




# The 25<sup>th</sup>

Semi-Annual  
Poster Presentation



**The Honors &  
Research Scholars  
Poster Presentation**



Wednesday, November 30, 2016  
11 AM-4 PM  
Atrium Ground and First Floors

Thursday, December 1, 2016  
10 AM-3 PM  
Atrium Amphitheater

Awards Ceremony at 12:30 PM  
Atrium Amphitheater



# Table of Contents



Honors in a Regular Course	6
CUNY Research Scholars	9
Emerging Scholars	12
Grant-Funded Projects	20
Special Projects	27

# Awards Ceremony



December 1, 2016  
Atrium Amphitheater  
12:55 PM

## Greetings

### **Russell K. Hotzler**

President

### **Bonne August**

Provost and Vice President for Academic Affairs

### **Pamela Brown**

Associate Provost

## **Summer Research Programs**

CUNY Summer Undergraduate  
Research Program (CSURP)

### **Rimi Dhar**

Cary Institute Research Experiences  
for Undergraduates

### **Aude Lochet**

Louis Stokes Alliances for  
Minority Participation (LSAMP)

### **Marvin Bennett**

National Science Foundation  
Research Experiences for Undergraduates  
(NSF REU)

National Science Foundation  
IUSE Geoscience Internship

### **Laura Yuen-Lau**

## Recognition of Undergraduate Researchers

Honors Scholars

**Laura Yuen-Lau**

CUNY Research Scholars

**Hamidreza Norouzi**

Emerging Scholars

**Hamidreza Norouzi**

LSAMP Scholars

**Marvin Bennett**

Grant-Funded Projects

**Laura Yuen-Lau**

Special Projects

**Hamidreza Norouzi**

Best Poster Awards

**Mercer Brugler**

Assistant Professor, Department of Biological Sciences



Honors Scholars Program Orientation  
September 1, 2016

# Honors in a Regular Course



Cytokine Influence on Neurodevelopment

**Serifat Adebola**

**Prof. Jeremy Seto**

BIO 3620: Molecular and Cell Biology

The Role of Sirtuins in  
Tetrahymena Thermophila

**Victor Adedara**

**Prof. Isaac Barjis**

BIO 3526: Pathophysiology

The Importance of Alkalinity in the  
Human Body

**Jenan Al-Keswani**

**Prof. Niloufar Haque**

BIO 2311L: Human Anatomy and Physiology I Lab

Barcoding and Sequencing of DNA  
Extracted from the Scales of Phataginus  
Tricuspis for Use in Forensics of Wildlife  
Trafficked in International Trade

**Abdullah Allaoa**

**Profs. Olufemi Sodeinde &**

**Eugenia Giannopoulou**

BIO 3352: Bioinformatics II

The History of Dentistry

**Huda Alsaidi**

**Prof. Anthony Sena**

RESD 1107: Introduction to Non-Metallic Dental Materials

CAD/CAM Open Source vs. Closed Source

**Huda Alsaidi**

**Prof. Daniel Alter**

RESD 2324: Computer Aided Design/Manufacturing  
(CAD/CAM) in Dentistry

Alzheimer's Disease and  
Related Disorders

**Ilhom Bakiyev**

**Prof. Niloufar Haque**

BIO 2311L: Human Anatomy and Physiology I Lab

Corporate Ethical Conduct

**Dushawn Butler**

**Prof. Charles Halpern**

MKT 2327: Entrepreneurship

## Corporate Social Responsibility

**Dushawn Butler**

**Prof. John Dello Russo**

BUS 2425: Business Management

## Innovative CAD/CAM Materials Used to Integrate Dental Implants into the Periodontium

**Valerie Co**

**Prof. Daniel Alter**

RESD 2324: Computer Aided Design/Manufacturing  
(CAD/CAM) in Dentistry

## Neurological Disease and Related Disorders

**Calisha Francis**

**Prof. Niloufar Haque**

BIO 2311: Human Anatomy and Physiology I

## Modeling the Effect of a Mutation on The Structure of GPCR6

**Johnny Guevara**

**Prof. Mai Zahran**

BIO 3356: Molecular Modeling in Biology

## Food and Wine Pairing in Classroom Setting in Comparison to a Professional Restaurant Wine Menu And Service

**Malika Ikramova**

**Profs. Rosa Abreu & John Richard Akana**

HMGD 2305: Dining Room Operation

## Species Delineation within the Black Coral Genus *Tanacetipathes*

**Sheila Moaleman**

**Prof. Armando Solis**

BIO 3350: Bioinformatics



NYC Department of Environmental Protection:  
Newtown Creek Treatment Plant Tour and Nature Walk  
September 23, 2016

## Exploring the Pollard's Algorithm

**Josiel Nunez**

**Prof. Ariane Masuda**

MAT 3021: Number Theory

## Measuring Natural Energy with Environmental Sensor Data

**Wes Oler**

**Prof. Heidi Boisvert**

MTEC 2250: Tangible Media

## Interactive R Application for Handling UCSC Genome Browser Tracks

**Chris Pang**

**Prof. Eugenia Giannopoulou**

BIO 3352: Bioinformatics II

## Building A DIY Water Quality Monitor

**Christian Pizarro**

**Prof. Charles Hamilton**

EMT 2390L: Operating Systems Lab

## The War on Drugs: The Conflict Perspective

**Alexandra Sarria**

**Prof. Gale P. Elston**

SOC 2403: Law and Society

## Exploring the Pollard's Algorithm

**Farjana Shati**

**Prof. Ariane Masuda**

MAT 3021: Number Theory

## Transistor Circuit for True Random Number Generator

**Justin Wong**

**Prof. Aparicio Carranza**

CET 4960: Applied Digital Technology



Cultivating Fine Dining Etiquette

Prof. Karen Goodlad

October 25, 2016

# CUNY Research Scholars



Examining the Effect of Oxidative Stress  
on Tetrahymena Thermophila Sirtuins

**Emmanuel Adebola**

**Prof. Ralph Alcendor**

Transmit Data with  
ZIGBEE/XBEE Wireless Protocol

**Rachel Alexander**

**Prof. Xinzhou Wei**

Bose-Einstein Condensation and  
Superfluidity of Photons in a Microcavity

**Mohammed Ruhel Alif**

**Prof. Oleg Berman**

Site Analysis-Case Studies

**Cory Breegle**

**Profs. Lia Dikigoropoulou & Jill Bouratoglou**

PEGDA-based Scaffold Design and  
Fabrication for the Drug Delivery Tests

**David Cameron**

**Prof. Ozlem Yasar**

Moral Reasoning in Nursing:  
How Best to Address Leaders

**Raven Campbell**

**Prof. Aida Egues**

Endocrine Disrupting Chemicals and its  
Effect on Reproductive and Mental Health

**Trevor Caraballo**

**Prof. Sanjoy Chakraborty**

Significance of Entrance Door Infiltration  
to Building Environment

**Lev Chesnov**

**Prof. Daeho Kang**

Roboqueen

**Aryuna Dashidorzhina**

**Prof. Farrukh Zia**

Design of a  
Cell Phone Charging Exercise Bike

**Utsab Dasrao**

**Prof. Angran Xiao**



Cultural Competence and Awareness  
Amongst Undergraduate Healthcare

**Natalia Dembowska**

**Prof. Zoya Vinokur**

MoDAR (Mobility Detection and  
Auto Recognizing) Robot

**Fatime Zahra El Fatimi**

**Prof. Andy S. Zhang**

Design of an Alternative 911 Mobile  
Communication System Concept

**Wei Jie Gao**

**Prof. Daniel Wong**

Designing Bowling Ball with Concrete

**Bryan Hoy**

**Prof. Navid Allahverdi**

Design of an Alternative 911 Mobile  
Communication System Concept

**Wen Yong Huang**

**Prof. Daniel Wong**

MoDAR (Mobility Detection and  
Auto Recognizing) Robot

**Felicia Jeter**

**Prof. Andy S. Zhang**

Structural Response of Fiber Reinforced,  
High Performance Concrete Under  
Elevated Temperatures

**Stanimir Karamihaylov**

**Prof. Navid Allahverdi**

Drug Delivery Tests for  
PDMS-based Scaffolds

**Maria Medina**

**Prof. Ozlem Yasar**

Race Springs

**Timothy Medina**

**Prof. Gerarda Shields**

A Methodology of Optimizing Abstraction  
in Anatomy and Physiology Infograms-  
Abbreviations and Acronyms

**Rachel Ofer**

**Prof. Vasily Kolchenko**

Histological Analysis of Differentiation in  
PC12 Neuroblastoma

**Tiffany Ramkisun**

**Prof. Jeremy Seto**

Telecommunications Engineering:  
“Building a Security Scheme in XBee  
Wireless Sensor Network”

**Amelia Ramnauth**

**Prof. Xinzhou Wei**

Application of High Performance Concrete  
in Structural Design

**Brandow Rojas**

**Prof. Navid Allahverdi**

Design of a  
Cell Phone Charging Exercise Bike

**Christo Sam**

**Prof. Angran Xiao**

Scaffold Fabrication for  
Cell Viability Analysis

**William Santiago**

**Prof. Ozlem Yasar**

Selection of Materials and  
Techniques for Construction Under  
Extreme Heat Conditions

**Harold Saquicela**

**Prof. Anne Sowder**

Significance of Entrance Door Infiltration  
to Building Environment

**Javonne Senior**

**Prof. Daeho Kang**

Cultural Competence and  
Awareness Amongst Undergraduate  
Healthcare Students

**Jerry Strklja**

**Profs. Zoya Vinokur & Elaine Leinung**

Drug Delivery Tests for the  
PDMS-based Scaffolds

**Navid Taherzadeh Samani**

**Prof. Ozlem Yasar**

Factors Affecting Emotional Regulation  
and Vagal Tone in an  
Expressive Writing Paradigm

**Christina Taitt**

**Prof. Jean Hillstrom**

Design of an Alternative 911 Mobile  
Communication System Concept

**Brian Esteel Taveras Diaz**

**Prof. Daniel Wong**

Open Source Implementation of  
Cyber Physical Systems

**Mellissa Valle**

**Prof. Farrukh Zia**



# Emerging Scholars



Adaptive and Autonomous  
Tensegrity System

**Starky Acevedo**

**Prof. Phillip Anzalone**

The Role of Sirtuins in T. Thermophila

**Victor Adedara**

**Prof. Ralph Alcendor**

Barcoding and Sequencing of  
DNA Extracted from the Scales of  
Phataginus Tricuspis for Use in Forensics of  
Wildlife Trafficked in International Trade

**Abdullah Allaoa**

**Prof. Olufemi Sodeinde**

Development of the  
Peer-Led Team Learning Handbook

**Carlos Alvarez**

**Prof. Janet Liou-Mark**

The Role of Sirtuins in T. Thermophila

**Jean-Luc Antoine**

**Prof. Ralph Alcendor**

Adaptive and Autonomous  
Tensegrity System

**Alyssa Ayow**

**Prof. Phillip Anzalone**

Discovering Mechatronics by Connecting  
the Software and the Hardware Together

**Atif Bacchus**

**Prof. Muhammad Ali Ummay**

Alzheimer's Disease and Related Disorders

**Ilhom Bakiyev**

**Prof. Niloufar Haque**

Computer Vision on the Web: Transition.js

**Ahmadou Barry**

**Prof. Marcos Pinto**

High Throughput Fluorescence Microscopy  
of Differentiating Neurons Infected with  
Toxoplasma Gondii

**William Bennett**

**Prof. Jeremy Seto**

What are the Economic and Environmental Costs of Improper Disposal of Cigarette Butts on Local NYC Beaches?

**Christian Bermeo**

**Prof. Sean McDonald**

Honors Scholars Newsletter

**Savannah Blodgett**

**Prof. Tamrah Cunningham**

Elevator Staging System for Maskless Photolithography

**Chad Boodoo**

**Prof. Ozlem Yasar**

User-Centered Design for Multimedia Health Literacy

**Ellen Chan**

**Prof. David Lee**

Development of a Next Generation Combustion Chamber for Waste-to-Energy Power Plants

**Jacky Chan**

**Prof. Masato Nakamura**

The Link Between Oral and Systemic Health: The Nursing Connection

**Maricel Charles**

**Prof. Aida Egues**

A Feasibility Study of an Energy Recovery System

**Liza Chiu**

**Prof. Masato Nakamura**



Interviewing Skills  
Professional Development Center  
October 20, 2016

Development of a Next-Generation  
Combustion Chamber for  
Waste-to-Energy Power Plants

**Justin Colon**

**Prof. Masato Nakamura**

Modeling the Interaction of Multi-target  
Compounds with the BACE 1 Enzyme:  
Implications in the Treatment of  
Alzheimer's Disease

**Coreen Cooper**

**Profs. Mai Zahran & Alberto Martinez**

Design of a  
Cell Phone Charging Exercise Bike

**Mark Cortes**

**Prof. Angran Xiao**

Spectroscopic Studies on the Interaction  
of Porphyrin, Chlorin, Isobacteriochlorin  
with Human Serum Albumin

**Alexandra DePasquale**

**Prof. Diana Samaroo**

The Link Between Oral and Systemic  
Health: The Nursing Connection

**Judith Diyarza**

**Prof. Aida Egues**

Significance of Entrance Door Infiltration  
to Building Environment

**Sean Eckelmann**

**Prof. Daeho Kang**

Adaptive and Autonomous  
Tensegrity System

**Andres Espinal**

**Prof. Philip Anzalone**



Advancing Library Research Techniques

Profs. Tess Tobin and Monica Berger

October 13, 2016

Neuroprotection and Regeneration of  
Neurons and Oligodendrocytes in  
Multiple Sclerosis

**Aspil Estime**

**Prof. Andleeb Zameer**

The Role of Sirtuins in *T. Thermophila*

**Edrouine Gabriel**

**Prof. Ralph Alcendor**

From Kitchen To Clinic:  
Cooking Up New Cancer Treatments With  
Ancient Ingredients

**Mubeen Ghafari**

**Prof. William Lambert**

Phenomenology and Place-based Learning

**Alexander Gray**

**Prof. Lauren Park**

Development of a  
Peer-Led Protein Structure Activity for  
Undergraduate Biochemistry

**Johnny Guevara**

**Profs. Nathan Astrof & Mai Zahran**

Endocrine Disrupting Chemicals and its  
Effect on Reproductive and Mental Health

**Devya Gurung**

**Prof. Sanjoy Chakraborty**

Accurate Stage Elevator Design for  
Photo-lithography Technique to  
Generate Engineered Tissues

**Kerolos Hanna**

**Prof. Ozlem Yasar**

Blending Wine Education and  
General Education: Preparing Tomorrow's  
Wine Professionals for Continual Growth

**Ayako Hiratsuka**

**Prof. Karen Goodlad**

Blending Wine Education and General  
Education: Preparing Tomorrow's Wine  
Professionals for Continual Growth

**Malika Ikramova**

**Prof. Karen Goodlad**

Mamakating Master Plan and  
Visitor Center Vision Study

**Christine Nicole Jayco**

**Prof. Paul King**



Health Promotion and Self Care:  
Impact of Microaggressions,  
Intersectional Identities, and  
Self-Compassion

**Ricardi Jean Gilles**

**Prof. Amanda Almond**

NYC MAX: Mapping the Maximum  
Allowable Density of NYC by Zoning

**Xiao Jing Jiang**

**Prof. Ting Chin**

Big Data in Cloud Robotics Using  
Neuromorphic Computing

**Alisa Kalegina**

**Prof. Ashwin Satyanarayana**

Modeling the Effect of a Mutation on the  
Structure of GPCR6

**Josue Kersaint**

**Profs. Nathan Astrof & Mai Zahran**

Molecular Characterization of Telopathes  
cf. magna from Deep Waters Around  
New Zealand, Antarctica (Ross and  
Somov Seas), and Hawaii

**Sheila Moaleman**

**Prof. Mercer Brugler**

Cultural Awareness in  
Health Care Professions

**Linalee Moreira**

**Prof. Elaine Leinung**

The Role of Calpains in Oxidative Stress

**Ribert Morette**

**Prof. Ralph Alcendor**

Multi-material Scaffold Fabrication for  
Engineered Tissues

**Kayla Natal**

**Prof. Ozlem Yasar**

Exploring the Pollard's Algorithm

**Josiel Nunez**

**Prof. Ariane Masuda**

The Role of Sirtuins in T. Thermophila

**Kabiru Omolaja**

**Prof. Raph Alcendor**

Adaptive and Autonomous  
Tensegrity System

**Asli Oney**

**Prof. Phillip Anzalone**

The Link Between Oral and Systematic Health: The Nursing Connection

**Akilah Pascall**

**Prof. Aida Egues**

Adaptive and Autonomous Tensegrity System

**Cyntia Persaud**

**Prof. Phillip Anzalone**

Health Promotion and Self Care: Impact of Microaggressions, Intersectional Identities, and Self-Compassion

**Jamel Phillips**

**Prof. Amanda Almond**

3D Scaffold Fabrication with Inverse Photolithography

**Ramesh Prashad**

**Prof. Ozlem Yasar**

A Feasibility Study of an Energy Recovery System

**Roseclaire Pyram**

**Prof. Masato Nakamura**

Crash Free Aerial Vehicle for Assistive Navigation System

**Tenzing Rabgyal**

**Prof. Xiaohai Li**

Health Promotion and Self Care: Impact of Microaggressions, Intersectional Identities, and Self-Compassion

**Stefanie Rimpel**

**Prof. Amanda Almond**



Designing a Research Poster Presentation

Mr. Marvin Bennett

November 3, 2016

Race as an Impact on Provision of Health Care: The Nursing Connection

**Ilse Rosalinda Rodriguez Delgado**

**Prof. Aida Egues**

Health Promotion and Self Care: Impact of Microaggressions, Intersectional Identities, and Self-Compassion

**Yulduz Saidinova**

**Prof. Amanda Almond**

Cultural Awareness in the Health Care Professions

**Fauziya Sani**

**Prof. Elaine Leninug**

Endocrine Disrupting Chemicals and its Effect on Reproductive and Mental Health

**Khosiyatkhon Sayfulloeva**

**Prof. Sanjoy Chakraborty**

Exploring the Pollard's Algorithm

**Farjana Shati**

**Prof. Ariane Masuda**

Understanding the Concept of Film

**Leroy Strother**

**Prof. John McCullough**

Controlling the Movements of a Robotic Mannequin Through Kinematics

**Rumana Hassin Syed**

**Prof. Farrukh Zia**

Reading J. Steinbeck's East of Eden as a Midrash on the Story of Cain and Abel

**Jaroslav E. Sykora**

**Prof. Laura Westengard**



Peer Leadership Program  
Fall 2016

Multi Material 3D Scaffold Printing with  
Maskless Photolithography

**Joyce Tam**

**Prof. Ozlem Yasar**

NYC MAX: Mapping the Maximum  
Allowable Density of NYC Zoning

**Xiaoneng Tang**

**Prof. Ting Chin**

Structural Health Monitoring of Bridges

**Danielle Telemaque**

**Prof. Navid Allahverdi**

Flow Cytometry and  
Cytokine Analysis Methods in R

**Nina Tretiakova**

**Prof. Jeremy Seto**

Discrete Structures:  
Algorithms, Complexity and Graph Theory

**Byron Ullauri**

**Prof. Satyanand Singh**

The Role of Sirtuins in T. Thermophila

**Masood Usman**

**Prof. Ralph Alcendor**

Adaptive and Autonomous  
Tensegrity System

**Adel Yaseen**

**Prof. Phillip Anzalone**

A Feasible Study of  
an Energy Recovery System

**Runtao You**

**Prof. Masato Nakamura**

Bolker-Pacala Population Model in  
Mathematical Biology

**Mei Zhu**

**Prof. Mariya Bessonov**



# GRANT-FUNDED PROJECTS



## NATIONAL SCIENCE FOUNDATION LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION (LSAMP) IN STEM

Program Coordinator: Mr. Marvin Bennett

Cytokine Influence on Neurodevelopment

**Serifat Adebola**

**Prof. Jeremy Seto**

Ants vs. Bees: A Comparison of  
Swarm-Intelligence Approaches for  
Cyber Security

**Mikhail Bennett**

**Prof. Benito Mendoza**

Copper Binding Properties and  
Antioxidant Ability of  
Multi-target Compounds

**Miguel A. Gomez**

**Prof. Alberto Martinez**

Mapping and Monitoring Lake Ice Using  
Combinations of Satellite and  
Ground Observations

**Marissa Lyons**

**Prof. Hamidreza Norouzi**

Global Land Cover Change from  
MODIS Measurements

**Francois Mertil**

**Prof. Hamidreza Norouzi**

Google Cloud vs AWS: A Comparison

**Abdou Ndiaye**

**Prof. Ossama Elhadary**

Detecting and Eliminating  
Noisy (Fraud) Instances in Big Data

**Kleber Perez**

**Prof. Marcus Pinto**

Structural Health Monitoring of Bridges

**Daniel Telemaque**

**Prof. Navid Allahverdi**

Simulating Binary Options

**Marieme Toure**

**Prof. Jonathan Natov**

**NATIONAL SCIENCE FOUNDATION  
RESEARCH EXPERIENCES FOR  
UNDERGRADUATES IN SATELLITE AND  
GROUND-BASED REMOTE SENSING AT  
NOAA-CREST:  
EXPANDED OPPORTUNITIES**

(NSF REU Grant # AGS-1560050)

Profs. Reginald Blake, Janet Liou-Mark, and  
Ms. Laura Yuen-Lau

Measurements and Discrimination of  
Aerosol and Cloud Layers Using a  
Multi-Wavelength Elastic Raman Lidar

**Anjeza Arapi**

Observing Seasonality of  
Inundation Patterns Across  
The Pacaya-Samiria National Reserve  
Region Through the Use of Sentinel SAR 1

**Carlos Alvarez**

Evaluation of  
Karenia Brevis Detection Techniques  
Using MODIS and VIIRS Imagery  
Against in Situ Measurements on the  
West Shelf of Florida

**Claudia Duran Garcia**

Sampling Fluorescence Reflectance from  
Ocean Color Satellite Imagery Using  
Fluorescence Line Height (FLH) Algorithm

**Rezwon Islam**

Use of Landsat 8 to Classify  
Coral Reefs and Evaluating the Effects of  
the Chemical Oxybenzone on  
Porites Furcata's Reflectance Signature

**Michael Mateo**

Satellite Data Visualization, Processing  
and Mapping Using ODIS Imager Data

**Aye Phyu**

Seasonal Variability of  
Precipitation Extremes in New York City

**Whelennis Polanco**

Thermal Structure of the Urban Boundary  
Layer during a Heat Wave Period

**Jeremy Sanchez**



## Evaluation of Differences Among Near-surface Air Temperature, Land Surface Temperature and Soil Temperature Using Remote Sensing and Ground-based Observations

**Farjana Shati**

## Impact of Urbanization and Climate Change on Streamflow

**Gnimdou Tchalim**

## Applications of Remote Sensing and In-Situ Measurements for Studying Lateral Carbon Fluxes Between Tidal Marshes and Connected Estuarine Waters

**Usaama Van**



Presentation Skills  
Professional Development Center  
October 6, 2016



NIH Bridges Scholars at the Annual Biomedical Research Conference for Minority Students (ABRCMS) in Tampa, Florida.

## **NATIONAL SCIENCE FOUNDATION GP-EXTRA: RECRUITING AND RETAINING NON-GEOSCIENCE MINORITY STEM MAJORS FOR THE GEOSCIENCE WORKFORCE**

(NSF IUSE GEO Grant #1540721)

Profs. Reginald Blake, Janet Liou-Mark,  
Hamidreza Norouzi, Viviana Vladutescu, and  
Ms. Laura Yuen-Lau

Analysis of Global Drought and  
Land-Cover/Land-Use Change Using  
Satellite Passive Microwave Observations

**Yanna Chen**

**Prof. Hamidreza Norouzi & Dr. Satya Prakash**

### **PHYS 1002:**

An Introduction to the  
Physics of Natural Disasters

**Prof. Reginald Blake**

### **Hurricane Research Team**

A Simple Thermodynamic Model for  
Hurricane Wind Velocity

**Wesley Ackley, Caylan Groome,**

**Fouad Medjekdoud, Travis Ngo, Paul Wong**

### **Earthquake Research Team**

Living with Earthquakes

**Shannon Evans, Kevin Geronimo,**

**Isaac Montiel-Montiel, Theodoric Seth Pierre,**

**Babajide Sonibare**

### **Climate Change Research Team**

Reduction of CO<sub>2</sub> Emissions and Energy  
Consumption by Building Re-Tuning

**Antonio Amato, Jason Benjamin,**

**Leonardo Castillo, Samuel Guzman,**

**Christian Lopez, Deryan Santana, Bergil St. Juste**



Developing and Delivering Effective Research Presentations

Mr. Marvin Bennett

October 27, 2016

## **Flood Research Team**

Save Yourself, Turn Around, Don't Drown  
**Dinesh Adhikari, Thanbir Ahmed Miah, Leonardo Perez, Irania Vazquez**

## **Volcano Research Team**

Volcanic Energy – The Great Eruption  
**Hussein Alnomani, Barry Amadou, Nigel Franklyn, Harrys Hounbedji, Erick Suazo**

## **NATIONAL INSTITUTE OF HEALTH BRIDGES TO THE BACCALAUREATE PROGRAM**

Associate Provost Pamela Brown, Profs. Liana Tsenova, Nathan Astrof, Pa Her, Jean Hillstrom, Janet Liou-Mark, Diana Samaroo, Armando Solis, Tatiana Voza, and Ms. Lori Younge

Health Promotion and Self Care:  
Impact of Microaggressions, Intersectional Identities, and Self-Compassion

**Nalda Abellard**  
**Prof. Amanda Almond**

Barcoding and Sequencing of DNA Extracted from the Scales of Phataginus Tricuspis for Use in Forensics of Wildlife Trafficked in International Trade and Biodiversity Studies

**Shenika Burke**  
**Prof. Olufemi Sodeinde**

Barcoding and Sequencing of DNA Extracted from the Scales of Phataginus Tricuspis for Use in Forensics of Wildlife Trafficked in International Trade and Biodiversity Studies

**Unyque Cruz**  
**Prof. Olufemi Sodeinde**

Health Promotion and Self Care:  
Impact of Microaggressions, Intersectional Identities, and Self-Compassion

**Jermaine G. Fairweather**  
**Prof. Amanda Almond**

Factors Affecting Emotional Regulation and Vagal Tone in an Expressive Writing Paradigm

**Nazish Ghulam**  
**Prof. Jean Hillstrom**

Factors Affecting Emotional Regulation  
and Vagal Tone in an  
Expressive Writing Paradigm

**Natalie Gonzalez**

**Prof. Jean Hillstrom**

Neurotrophic Factors and Their Effects in  
the Treatment of Multiple Sclerosis

**Juanita Marin**

**Prof. Andleeb Zameer**

Factors Affecting Emotional Regulation  
and Vagal Tone in an  
Expressive Writing Paradigm

**Sehar Munawar**

**Prof. Jean Hillstrom**

Factors Affecting Emotional Regulation  
and Vagal Tone in an Expressive  
Writing Paradigm

**Marvelous Nkrumah**

**Prof. Jean Hillstrom**

Examine the Effect of Oxidative Stress  
on Tetrahymena Thermophila Sirtuin  
Family Members

**Kingsley Okolo**

**Prof. Ralph Alcendor**

Introduction to the Chemistry and  
Laboratory Preparation of  
Porphyrin Compounds: New Asymmetric  
Light-sensitive Compounds for  
Energy Storage Applications

**Nadia Okyere**

**Prof. Peter Spellane**

Why it is Possible for AI to  
Mimic Human Intelligence

**Almas Qamar**

**Prof. Lauren Park**

Protective Cytokines in Multiple Sclerosis

**Elma Rahman**

**Prof. Andleeb Zameer**

Factors Affecting Emotional Regulation  
and Vagal Tone in an  
Expressive Writing Paradigm

**Ebeny Santana**

**Prof. Jean Hillstrom**

Characterizing the Antioxidant Properties  
of a Novel Ionophoric Polyphenol,  
Compound-AM20

**Jitendra Singh**

**Prof. Ralph Alcendor**



## **Department of Education MSEIP STRATEGIC CHANGES TO INCREASE AND SUSTAIN THE PARTICIPATION OF WOMEN AND UNDERREPRESENTED MINORITY STUDENTS IN COMPUTER SCIENCE**

(DOE MSEIP Grant #P120A150063)

Associate Provost Pamela Brown, Profs. Sandie Han,  
Boyan Kostadinov, Janet Liou-Mark, Johann Thiel, and  
Ms. Suhua Zeng

Developing Case Studies for  
Peer Leader Training

**Joel Chapman, Thierno Diallo, Samuel Guzman,  
Michael Johnson, Luis Lora, Jie Hao Luo,  
Jean Povo, Kennedy Samarakody, Bashrat Sultana,  
and Xuebin Zou**  
**Prof. Janet Liou-Mark**

## **THE BLACK MALE INITIATIVE PROGRAM**

Singlet Oxygen Production by  
Photosensitizing Macromolecules

**Andrew Wills**

**Profs. Diana Samaroo & Alberto Martinez**



U.S. Environmental Protection Agency (EPA)  
October 21, 2016

# Special Projects

## Close Encounters with Stirling Numbers of the First and Second Kind

**Adesoji Adeleke, Mark A. Avila, Ivan Chen, Yanna Chen, Michael A. Estrada, Joshua Grillasca, Ricky Hardiyanto, Cahit Huner, Shawki Kased, Joefer Chris R Luna, Jie Hao Luo, Josue A. Martinez, Jeffrey E Meza, Rajwinder Munder, Juan Carlos Peralta, Abidur Rahman, Kareshma D. Ramashwar, Merkis R. Ruiz, Julio Cesar Salazar Ibarra, Michael Schwartz, Rumana Shammee, Amit Sharan, Erick F Suazo, Chun Kit Szeto, Karma Tsultrim, Byron Ullauri, Ivan Yeung, Donald Young, and Xuebin Zou**

### Abstract:

An important study in combinatorics involves partitions of  $n$  element sets into  $k$  classes. We discuss partitions, inverse partitions, and answer relevant questions that help to clarify and lay the ground work for further explorations with Stirling Numbers.

**Prof. Satyanand Singh**



Writing Abstracts for Research Projects  
September 29, 2016



## The 25th Semi-Annual Honors and Research Scholars Poster Presentation

To all the dedicated professors for mentoring students. A heartfelt thank you for making this event a successful one.



### Special Thanks To:

Dean Kevin Hom  
Dean David Smith  
Dean Justin Vazquez-Portiz  
Prof. Julia Jordan  
Ms. Laura Yuen-Lau  
Dr. Satya Prakash  
Mr. Marvin Bennett  
Mr. David Turkiew  
Mr. George Lowe  
Mr. Lubosh Stepanek  
Ms. Shawn Beatty  
Ms. Claire Johnson



**A special thank you Prof. Mercer Brugler, Hamidreza Norouzi, Diana Samaroo, and Laura Yuen-Lau for overseeing the poster competition and to the poster judges:**

Ralph Alcendor  
Navid Allahverdi  
Nadia Benakli  
Dionne Bennett  
Monica Berger  
Reginald Blake  
Pamela Brown  
Aida Egues  
Patrick O'Halloran  
Laina Karthikeyan  
Alberto Martinez  
Ariane Masuda  
Kara Pasner  
Satya Prakash  
Diana Samaroo  
Jeremy Seto  
Gerarda M. Shields  
Satyanand Singh  
Olufemi Sodeinde  
Lian Tsenova  
Melanie Villatoro  
Yu Wang  
Mai Zahran



A special recognition and appreciation to Ms. Natalie Yeung for designing the program.

