrepeat Region of the Infectious Prion Protein**
Marie Nielsen, 17, Pacific Collegiate School, Santa Cruz, California

CB004 **Localization and Quantification of Ataxin-1 in Normal Cell Lines and Alzheimer's-Mutated Cell Lines and an Evaluation of Nicotine- and THC-induced Microglial Activation**
Prachiti H. Dalvi, 16, International Baccalaureate at Bartow High School, Bartow, Florida

CH002 **Postmortem Body Tissue and Fluid Distribution of 1,1-difluoroethane**
James S. Peng, 16, American Heritage School, Plantation, Florida

CH010 **Molecular Imprinting in the Creation of Potentiometer Sensors**
Julia Yun-ling Shi, 15, Tullahoma High School, Tullahoma, Tennessee

CH012 **Facile Access to Bicyclic Sultams Having Sulfur at the Apex Position**
Daria S. Grosheva, 16, Academical Gymnasium of Saint-Petersburg State University, Saint-Petersburg, Russia

CH041 **Bio-Battery**
Ayse Ferda Yalcin, 16, Ozel Kultur Science High School, Istanbul, Ankara, Turkey

CS030 **Information Distance and Its Implementation in Spam Detection**
Janice Rosalina Zhang, 17, Plano Senior High School, Plano, Texas

EE052 **Electromagnetic Transportation, Phase III**
Braxton Gage Hoenes, 16, Beardstown High School, Beardstown, Illinois

EN003 **Thermogelling Dispersions of Polymer Nanoparticles**
Peter D Hu, 17, Texas Academy of Mathematics and Science, Denton, Texas

EV021 **A Comparative Study of the Mercury Content of the Bear, Jordan, and Weber Rivers and Its Effects on the Wildlife and the Great Salt Lake**
Christie Hewlett, 16, Weber High School, Pleasant View, Utah

ME010 **Why Your Arteries Care About PAPP-A: PAPP-A Enhances Smooth Muscle Cell Hyperplasia**
Catherine Elizabeth Ishitani, 17, Mayo High School, Rochester, Minnesota

ME014 **Influences of *Cinnamomum cassia* on Pre-diabetic Characteristics**
Ashley Nicole Hoehn, 16, Ottoville Local Schools, Ottoville, Ohio

ME035 **Cardiac Disease Detection: A Study of the Defining Characteristics of a Human Phonocardiogram**
Darren Jindal, 16, Baton Rouge Magnet High School, Baton Rouge, Louisiana

ME051 **The Role of Proteasomal Subunits in Polyglutamine Protein Aggregation in the Nematode *C. elegans***
Dave Raj Praharaj, 16, Virgil I. Grissom High School, Huntsville, Alabama

ME083 **The Expression of MicroRNAs and Their Role in the Development of Leukemia**
Mengyi Xu, 16, Lincoln Park High School, Chicago, Illinois

PH313 **A Novel Approach to Asteroid Identification Using Image Processing of Existing Data**
Erika Alden DeBenedictis, 17, Albuquerque Academy, Albuquerque, New Mexico
Haochen Hong, 16, La Cueva High School, Albuquerque, New Mexico

PH319 **Detection of Muon Flux and Muon Lifetime Using a High Resolution Muon Detector**
Leah Suzanne Wilson, 16, duPont Manual High School, Louisville, Kentucky

Florida Tech is offering tuition scholarships of $50,000 each, to be distributed over four years.

GE Energy

GE Energy, based in Atlanta, Georgia is one of the world's leading suppliers of power generation and energy technologies, with 2008 revenue of $29.3 billion. GE Energy works in all areas of the energy industry including coal, oil, natural gas and nuclear energy; renewable resources such as water, wind, solar and biogas; and other alternative fuels. Numerous GE Energy products are certified under ecomagination, GE's corporate-wide initiative to aggressively bring to market new technologies that will help consumers meet pressing environmental challenges. GE's tradition of innovation began with its founder Thomas Edison. This GE Energy Edison Award will recognize that same passion, innovation and creativity. This award is presented to projects which best display imaginative, impactful or efficient generation or usage of energy with special consideration of the GE Ecomagination commitment.

Scholarship Award of $2,500

ET045 **Optimizing Turbine Blade Efficiency by Manipulating Boundary Layer Separation**
Andrew Kipling Miller, 18, Western Alamance High School, Elon, North Carolina

Scholarship Award of $1,500

ET020 **Harnessing Solar Energy, Year Five: Increasing the Efficiency of a Hybrid Polymer Photovoltaic Cell with Nanofiber Polymer Complexes of Varied Thickness**
Nathan McKay Monroe, 18, Episcopal High School, Jacksonville, Florida

Scholarship Award of $1,000

EE027 **Sensor to Detect Liquids**
Thomas Nesch, 20, Technische Oberschule Stuttgart, Stuttgart, Germany

Geological Society of America

Since 1888 this society unites thousands of earth scientists from every corner of the globe in a common purpose to study the mysteries of our planet and share scientific findings. The mission of GSA is to be a leader in advancing the geosciences, enhancing the professional growth of its members, and promoting the geosciences in the service of mankind. We are awarding projects demonstrating excellence in investigating Earth Science.

First Award of $1,500

EA013 **Cook Inlet: Correlation between Air Temperature Trends and Intra-seasonal Sea Ice Extent Variability**
Kelsey Ann Meacham, 15, West Anchorage High School, Anchorage, Alaska

Second Award of $1,000

EA303 **The Impact of 2008 Tropical Cyclones in the Phytoplankton Community of an Estuarine System, a Second Year Study**
Andrea Carolina Monzon, 14, Academia del Perpetuo Socorro, San Juan, Puerto Rico
Adriana Cristina Sarro, 15, Academia del Perpetuo Socorro, San Juan, Puerto Rico

Third Award of $500

EA009 **Mapping Venus: The Use of Magellan Radar Data to Determine the Geologic History of a Circular Low on Venus, How the Area Varies in Space and Time and If It Formed by Endogenic or Exogenic Processes, Phase Two**
Courtney Catherine Jackson, 16, Cloquet Senior High School, Cloquet, Minnesota

IEEE Foundation

Sponsored by the IEEE Foundation, the IEEE Presidents' Scholarship is awarded by the IEEE, the world's largest technical professional society, with over 365,000 members in over 150 countries. Given for outstanding achievement in the field of engineering, it includes a $10,000 scholarship payable over four years for undergraduate study in engineering or a related field.

The IEEE Foundation Presidents' Scholarship Award of $10,000

PH026 **A Microwave Metamaterial Lens with Negative Index of Refraction**
Rahul Kumar Pandey, 17, Stoney Creek High School, Rochester Hills, Michigan

The winner also receives a plaque, framed certificate and free membership to the IEEE for the duration of the scholarship.

IEEE Computer Society

First Award of $1,000

CS035 **Semantic Image Retrieval: Learning Gaussian Mixture Models of Semantic Concepts Using Expectation-Maximization**
David C Liu, 17, Lynbrook High School, San Jose, California

Second Award of $500

CS032 **Creating Zinif: An Interpreted, Object-oriented Programming Language**
Kent Andrew Williams-King, 15, Argyll Centre, Calgary, Alberta, Canada

Third Award of $350

CS033 **FPFD: An Implementation of IEEE 754-2008 Decimal Arithmetic**
Tavian Edwin Lyon Barnes, 17, Queen Elizabeth High School, Calgary, Alberta, Canada

Team First Award of $500 for each team member

CS306 **Stylometric "Fingerprinting": A Computerized Approach to Author Identification**
Ashley Kate Vechinski, 14, Life Christian Academy, Harvest, Alabama
Bethany Lynne Johnson, 15, Life Christian Academy, Harvest, Alabama

Team Second Award of $400 for each team member

CS307 **The Development of a CAD to Find Abnormalities in Digital Radiographs, Phase II**
Rebekah Kristine Unsworth, 16, Kingswood Academy, Sulphur, Louisiana
Mary Rochelle Unsworth, 18, Kingswood Academy, Sulphur, Louisiana

Team Third Award of $300 for each team member

Winners will receive a framed certificate, and a one-year free subscription to the CS magazine of their choice. A winners group photo will also be published in an issue of "Computer" magazine.

IIT Institute of Psychology

Illinois Institute of Technology is a national, technological, Ph.D. granting research university, with world-renowned programs in engineering, architecture, the sciences, humanities, psychology, business, law and design. IIT brings a focused interdisciplinary approach to education, including the Interprofessional Projects Program. IIT pairs the educational and cultural experiences of America's Second City with the small feel of an undergraduate population of just over 2,300 and a total population of just over 6,000.

Second Place Award of $1000 for excellence in Behavioral and Social Sciences

BE314 **A Closer Look at Social Taboo: Female Genital Mutilation**
Ahmed Safieldin Aboumandoor, 16, Futures International School, Cairo, Egypt
Ahmed Ahmed Shoieb, 15, Futures International School, Cairo, Egypt

Third Place Award of $500 for excellence in Behavioral and Social Sciences

BE038 **Possible Variance in Scores on the Missouri Assessment Program (MAP) Communication Arts Test Based on English Dialect Spoken**
Daniel Alexander Duncan, 18, St. Charles West High School, St. Charles, Missouri

Renewable Scholarship of $15,000 per year for up to four years

BE004 **Multiple Choice Testing: A Review of Factors that Affect Test-Taking Effectiveness**
Amanda Gabriela Barillas, 16, Southwestern Educational Society,
Mayaguez, Puerto Rico

BE016 **Analysis of Eye Contact and Driving Time on a Simulated Driving Device: Crazy Texting While Driving**
Chee Xiong, 18, Como Park Senior High School, St. Paul, Minnesota

BE018 **Fun & Games: A Study of Rational Behavior in Individuals through Cognitive Reflections Testing and Predictions of Nash Equilibrium in n-person Games**
Catherine Susan Haag, 17, Beaumont School, Cleveland Heights, Ohio

BE034 **A Comparison of the Effects of Native Language on the Learning Style of Native Chinese and Native English Speakers**
Ling Chou, 17, Oregon Episcopal School, Portland, Oregon

BE036 **What Is the Impact on Racial Profiling When Presenting Subliminal Images to the Subconscious?**
Ariel Nicole Wiley, 17, Basha High School, Chandler, Arizona

BE045 **The Effects of Processing Style on PSAT and GPA Scores**
Alyssa Cathryn Tapley Dougherty, 17, Santa Catalina Upper School, Monterey, California

BE052 **Socioeconomics and Public Education: An Examination of Factors and Policies that Narrow the Achievement Gap**
Jonathan Dean Loucks, 17, Illinois Mathematics and Science Academy, Aurora, Illinois

First Place Award of $1500 for excellence in Behavioral and Social Science

BE308 **Action and Awareness: An Environmental Education Methodology**
Ana Claudia Cassanti, 17, Colegio Dante Alighieri, Sao Paulo, SP, Brasil
Felipe Seabra Fernandes, 17, Colegio Dante Alighieri, Sao Paulo, SP, Brasil
Ana Clara Cassanti, 17, Colegio Dante Alighieri, Sao Paulo, SP, Brasil

Scholarship award and continuation is conditional upon the student being admitted to Illinois Institute of Technology, maintaining satisfactory academic progress, and remaining a full-time student.

International Council on Systems Engineering - INCOSE

The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization founded to develop and disseminate the interdisciplinary principles and practices that enable the realization of successful systems. INCOSE will award the best interdisciplinary project that can produce technologically appropriate solutions the meet societal needs.

Honorable Mention

EE014 **Developing a Remotely Operated Underwater Device for Rapid Deployment in Flooded Scenarios to Gather Information for S&R**
Avilash Kalpathy Cramer, 16, West Linn High School, West Linn, Oregon

EE015 **Ultrasonic Sensor Mobility Aids for the Visually Impaired**
Thomas Frederick Wilkason, 16, Mount de Sales Academy, Macon, Georgia

EE018 **Autonomous Human-Seeking Robot**
Elizabeth Charlotte Coquillette, 18, Hathaway Brown School, Shaker Heights, Ohio

EE047 **Look at This MES: Mars Environment Simulator III**
Julie Emily Walker, 18, Leonardtown High School, Leonardtown, Maryland

EE059 **The Practical Utilization of Wireless Protocol and Swarm Mentality to Improve Overall Efficiency and Effectiveness in Autonomous Robot Platforms**
Carl Edward Lawhon, 17, Pembroke Hill School, Kansas City, Missouri

EN054 **BridgeTender: An Autonomous System to Monitor the Structural Health of Bridges**
Evan Bock Clark, 17, West High School, Salt Lake City, Utah

ET061 **Utilizing the Other 99% of America's Wind Energy**
James Lee Clark, 16, Mayfield High School, Las Cruces, New Mexico

ET069 **Solar Acquisition**
Shyamal Ashwin Patel, 18, Saint Augustine High School, Saint Augustine, Florida

First Award of $1,500

EE068 **The Underground Radio II**
Alexander Kent Kendrick, 16, Los Alamos High School, Los Alamos, New Mexico

Mu Alpha Theta, National High School and Two-Year College Mathematics Honor Society

Formed 50 years ago to develop strong scholarship in Mathematics and promote the understanding and enjoyment of the subject. The Mu Alpha Theta Award is given to the most challenging, thorough, and creative investigation of a problem involving mathematics accessible to high school students. Components of the investigation may include, but are not limited to, mathematical proof, mathematical modeling, statistical analysis, visualization, simulation, and approximation.

First Award of $1,000

CS031 **Performance Improvement in Online Analytical Processing (OLAP)**
Michael Yan, 18, Hamilton High School, Chandler, Arizona

MA030 **An Analysis of Erdos's Conjecture**
Matthew Henry Stoffregen, 18, Woodoland Hills High School, Pittsburgh, Pennsylvania

MA301 **Survival Analysis of Gene Expression Data Using a Hybrid Dimension Reduction Technique**
Sameer Kirtikumar Deshpande, 18, Texas Academy of Mathematics and Science, Denton, Texas
Jeffrey Chan, 16, William P. Clements High School, Sugar Land, Texas
Alicia Zhang, 17, Liberal Arts and Science Academy High School, Austin, Texas

Winners will receive a certificate and information about joining Mu Alpha Theta.

National Anti-Vivisection Society

For the projects that best promote scientific advancement through methods that do not harm animals, that work to replace live animals with non-animal methodologies, or for animal-based research that benefits animals using non-invasive techniques, or in an observational setting.

First Award of $5,000

CB037 **Microscale Platform for Determining Human Pluripotent Stem Cell Fate**
Jane Yoonhae Suh, 17, Palos Verdes Peninsula High School,
Rolling Hills Estates, California

Second Award of $2,000

CS043 **Neural Network Modeling: An Innovative Time and Cost Efficient Approach for Anti-Cancer Drug Development**
Monica Roy Chowdhury, 16, Blue Valley High School, Stilwell, Kansas

Third Award of $1,000

BE040 **Facial Expression and Its Relationship to Gesture in Western Lowland Gorillas**
Jennifer Lynn Draiss, 17, Monroe-Woodbury High School, Central Valley, New York

ME028 **Designing Heterologous Influenza Vaccine for New Pandemic Pathogen Emerging in Humans Infected with Avian Influenza**
Alexander Chernyakhovsky, 17, William Mason High School, Mason, Ohio

For more information on the specific guidelines for this award, visit the National Anti-Vivisection Society's website.

National Collegiate Inventors and Innovators Alliance/The Lemelson Foundation

Prizes are awarded for creativity, technological innovation and commercial promise. The National Collegiate Inventors and Innovators Alliance will award prizes in 11 different categories, which recognize innovation and invention that addresses critical basic human needs.

Scholarship Award of $1,000

CS043 **Neural Network Modeling: An Innovative Time and Cost Efficient Approach for Anti-Cancer Drug Development**
Monica Roy Chowdhury, 16, Blue Valley High School, Stilwell, Kansas

EE063 **Using Wasted Heat Energy of a Car with Thermoelectric Modules**
Thomas Keith Houser, 15, De La Salle High School, Concord, California

EN061 **Analysis of Nanofiber-based Scaffolds**
Abigail Rose Lewis, 17, Rockdale Magnet School for Science and Technology, Conyers, Georgia

EN304 **Designing and Characterizing Zinc Oxide Nanotube Based Hybrid Solar Cell**
Ahmet Rasit Yildirim, 16, Private Beyliduzu Fatih Science High School, Istanbul, Marmara, Turkey
Enes Guney, 17, Private Beyliduzu Fatih Science High School, Istanbul, Marmara, Turkey

ET012 **Gone with the Windmills: An Analysis of the Effectiveness of an Oscillating Wind Energy Generator**
Ryan Cherian Alexander, 16, R. C. Clark High School, Plano, Texas

EV002 **Degradation of Antibiotics in Waste Water**
Jan Justra, 19, Gymnasium, Brno - Reckovice, Brno, Czech Republic

ME009 **Bioelectromagnetics**
Alexis Omar Lopez, 16, Celebration High School, Celebration, Florida

ME303 **Harvesting the Heart's Energy Using Piezoelectric Materials: A Comparison of Right Atrial, Right Ventricular, and Left Ventricular Pacing Sites**
Atmananda Mitra Persaud, 17, Champlin Park High School, Champlin, Minnesota
Christopher Ryan Ho, 18, Champlin Park High School, Champlin, Minnesota
Alexander Scott Ditter, 18, Champlin Park High School, Champlin, Minnesota

MI020 **A Styrofoam-Decomposing Bacterium from Mealworms**
I-Ching Tseng, 16, National Taichung Girl's Senior High School, Taichung, Taiwan, Chinese Taipei

MI025 **Natural *Escherichia coli* 0157:H7 Inhibitors: A Future Innovation in Food Safety**
Abbey Elaine Thiel, 16, Isabel High School, Isabel, South Dakota

PH018 **A Novel Method for Measuring Sonoluminescent Spectra**
Lyric Elizabeth Gillett, 17, Cornerstone High Homeschool, Houston, Texas

National Taiwan Science Education Center

Trip to Taiwan to attend the Taiwan International Science Fair in February. This award includes a round trip ticket, most meals, accommodations and activity expenses for the winners.

Trip to attend the Taiwan International Science Fair.

BI011 **Mechanisms of Tumor Cell Invasion: The Role of Stat3 in Squamous Cell Carcinoma**
Kendall Marie Hughes, 18, Caddo Parish Magnet High School, Shreveport, Louisiana

BI022 **Curcumin Induces Apoptosis in Cancer Cells by Inhibiting NF-kB**
Anartya Mandal, 18, Boston Latin School, Boston, Massachusetts

Valid passports required for trip winners.

North American Benthological Society

An international scientific organization whose purpose is to promote better understanding of the biotic communities of lake and stream bottoms and their role in aquatic ecosystems. We are awarding projects which contribute to scientific research in these habitats.

First Award of $600

AS003 **Copepods and Cholera: An Assessment of Freshwater Copepods Used for Biological Pest Control as a Reservoir for the Cholera Causing Bacterium *Vibrio cholerae***
Madeleine Amanda Ball, 16, Ursuline Academy of Dallas, Dallas, Texas

Second Award of $350

EV010 **Effects of Nano Metal Oxides on Sentinel Organisms in the Aquatic Environment**
Jamie Elizabeth Molloy, 17, Divine Savior Holy Angels High School, Milwaukee, Wisconsin

Third Award of $250

EM002 **The Use of a Rain Garden to Control Road Run-off in Scanlon Creek and an Assessment of Rain Gardens as the Best Storm Water Management Practice, Phase III**
Logan Joseph Pallin, 16, Cloquet Senior High School, Cloquet, Minnesota

All winners receive a one-year membership in the Society and a subscription to the "Journal of the North American Benthological Society".

Oregon Institute of Technology

Oregon Institute of Technology, (OIT) Oregon's polytechnic university and top-ten baccalaureate university in the western US, provides degree programs and educational opportunities in the applied sciences and technologies, especially in engineering and allied-health fields, that prepare students to be effective participants in their professional, public and international communities. OIT and the Oregon Tech Foundation (OTF) will award a $5,000 scholarship for tuition at OIT to the most meritorious project in the research area of interest and expertise at OIT.

Award scholarship of $5,000

EE014 **Developing a Remotely Operated Underwater Device for Rapid Deployment in Flooded Scenarios to Gather Information for S&R**
Avilash Kalpathy Cramer, 16, West Linn High School, West Linn, Oregon

EM012 **What Characteristics Influence a Goshawk's Nesting Site?**
Kieron Arn Callahan, 16, Grant Union High School, John Day, Oregon

Patent and Trademark Office Society

Promotes the US Patent and Trademark system's growth and well-being, promotes and fosters a true appreciation of these systems, recalls our rich heritage of innovation and commerce, and cultivates the highest standards of professional ethics among patent practitioners. The PTO extends this mission to the scientists and engineers of tomorrow. The Special Awards given at the Intel ISEF encourage young inventors to develop new and useful products, and to pursue careers in science and technology.

Grand Award of $1,000 and a framed copy of the first patent granted in the United States of America

EE068 **The Underground Radio II**
Alexander Kent Kendrick, 16, Los Alamos High School, Los Alamos, New Mexico

Second Award of $200

BI026 **Novel Biosensor Utilizing a Quinone Monolayer in Conjunction with Cyclic Voltammetry**
Joy Elisabeth Lee, 17, Thomas Jefferson High School for Science and Technology, Alexandria, Virginia

CH014 **Without a Trace**
Alexis Paige Madle, 15, Alpena High School, Alpena, Arkansas

EE023 **Trumpet Scale Tutor**
Philippa Catherine Clark, 17, Wyke 6th Form College, Hull, East Yorkshire, United Kingdom

EM037 **Recycled Composite Material Made from Non-recyclable Multilayer Film Plastic Packaging Waste**
Hetal Kanjibhai Vaishnav, 16, Late Shree S.G Dholakiya Memorial High School, Rajkot, Gujarat, India

EN043 **Sensor for Organic Residues on Aluminum Surfaces**
Christoph Wiesinger, 20, HTL Braunau, Braunau/Inn, Austria

EV306 **Investigation and Handling Proposals of Microbial Contamination in Public Transportation Vehicles in Shanghai**
Qing Xu, 16, Shanghai Yangpu Senior High School, Shanghai, China
Ao Yang, 17, Shanghai Luwan High School, Shanghai, China
Haijun Guo, 18, Shanghai Luwan Senior High School, Shanghai, China

ME015 **Engineering and Validating Predictive Infection Surveillance Strategies for Methicillin-resistant *Staphylococcus aureus***
Stephen Walter Trusheim, 18, Breck School, Golden Valley, Minnesota

Third Award of $150

AS313 **The Effects of Over the Pain Remedies on the Heart Rate of *Daphnia magna* and Its Implications to Human Cardiology**
Angshylea O'lesizisa Jones, 17, Jim Hill High School, Jackson, Mississippi
Kayla Coleman, 17, Jim Hill High School, Jackson, Mississippi

CS025 **Head-Controlled Computer Interface for the Disabled**
John B. Hinkel, III, 17, Hopkinton High School, Hopkinton, Massachusetts

EE309 **Computerized Braille Translator**
Ronny Roberto Perez Picado, 18, Colegio Tecnico Profesional Don Bosco, San Jose, Costa Rica
Robert Thomas Zamora, 18, Colegio Tecnico Profesional Don Bosco, San Jose, Costa Rica
Sayder Palacios Potosme, 18, Colegio Tecnico Profesional Don Bosco, San Jose, Costa Rica

EM310 **Extraction and Characterization of Hydroxyapatite from Marine By-Products**
Yessica Andrea Elizondo Hidalgo, 16, Colegio Cientifico de Costa Rica, Sede de Puntarenas, Puntarenas, Costa Rica
Cynthia Maria Fernandez Espinoza, 17, Colegio Cientifico de Costa Rica, Sede Puntarenas, Cocal, Costa Rica
Edwin Xiao Cai, 16, Colegios Cientificos de Costa Rica, Sede Puntarenas, Puntarenas, Costa Rica

EN305 **Switchable Infrared-Reflecting Green Window**
I-Hui Lee, 18, Taipei Municiple LiShan High School, Taipei City, Taiwan, Chinese Taipei
Yu-Ching Chao, 18, Taipei Municiple LiShan High School, Taipei City, Taiwan, Chinese Taipei

ET060 **Inducing Anaerobic Conditions for Hydrogen Production in *Chlamydomonas reinhardtii***
Raman Venkat Nelakanti, 16, Lynbrook High School, San Jose, California

EV009 **A Novel Mercury Filter**
Sharis Nicole Steib, 18, Saint James High School, St. James, Louisiana

PH039 **Versatile Wind Velocity and Direction Transducer**
Olexandr Olenyev, 16, Bahatoprofilnyj Litsey #99, Zaporizhzhya, Ukraine

PowerPlus Engineering, Inc.

Founded in 1987, PowerPlus Engineering provides engineering services to the nation's Electricity Utility and Renewable Energy Companies. PowerPlus is presenting an award for the project deemed to make the most significant contribution to sustainable electrical energy.

Award of $1,500

ET012 **Gone with the Windmills: An Analysis of the Effectiveness of an Oscillating Wind Energy Generator**
Ryan Cherian Alexander, 16, R. C. Clark High School, Plano, Texas

The award is sponsored by PowerPlus Engineering, Inc.

Psi Chi, The National Honor Society in Psychology

Psi Chi was founded in 1929, for the purposes of encouraging, stimulating, and maintaining excellence in scholarship and advancing the science of psychology. Membership is open to graduate and undergraduate students who are making the study of psychology one of their major interests, and who meet the minimum qualifications. Awards given to the best projects in psychological science.

First Award of $1,000

BE037 **How Worms Learn, Part III: Mammalian Gene Expression and Associative Conditioning in *Caenorhabditis elegans***
Olivia Catherine Schwob, 16, Boston Latin School, Boston, Massachusetts

Second Award of $350

BE038 **Possible Variance in Scores on the Missouri Assessment Program (MAP) Communication Arts Test Based on English Dialect Spoken**
Daniel Alexander Duncan, 18, St. Charles West High School, St. Charles, Missouri

Third Award of $150

BE041 **The Effects of Acetylcholine on Memory**
Rebekah Lynn Inez Ivie, 17, Trotwood Madison High School, Trotwood, Ohio

All winners will receive a Psi Chi Certificate of Recognition.

Ricoh Americas Corporation

Ricoh Americas Corporation is a leading provider of document solutions whose integrated hardware and software products help businesses share information efficiently. Ricoh has a long-standing environmental mission and commitment to sustainability, bringing corporate, social and environmental responsibilities into balance. This year, for the fifth consecutive year, Ricoh was named to the Global 100 Most Sustainable corporations in the World! The Ricoh Sustainable Development Award is awarded to the entries, selected from among all award categories, whose principles and technical innovations offer the greatest potential for increasing our ability to grow environmentally friendly and socially responsible businesses.

Ricoh Sustainable Development Award of $12,500

EM037 **Recycled Composite Material Made from Non-recyclable Multilayer Film Plastic Packaging Waste**
Hetal Kanjibhai Vaishnav, 16, Late Shree S.G Dholakiya Memorial High School, Rajkot, Gujarat, India

ET045 **Optimizing Turbine Blade Efficiency by Manipulating Boundary Layer Separation**
Andrew Kipling Miller, 18, Western Alamance High School, Elon, North Carolina

Sierra Nevada College

SNC combines the liberal arts and professional preparedness through an interdisciplinary curriculum which emphasizes entrepreneurial thinking and environmental, social, economic and educational sustainability. These graduates will be scholars and contributors to a sustainable world. SNC is offering the "Science Scholarship" of $12,500 per year for 4 years to ALL Intel ISEF finalists! SNC is offering Full tuition "Genius Scholarships" to selected finalists in the environmental science and computer science fields. These select scholarships are valued at $23,000 per year for 4 years for a total of $92,000.

Genius Scholarships

BE018 **Fun & Games: A Study of Rational Behavior in Individuals through Cognitive Reflections Testing and Predictions of Nash Equilibrium in n-person Games**
Catherine Susan Haag, 17, Beaumont School, Cleveland Heights, Ohio

CS012 **Secure Testing OSS**
Brendan Anthony Lee, 18, Alma High School, Alma, Arkansas

CS032 **Creating Zinif: An Interpreted, Object-oriented Programming Language**
Kent Andrew Williams-King, 15, Argyll Centre, Calgary, Alberta, Canada

EM014 **The Effects of Prescribed Burning on Environmental Mercury Release during Subsequent Forest Fires**
Julia Marie Denning, 17, Gold Beach High School, Gold Beach, Oregon

ET008 **Run Your Car on Water!, Phase II: Modification and Development of an Innovative Device for Greater Fuel Efficiency**
Lauren Michelle Cardenas, 17, Del Rio High School, Del Rio, Texas

ET061 **Utilizing the Other 99% of America's Wind Energy**
James Lee Clark, 16, Mayfield High School, Las Cruces, New Mexico

ET309 **When Pigs Fly: A Study of Lift without Drag**
Alexander Dean Kaplan, 17, Lake Braddock Secondary School, Burke, Virginia
Noelle Vinas, 17, Lake Braddock Secondary School, Burke, Virginia

ET309 **When Pigs Fly: A Study of Lift without Drag**
Alexander Dean Kaplan, 17, Lake Braddock Secondary School, Burke, Virginia
Noelle Vinas, 17, Lake Braddock Secondary School, Burke, Virginia

EV021 **A Comparative Study of the Mercury Content of the Bear, Jordan, and Weber Rivers and Its Effects on the Wildlife and the Great Salt Lake**
Christie Hewlett, 16, Weber High School, Pleasant View, Utah

EV039 **The Effect of Selected Disinfectants on the Physiology of California Black Worms**
Alisha April Blair, 18, North Toole County High School, Sunburst, Montana

EV310 **An Analysis of Tide Interaction with Environmental Temperature to Find Precursors of a Red Tide Bloom**
Max Keach Breitenbach, 17, Bellarmine Preparatory School, Tacoma, Washington

MA008 **Does the Brain Process Sounds Mathematically?**
Zachary Joseph Branson, 17, duPont Manual Magnet High School, Louisville, Kentucky

PH009 **Hits on the Hill: Investigations of Forces of Low Level Impact to the Head during Freestyle Aerial Ski Jumping**
Amy Jane David, 17, Pinedale High School, Pinedale, Wyoming

Scholarship award and continuation is conditional up the student being admitted into Sierra Nevada College, maintaining satisfactory academic progress, and remaining a full-time student.

Society of Exploration Geophysicists

For projects that display excellence related to the geophysical sciences.

Distinguished Achievement Award of $1,250 and a trip to the SEG International Exposition and Annual Meeting

EE068 **The Underground Radio II**
Alexander Kent Kendrick, 16, Los Alamos High School, Los Alamos, New Mexico

Award of Merit of $500

PH021 **Optimization of CCD Parameters for High Resolution Lunar Imaging**
Michelle Dawn Wenz, 17, Red Lion Area Senior High School, Red Lion, Pennsylvania

Award of Merit of $250

CS040 **Hybrid Light Rendering**
Matt Swaner Vitelli, 16, Academy for Math, Engineering, and Science, Salt Lake City, Utah

EE067 **Adaptive Filtering of Lidar Data to Preserve Stream Bank Morphology**
William Benjamin Haber, 16, Dr. Michael M. Krop Senior High School, Miami, Florida

EM009 **Thermal Optimization of Deep Boreholes for Minor Actinide Waste Disposal**
Alec C. Lai, 17, Hawken Upper School, Gates Mills, Ohio

EN062 **An Investigation of the Potential Impact of Liquefaction-Induced Lateral Spreading on a Populated Urban Setting**
Evelyn Chang, 16, University High School, Irvine, California

PH028 **Hey, Can You Hear Me? Using Isobel Contour Mapping to Determine Acoustically Optimum Seating Positions in a Given Classroom**
Chaneg Torres, 15, Redeemer Baptist School, North Parramatta, New South Wales, Australia

Team award of $500 to be divided equally among team members.

SPIE-The International Society for Optical Engineering

Advancing the science and application of light, S.P.I.E. is the largest international not-for-profit society in optics, photonics, and imaging with 17,000 individual members, including 3,500 students, and representing 86 countries. S.P.I.E. also supports Intel ISEF-affiliated science fairs to help inform students about the educational and career possibilities in the exciting and growing field of optical engineering. S.P.I.E presents these Intel ISEF awards for the best projects in the area of Optics and Photonics Engineering.

First Award of $2,500

PH005 **A Novel Method to Determine the Mechanism Behind DNA-DNA Interactions Using Optical Tweezers**
Sujay Tyle, 15, Pittsford Mendon High School, Pittsford, New York

Second Award of $1,500

PH016 **Laser Induced Microfluidic Motion of a Liquid-Liquid Interface**
William Cummings Newberry, 17, Greenwich High School, Greenwich, Connecticut

Third Award of $1,000

EE027 **Sensor to Detect Liquids**
Thomas Nesch, 20, Technische Oberschule Stuttgart, Stuttgart, Germany

S.P.I.E. has distributed nearly $3 million dollars in individual scholarships and institutional grants. This ambitious effort reflects the Society's commitment to education and to the next generation of optical scientists and engineers.

States United for Biomedical Research (SUBR)

For the top biomedical projects that best demonstrate the goal of advancing human and/or veterinary medicine. SUBR is a network of nonprofit associations who have joined forces to promote health through science and education, to promote public understanding and increase appreciation of the values of biomedical research, including humane care and use of research animals, and provide access to accurate information about biomedical research and its benefits.

First Award of $2,500

BE013 **Predicting Biobehavioral Links between Nurturing and Cognitive Development through Model Species, *Rattus norvegicus***
Ashlee Nicole Sharer, 17, Wayne County High School, Jesup, Georgia

Second Award of $1,000

AS007 **Isolation of *Staphylococcus hyicus* and *Streptococcus equisimilis* and Use of Isolate to Develop Avian Antibodies to Be Used in the Prevention of Porcine Mastitis, Part Two**
Samantha Kay Welu, 14, Marshall High School, Marshall, Minnesota

ME098 **Blood Pressure in a Mouse Model of Type 1 Diabetes Mellitus: The Effects of Vitamin B6 Treatment**
Meghan Michele Pantalia, 15, Classen School of Advanced Studies, Oklahoma City, Oklahoma

In addition, a $1,000 grant is awarded to the teacher of the SUBR first place award winner.

United Technologies Corporation

United Technologies Corporation (UTC) is a diversified company whose business units include Carrier heating and air conditioning, Hamilton Sundstrand aerospace systems and industrial products, Otis Elevators and escalators, Pratt & Whitney aircraft engines, Sikorsky helicopters, UTC Fire & Security protection services, UTC Power fuel cells, and the United Technologies Research Center. We are proud to recognize 8 projects for excellence in science and engineering. Each winning project will receive shares of UTC common stock.

UTC Stock

CH001 **Complexing Transition Metal Ions with Curcumin**
Chelsea Lynn Massaro, 15, Mount Dora Christian Home & Bible School, Mount Dora, Florida

CS014 **Human Visual System-based Adaptive Tone Reproduction for Restoring Imperceptible Details of Digital Images**
Yi-Ping Shih, 18, Taipei Municipal First Girls' Senior High School, Taipei, Taiwan, Chinese Taipei

CS021 **Do You 'ear Wha' I 'ear?, II: Lowering Voice Frequencies in Real Time to Revolutionize Hearing Assistance Technology**
Nicholas Mycroft Christensen, 17, Wetumpka High School, Wetumpka, Alabama

EE059 **The Practical Utilization of Wireless Protocol and Swarm Mentality to Improve Overall Efficiency and Effectiveness in Autonomous Robot Platforms**
Carl Edward Lawhon, 17, Pembroke Hill School, Kansas City, Missouri

EN002 **5-Ply Hickory Lacrosse Shaft vs. Solid Hickory Lacrosse Shaft**
Rachel Marie McCarthy, 15, James Bowie High School, Austin, Texas

ET045 **Optimizing Turbine Blade Efficiency by Manipulating Boundary Layer Separation**
Andrew Kipling Miller, 18, Western Alamance High School, Elon, North Carolina

ET050 **The Electromagnetic Vibration Dampening System for Advanced Solid Rocket Fuel Motor Systems**
Joseph Richard Bussenger, 17, Pennridge High School, Perkasie, Pennsylvania

MA042 **The Classification of Certain Fusion Categories**
Eric Kerner Larson, 17, South Eugene High School, Eugene, Oregon

Each winner will also receive a plaque, a digital camera, backpack and the United Technologies Corporation Annual Report. Common stock award to be divided among team members.

University of the Sciences in Philadelphia

Scholarships to finalists from the following categories: Biochemistry, Cellular and Molecular Biology, Chemistry, Computer Science, Environmental Science, Medicine & Health, or Microbiology.

Tuition Scholarship ranging from $6,000 to $9,000 per year for four, five or six years, depending upon the degree program

CB020 **The Carcinogenesis and Invasiveness of Hepatocellular Carcinoma with IQGAP2 siRNA Transfection**
Jason Michael Littman, 16, Plainview-Old Bethpage John F. Kennedy High School, Plainview, New York

ME066 **White Coats: Boon or Bane?**
Ariel Lynne Schroeder, 17, Saint Joseph High School, Natrona Heights, Pennsylvania

MI040 **The Genetic Code of *Anaeromyxobacter dehalogenans***
Jimmitti Teysir, 17, City Honors School, Buffalo, New York

Scholarship will go into effect upon the recipient's enrollment to any one of the degree programs offered at USP and are renewable for the length of the degree program provided the recipient maintains a cumulative GPA of 3.0.

Vacuum Technology Division of the American Vacuum Society

AVS is a not-for-profit professional society that promotes communication between academia, government laboratories and industry for the purpose of sharing research and development findings over a broad range of technologically relevant topics.

First Award of $1,250

PH049 **Star in a Jar: Operating Parameter Relationships in an Inertial Electrostatic Confinement Fusion Reactor**
Eric A. Foss, 17, Kentwood High School, Covington, Washington

Second Award of $750

PH048 **Subcritical Neutron Multiplication in a 2.5 MeV Neutron Flux**
Taylor Ramon Wilson, 14, The Davidson Academy of Nevada, Reno, Nevada

Third Award of $500

PH031 **Stability of Gold-Thiolate Nanoparticle Vapor Sensors at Elevated Temperatures**
Katherine Yuan Fang, 17, Pioneer High School, Ann Arbor, Michigan

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Wolfram Research, Inc. has provided the opportunity for all Intel ISEF 2009 Finalists and Observers to obtain a copy of Mathematica software.