2012 NYC ISEF Finalists

The following nineteen students, representing 15 projects, have been selected from this year’s NYCSEF competition to represent New York City at the Intel International Science and Engineering Fair in Pittsburgh, PA from May 13 - 18, 2012. Additionally, two projects have been selected as first and second alternates. Congratulations to all of this year’s winners.

Mimi Yen – senior (Behavioral and Social Sciences)
High School: Stuyvesant High School
Project Title: Characterizing the Behavior and Genetics of Headplugging in C. elegans
Mentor: Dr. Matthew Rockman – New York University

Shu Hui Liu – senior (Biochemistry)
High School: Bronx High School of Science
Project Title: JAK inhibition Increases erbB signaling, Enhancing Sensitivity to Combination Therapy of JAK/erbB Blockade in Breast Cancer Cells
Mentor: Dr. Paul Gao – Memorial Sloan Kettering Cancer Center

Michelle Zhang – senior (Biochemistry)
High School: Stuyvesant High School
Project Title: Stabilization of Phosphotriesterase Using PyRosetta
Mentor: Dr. Richard Bonneau – New York University

Talal Syed – senior (Cellular and Molecular Biology)
High School: Bronx High School of Science
Project Title: The Insufficiency of Biomarkers in the Identification of Breast Cancer Stem Cells: Hybrid Spheroids as an Alternative Assay
Mentor: Dr. Christopher Lange – SUNY Downstate

Yuebi Hu – senior (Chemistry)
High School: Bronx High School of Science
Project Title: Calculations of High Quality Graphene Electrodes for Use in High Performance Transistors
Mentor: Dr. Qi Shui Chan – Columbia University

Jennifer Lam – senior (Chemistry)
High School: Stuyvesant High School
Project Title: Predicting Bandgap to Synthesize the Most Efficient Solar Cells
Mentor: Dr. Glen Kowach – The City College of New York (CUNY)

Andre Arslan and David Lu – juniors (Computer Science)
High School: Hunter College High School and Stuyvesant High School
Project Title: Chasing Enemies on Random Graphs
Teacher: Ashvin Jaishankar, Stuyvesant High School

Edward Cho – senior (Earth and Planetary Sciences)
High School: Stuyvesant High School
Project Title: Let There Be No Light! ESR Dating of the Quartz from the Bytham River Palaeochannel
Mentor: Dr. Bonnie Blackwell – Williams College
Jia Wen Lin – senior (Engineering)
High School: Francis Lewis High School
Project Title: Mineral Accretion Powered by Solar Electricity Accelerates *Crassotrea virginica* Growth
Mentor: Dr. James E. Cervino – Woods Hole Oceanographic Institute

Nicholas Rivera – senior (Engineering)
High School: Stuyvesant High School
Project Title: Design of a Nozzle Beam Chemical Vapor Deposition Reactor
Mentor: Dr. Glen Kowach – The City College of New York (CUNY)

Junda Huang – senior (Mathematics)
High School: James Madison High School
Project Title: A Relationship between Quadratic Character and Repeating Decimals
Mentor: Dr. Edward Miller – Polytechnic Institute of New York University

Daniel Arango and Shanawaj Khair – seniors (Microbiology)
High School: John Bowne High School
Project Title: Do You Have the “Guts” to Lose Weight?
Mentor: Dr. John Dennehy – Queens College (CUNY)

Tongzhu Xu – senior (Microbiology)
High School: Bronx High School of Science
Project Title: Re-evaluation of Fuzeon, the First Peptide Anti-HIV Drug, Reveals a Novel Mechanism of Action
Mentor: Dr. Lu Li – Kimball Research Institute – New York Blood Center

Indroneil Roy – senior (Physics)
High School: Francis Lewis High School
Project Title: Control of Blinking in Colloidal Quantum Dots using a Non-Magnetic Metamaterial
Mentor: Dr. Vinod Menon – Queens College (CUNY)

Hui Hui Fan – senior (Plant Sciences)
High School: Stuyvesant High School
Project Title: Root Nutrient Foraging: A Morphometric Approach to Quantifying the Developmental Plasticity Space of Arabidopsis Ecotypes in Laboratory and Natural Environments
Mentor: Dr. Gloria Coruzzi – New York University

ISEF Alternates:

*1st Alternate* Kalia Firester – freshman (Plant Sciences)
High School: Hunter College High School
Project Title: Natural Oxylipins - Environmentally Friendly Agrochemicals for Broad Protection against Root-knot Nematode *Meloidogyne spp.*
Mentor: Dr. Sigal Brown Horowitz – Volcani Agriculture Institute

*2nd Alternate* Edwin Chan – juniors (Environmental Studies)
High School: Trinity School
Project Title: Resveratrol Prevents Alzheimer's Disease-Related Microglial Inflammation
Teacher: Dr. Philippe Marambaud – Feinstein Institute for Medical Research