

Special Award Winners - VSSEF 2009

American Meteorological Society

Certificate of Outstanding Achievement for Ability & Creativity in an Atmospheric Science Exhibit

The Inhibition of Convection Currents Due to Temperature and Salinity Gradients

Edward Hackett

Wt Woodson High School

Certificate of Outstanding Achievement for Ability & Creativity in an Atmospheric Science Exhibit

A New Satellite Data-Based Global Drought Index

Varun Bansal

Thomas Jefferson High School for Science and Technology

American Nuclear Society, Virginia Section

Award

The Effect of Irradiating Raphanus sativus Seeds on Growth

Matthew Meise

Roanoke Valley Governor's School

American Psychological Association

Certificate of Award for Outstanding Research in Psychology

The Science of Optimal Decision-making

Catherine Kromkowski

Charlottesville High School

Andrew Kromkowski

Charlottesville High School

American Society of Naval Engineers

First Place Award

Eliminating the Wall Effects of Wind Tunnel Testing Utilizing a Mobile Open-Air Testing Apparatus

Jacob Harvey

Southwest Virginia Governor's School

Second Place Award

The Effects of Electrolysis on Internal Combustion Engine

Daniel Aube

Briar Woods High

Third Place Award

The Effect of Various De-icing Chlorides on Steel Corrosion

Rachel Strauss

Roanoke Valley Governor's School

ASM Materials Education Foundation

Most Outstanding Exhibit in Materials Science

The Degradation of the Two-way Effect in NiTi

Scott Skirlo

Thomas Jefferson High School for Science and Technology

Association for Women Geoscientists

Student Award for Geoscience Excellence

Leaching Bifenthrin Through Various Soils

Jordan Gulli

Roanoke Valley Governor's School

Carilion Clinic

Future Physician Scientist Award

The Effects of UVC Radiation on the Prevalence of Community Associated Methicillin-Resistant Staphylococcus aureus in athletic departments

William Day

Ocean Lakes High

Intel Corporation

Excellence in Computer Science Award

A Heterogeneous Mixture Model for Unsupervised Pattern Classification

Aditya Palepu

Thomas Jefferson High School for Science and
Technology

International Council of Systems Engineers

First Place Systems Engineering Award

A Study on the Influence of Fiber Orientation on Transverse Permeability of Fibrous
Porous Media

Mukarram Ahmad

Mathematics and Science High School at Clover Hill

Second Place Systems Engineering Award

The Degradation of the Two-way Effect in NiTi

Scott Skirlo

Thomas Jefferson High School for Science and
Technology

Third Place Systems Engineering Award

The Design and Implementation of a Speed Management Device in Automobiles

Molly Patterson

Thomas Jefferson High School for Science and
Technology

Mu Alpha Theta

Mu Alpha Theta Award

Controlling HIV from Transformation into AIDS: Mathematical Modeling of HIV Dynamics

Sohini Sengupta

Ocean Lakes High

National Oceanic and Atmospheric Administration

Taking the Pulse of the Planet Award

The Suffocating Effect of Urban Trees on Public Health

Edward Kim

Mclean High School

National Society of Professional Engineers

Innovative Engineering Award

Obtaining Optimal Efficiency From a Thompson Coil Electromagnetic Mass Accelerator

Tim Bennett

Bishop O'Connell

Nobilis, Inc.

Sustainable Development Award

Filtration By Mussels Of Nitrates and Phosphates

Pasha Mostaghim

Langley High School

Ricoh Corporation

Sustainable Development Award

Filtration By Mussels Of Nitrates and Phosphates

Pasha Mostaghim

Langley High School

SAIC

First Place for Applied Science

pVISIA: Vector for Surface Display of Immunogens

Vishwajith Sridharan

Thomas Jefferson High School for Science and
Technology

Second Place for Applied Science

Antibacterial Effects of Carbon Nanotubes

Devika Pateriya

Chantilly High School

Third Place for Applied Science

Determining the Dielectric Function for Ionic Crystals from the Bottom Up""

Narendra Tallapragada

Thomas Jefferson High School for Science and
Technology

Honorable Mention for Applied Science

A Comparative Assessment of Hiking, Mountain Bike, and Horse Trails

Adam Rotche

Blacksburg High School

Sarah Ryan

Blacksburg High School

First Place for Computational Sciences

Controlling HIV from Transformation into AIDS: Mathematical Modeling of HIV Dynamics

Sohini Sengupta

Ocean Lakes High

Second Place for Computational Sciences

A New Approach to Encryption

Curtis Khol

James Madison High School

Third Place for Computational Sciences

Dynamic Visual Pattern Recognition of Spoken Vowels: An Experiment in Automated Lip Reading

Joseph Jachowski

Thomas Jefferson High School for Science and
Technology

Honorable Mention for Computational Sciences

Investigations into the Cellular Turing Machine: Exploring the Limits of Massive Parallelism

Thomas Delgado

Mathematics and Science High School at Clover Hill

Honorable Mention for Computational Sciences

Textual Summarization Using Multi-Layer Neural Networks

Arian Khorshid

George Marshall High School

Syed Hassan

Farhang Hooshmandnia

First Place for Methods for Countering Weapons of Mass Destruction

The Effect of Socioeconomic Variables on Influenza Spread

Matthew Weber

Loudoun Academy of Science

Second Place for Methods for Countering Weapons of Mass Destruction

A Heterogeneous Mixture Model for Unsupervised Pattern Classification

Aditya Palepu

Thomas Jefferson High School for Science and Technology

Third Place for Methods for Countering Weapons of Mass Destruction

Synthesis and Characterization of Biomarker-Harvesting Hydrogel Nanoparticles

Anirudh Mohan

Thomas Jefferson High School for Science and Technology

Honorable Mention for Methods for Countering Weapons of Mass Destruction

The Effect of Sodium Cyanide on Oxygen Reduction

Shanna Su

Mills E. Godwin High School

Society of Manufacturing Engineers

First Place Award

The Degradation of the Two-way Effect in NiTi

Scott Skirlo

Thomas Jefferson High School for Science and Technology

Second Place Award

A Study on the Influence of Fiber Orientation on Transverse Permeability of Fibrous Porous Media

Mukarram Ahmad

Mathematics and Science High School at Clover Hill

Third Place Award

The Effect of Various De-icing Chlorides on Steel Corrosion

Rachel Strauss

Roanoke Valley Governor's School

Honorable Mention

The Science of Optimal Decision-making

Catherine Kromkowski

Charlottesville High School

Andrew Kromkowski

Charlottesville High School

Honorable Mention

The effect of medium on reading comprehension: screen text versus printed text.

Katherine Agnew

Central Virginia Governor's School

The Society for In Vitro Biology

Award

The Effects of UVC Radiation on the Prevalence of Community Associated Methicillin-Resistant Staphylococcus aureus in athletic departments

William Day

Ocean Lakes High

The Virginia Biotechnology Association

First Prize in Biotechnology

Synthesis and Characterization of Biomarker-Harvesting Hydrogel Nanoparticles

Anirudh Mohan

Thomas Jefferson High School for Science and Technology

Second Prize in Biotechnology

The Significant Role of p70 Ribosomal S6 Kinase in Regulating Mouse Embryonic Stem Cell Cardiomyogenesis

LeeAnn Li

Thomas Jefferson High School for Science and Technology

Third Prize in Biotechnology

The Role of CREB in the Downregulation of Cyclin D1 by Tumor-Suppressor RASSF1A

Jessica Liu

Thomas Jefferson High School for Science and Technology

The Virginia Section of the American Water Works Association

First Prize

The Effect of Aquatic Plant on Lead Removal in Water

Christopher Castillo

Godwin High School

Second Prize

Filtration By Mussels Of Nitrates and Phosphates

Pasha Mostaghim

Langley High School

Third Prize

Effect of Greywater on Plants

Gabriel Ritter

George Marshall High School

Certificate of Merit

Effect of Location on Difficult Run's Pollution

Simren Ajrawat

Oakton High School

Certificate of Merit

The Use of Rye Grass to Remove Lead and Cadmium from Waste Water

Joshua Hicks

Staunton River High School

The Yale Science & Engineering Association, Inc.

Yale Award for Most Outstanding Eleventh Grade Exhibit in Computer Science, Engineering, Physics, or Chemistry

Electrochemical Analysis of Electrocatalytic Performance of Non-Precious Metal Electrodes and Catalysts on the Direct Ethanol Fuel Cell

Abhinav Mohan

Chantilly High School

United States Air Force

Certificate of Achievement for an Outstanding Science or Engineering Fair Project

A New Satellite Data-Based Global Drought Index

Varun Bansal

Thomas Jefferson High School for Science and Technology

A Novel Approach to the Multi-Thread Theory of Solar Coronal Loops Using New Stereoscopic Imaging

David Kim

Thomas Jefferson High School for Science and Technology

Identification by Text Analysis

Yosyp Shvab

T. C. Williams

Modeling and Simulation of Aneurysm Blood Flow Interaction

Alicia Hamar

H-B Woodlawn

United States Army

Engineering Prize

Electrochemical Analysis of Electrocatalytic Performance of Non-Precious Metal Electrodes and Catalysts on the Direct Ethanol Fuel Cell

Abhinav Mohan

Chantilly High School

Environmental Sciences Prize

A New Satellite Data-Based Global Drought Index

Varun Bansal

Thomas Jefferson High School for Science and
Technology

Life Sciences

The Significant Role of p70 Ribosomal S6 Kinase in Regulating Mouse Embryonic Stem
Cell Cardiomyogenesis

LeeAnn Li

Thomas Jefferson High School for Science and
Technology

Mathematics / Computer Science Prize

Controlling HIV from Transformation into AIDS: Mathematical Modeling of HIV Dynamics

Sohini Sengupta

Ocean Lakes High

Physical Sciences Prize

Determining the Dielectric Function for Ionic Crystals from the Bottom Up""

Narendra Tallapragada

Thomas Jefferson High School for Science and
Technology

Silver Medallion for Science / Engineering Excellence

The Significant Role of p70 Ribosomal S6 Kinase in Regulating Mouse Embryonic Stem
Cell Cardiomyogenesis

LeeAnn Li

Thomas Jefferson High School for Science and
Technology

United States Metric Association

U. S. Metric Association Award

Determining Tension and Drag and Lift Coefficients for Three Simple Paravane Designs

Martin Minot

Central Virginia Governor's School

Virginia Dental Association

Animal Sciences Award

The Effect of Bisphenol A on the Development of Artemia

Sarah Zillioux

Roanoke Valley Governor's School

Behavioral and Social Sciences Award

The effect of medium on reading comprehension: screen text versus printed text.

Katherine Agnew

Central Virginia Governor's School

Biochemistry Award

pVISIA: Vector for Surface Display of Immunogens

Vishwajith Sridharan

Thomas Jefferson High School for Science and Technology

Cellular and Molecular Biology Award

Investigating the French Paradox: Resveratrol as a Potential Antioxidant in Mesenchymal Stem Cell Differentiation and Genomic Stability

Suraj Mishra

Mills E. Godwin High School

Chemistry Award

Synthesis and Characterization of Biomarker-Harvesting Hydrogel Nanoparticles

Anirudh Mohan

Thomas Jefferson High School for Science and Technology

Computer Science Award

A Heterogeneous Mixture Model for Unsupervised Pattern Classification

Aditya Palepu

Thomas Jefferson High School for Science and Technology

Earth and Planetary Science Award

A New Satellite Data-Based Global Drought Index

Varun Bansal

Thomas Jefferson High School for Science and Technology

Energy and Transportation Award

Eliminating the Wall Effects of Wind Tunnel Testing Utilizing a Mobile Open-Air Testing Apparatus

Jacob Harvey

Southwest Virginia Governor's School

Engineering: Electrical and Mechanical Award

Determining Tension and Drag and Lift Coefficients for Three Simple Paravane Designs

Martin Minot

Central Virginia Governor's School

Engineering: Materials and Bioengineering

A Study on the Influence of Fiber Orientation on Transverse Permeability of Fibrous Porous Media

Mukarram Ahmad

Mathematics and Science High School at Clover Hill

Environmental Management Award

The Suffocating Effect of Urban Trees on Public Health

Edward Kim

Mclean High School

Environmental Sciences Award

The Effect of Aquatic Plant on Lead Removal in Water

Christopher Castillo

Godwin High School

Mathematical Sciences Award

Controlling HIV from Transformation into AIDS: Mathematical Modeling of HIV Dynamics

Sohini Sengupta

Ocean Lakes High

Medicine and Health Sciences Award

Facilitating the Differential Diagnosis of a Tumor

Jayson Marwaha

Thomas Jefferson High School for Science and Technology

Microbiology Award

Antibacterial Effects of Carbon Nanotubes

Devika Pateriya

Chantilly High School

Physics & Astronomy Award

The Effects of Shell Load on Shotgun Recoil

Benjamin Graham

Southwest Virginia Governor's School

Plant Sciences Award

The Effect of Irradiating Raphanus sativus Seeds on Growth

Matthew Meise

Roanoke Valley Governor's School

Team Project Award

The Effect of Whey Protein on the Growth of Tilapia Oreochromis niloticus

Jessica Szelc

Thomas Jefferson High School for Science and
Technology

Huan Song

Bennett Malbon Award

Investigating the French Paradox: Resveratrol as a Potential Antioxidant in Mesenchymal Stem Cell Differentiation and Genomic Stability

Suraj Mishra

Mills E. Godwin High School

Virginia Veterinary Medical Association

Virginia Veterinary Medical Association Award

Are Thoroughbred Racehorses Getting Weaker?

Audrey Boslego

Bruton High School

Water Environment Federation

Stockholm Junior Water Prize

Leaching Bifenthrin Through Various Soils

Jordan Gulli

Roanoke Valley Governor's School

Stockholm Junior Water Prize

The Effect of Estrogen Level in Water on the Average Root Length and Average Number of Roots of the Pothos Plant

Amanda Schanz

Math and Science High School at Clover Hill

Stockholm Junior Water Prize

Controlling Corrosion The Effects of pH, Temperature, and Conductivity on the Rate of Corrosion of Steel in Water

Juliana Wu

York High School
