

The
24th
*Semi-Annual
Poster Presentation*

**Honors and
Research Scholars
Poster Presentation**

Wednesday, May 4, 2016

11:00 AM - 4:00 PM

Atrium First and Ground Floors

Thursday, May 5, 2016

10:00 AM - 3:00 PM

Awards Ceremony at 12:30 PM

Atrium Amphitheater

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Regular Course

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Awards Ceremony

May 5, 2016
Atrium Amphitheater
12:30 PM

Greetings

Russell K. Hotzler
President

Bonne August
Provost
Vice President for Academic Affairs

Pamela Brown
Associate Provost

Honors Scholars Recognition

Janet Liou-Mark
Director of the Honors Scholars Program

Research Scholars Recognition

Hamidreza Norouzi
Director of Undergraduate Research

Special Projects Recognition

Laura Yuen-Lau
Coordinator of the Honors Scholars Program

Best Poster Awards

Reneta Lansiquot
Assistant Director of the Honors Scholars Program



Honors Scholars Program Orientation
February 11, 2016



The American Museum of Natural History
March 25, 2016

Honors Course

Privacy, Encryption, Technology & Security - Case Study of Apple vs. FBI

Danisha Deonarain, Cynthia Love,
Patricia Negron, Aremi Ruiz, Jessica Samide,
and Nicole Waite

Prof. Marissa J. Moran

LAW 4704H: Legal Technology

Honors in a Regular Course

The Effect of Hydrogen Peroxide (H₂O₂) on Sirtuins in *Tetrahymena Thermophila*

Victor Adedara

Profs. Ralph Alcendor and Kajan Ratnakumar

BIO 3620: Molecular and Cell Biology

Brand Identity

Nanase Akagami

Prof. Joseph Loguirato

COMD 2300: Communication Design I

Case Studies for Peer Leader Training

Carlos Alvarez

Prof. Janet Liou-Mark

MEDU 2901: Peer Leader Training in Mathematics

The Synthesis of Angucyclines Using an Intramolecular Bradsher Cycloaddition

Abdullah Allaoa

Prof. Tony Nicolas

CHEM 2323: Organic Chemistry II

Ethical Marketing

Dushawn Butler

Prof. John Dello Russo

MKT 1212: Consumer Behavior

Light Matter Interaction in Semiconductor Heterostructures

Rakibul Chowdhury

Prof. German Kolmakov

PHYS 1434: General Physics II: Algebra Based

Wal-Mart and Ethics

Hailin Du

Prof. John Dixon

BUS 2425: Business Management

Precision Engineered Dental Appliances

Olesea Galusca

Prof. Renata Budny

RESD 1212: Fixed Prosthodontics II

STEM Teaching Scholarship in New York City

Kendra Guo

Prof. Fangyang Shen

CST 2400: Computer Systems Management and Support

Fear of Public Speaking

Malika Ikramova

Prof. John Sannuto

COM 1330: Public Speaking

The Exciton Base-Einstein Condensation and Superfluidity in Bilayer Systems

Samuel Isaac

Prof. Oleg Berman

PHYS 1442: General Physics II: Calculus Based

The Exciton Base-Einstein Condensation and Superfluidity in Bilayer Systems

Sarah Khovov

Prof. Oleg Berman

PHYS 1442: General Physics II: Calculus Based

LGBTQ Muslim Experience Study

Felix Kurniawan

Profs. Gilbert Kiefer and Eric Rodriguez

MAT 1272: Statistics

BCD to 7-Segment Display

Wai Ming Lam

Profs. Robert Armstrong and Ohbong Kwon

EMT 1250: Fundamentals of Digital Systems

Etiologies and Treatment of Neurological Pathologies

Stella Lee

Prof. Niloufar Haque

BIO 2312: Human Anatomy and Physiology II

Neurological Disease and Neurotherapy

Stella Lee

Prof. Ralph Alcendor

BIO 3302: Microbiology I

L.I.D. (Liquid Interactive Dispenser)

Adrian Martinez Zuniga

Prof. Muhammad Ummy

EET 2271: Circuit Analysis Laboratory

Technology's Impact on the Economy

Rejwoan Matubbar

Prof. Andrea Allard

CST 1100: Introduction to Computer Systems

Green Marketing

Kayla McCall

Prof. John Dello Russo

MKT 1212: Consumer Behavior

An Analysis of the Impact of the Harlem Renaissance

Nykkeicha McEwan

Prof. Javiela Evangelista

AFR 1466: Modern African-American History II

Elucidating Novel Species of Deep-Sea Black Coral (Order Antipatharia) from the Hawaiian Archipelago

Sheila Moaleman

Prof. Mercer Brugler

BIO 1201: Biology II

Strong Cobra

Israel Nava Hernandez

Prof. Edward Morton

CET 3625: Applied Analysis Lab

Expression of Membrane Proteins

Jawad Rashid

Prof. Nathan Astrof

BIO 3601: Biochemistry

Furniture Design Utilizing Multifunctional Elements

Ezra Stabler

Prof. Lieselle Trinidad

IND 2401: Furniture Design

Culture and Culture Change: Gentrification in the Downtown Brooklyn Area

Phillipa Williams

Prof. Angela D'Souza

ANTH 1101: Introductory Anthropology

Gender Equality in Burundian Coffee Farming

Anna Ye

Prof. James Reid

HMG 3501: Hospitality Work Force Management in a Global Marketplace

Case Studies for Peer Leader Training

Mei Zhu

Prof. Janet Liou-Mark

MEDU 2901: Peer Leader Training in Mathematics



American Meteorological Society

January 16, 2016

CUNY

Research Scholars

Advanced Design and Fabrication of Custom Prosthetics

Ehab Ahmad
Prof. Gaffar Gailani

Prediction of Hydrodynamic Vulnerability of Coastal Bridges to Extreme Storm Surges

Jonathan Akujobi
Prof. Gerarda Shields

Advanced Design and Fabrication of Custom Prosthetics

David Amegavie
Prof. Gaffar Gailani

Advanced Design and Fabrication of Custom Prosthetics

Harold Barreto
Prof. Gaffar Gailani

Creating Active Learning Spaces in Virtual Worlds

Zianne Cuff
Prof. Reneta Lansiquot

Benefits of Expressive Writing: Improvements in Vagal Tone over Time

Cherishe Cumma
Prof. Jean Hillstrom

Student's Matchmaker: An Internship Finder

Hector Feliz
Prof. Marcos Pinto

3D Nutrient Delivery Network Fabrication for the Engineered Tissues

Eddy Garcia
Prof. Ozlem Yasar

Novel Materials for Photonics and Optoelectronics

Andy He
Prof. German Kolmakov

Re-visualizing Brooklyn Tech: Architectural Archeology and Virtual Land Development

Ikrash Khan
Prof. Alan Lovegreen

The Role of Calpains in Oxidative Stress

Robin Koiner
Prof. Ralph Alcendor

Analysis of Renewable Energy Systems

Ibrahim Mamun
Prof. Masato Nakamura

Advanced Design and Fabrication of Custom Prosthetics

Rachid Moumni
Prof. Gaffar Gailani



Writing Abstracts for Research Projects
March 3, 2016

**Study of Two-dimensional Transition Metal
Dichalcogenide Semiconductors:
MoS₂, MoSe₂, WS₂, WSe₂ and
Implementation of Modern Physics Experiments
in the Undergraduate Laboratory**

William Orton
Prof. Roman Kezerashvili

Lagrange and the Calculus of Variations

Yen Pham
Prof. Andrea Ferrogli

**Mechanical Characterization of
Biomaterials for Tissue Engineering Applications**

Ramesh Prashad
Prof. Ozlem Yasar

**Prediction of Hydrodynamic Vulnerability of
Coastal Bridges to Extreme Storm Surges**

Jarren Sanderson
Prof. Gerarda Shields

**Discovering Mechatronics by Connecting the
Software and the Hardware Together**

Malevich Tsimur
Prof. Muhammad Ali Ummy

**Stochastic Simulation of an Energy Conversion
System: Modeling of a Combustion Chamber in
a Waste-to-Energy (WTE) Power Plant**

George Vanishvili
Prof. Masato Nakamura

**Fabrication of Engineered Tissues
with Micro-Molding**

Xavier Williams
Prof. Ozlem Yasar

**Baccalaureate Student
Research Scholars**

Computer Simulation and Design of Bridges

Amanda Abrew
Prof. Navid Allahverdi

The Role of Sirtuins in T. Thermophile

Victor O. Adedara
Prof. Ralph Alcendor

Design of a Stand-Up Power Wheelchair

Joshua Afrifa
Prof. Angran Xiao

**iPractice Challenge: A Mobile App for
Practicing Computer Programming**

Brayan Almonte
Prof. Benito Mendoza

**Modulation of Glucose Uptake and Cell Polarity
in Toxoplasma Infected Cells**

William Bennett
Prof. Jeremy Seto

**Understanding the Mechanism of Binding of
VEGFD with its Receptor VEGF3**

Najma Bibi
Prof. Mai Zahran

**Understanding the Mechanism of Binding of
VEGFD with its Receptor VEGF3**

David Carvajal
Prof. Mai Zahran

**Symbolic Language in STEM Education Graphics:
Infograms for Anatomy and Physiology**

Tristan Charran
Prof. Vasily Kolchenko

Global Drought and Land-Cover/ Land-Use Change Studies Using Satellite Microwave Observations

Yanna Chen
Prof. Hamidreza Norouzi

The Role of Sirtuins in T. Thermophile

Edrouine Gabriel
Prof. Ralph Alcendor

Design of a Stand-Up Power Wheelchair

Justen Garner
Prof. Angran Xiao

Drug Design Target VEGFR3 Receptor

Binita Giri
Prof. Mai Zahran

Study of Multi-target Directed Ligands: Copper Binding Selectivity and Inhibition of Reactive Oxygen Species Formation and BACE 1 Enzymatic Activity

Miguel Gomez
Prof. Alberto Martinez

GravGen and Interdependent Alternate Energy Generator

Christopher Guzman
Prof. Andy Zhang

A Novel Technique of Designing a C-band SOA-based Bidirectional Tunable Fiber Laser with Two Merged Fiber Ring Cavities

Ouidir Harikenchikh
Prof. Muhammad Ali Ummy

Advanced Design and Fabrication of Custom Total Knee Replacement with Cost Analysis

Gabriel Higuera
Prof. Gaffar Gailani

Mechanical Characterization of Polydimethylsiloxane (PDMS) Based Scaffolds for Tissue Engineering Applications

Mian Huang
Prof. Ozlem Yasar

Design of a Stand-Up Power Wheelchair

Damir Kasumovic
Prof. Angran Xiao

Design and Building of 3D Printer with Cost Analysis

Eraj Khan
Prof. Gaffar Gailani

A Comparison of Bio-Inspired Algorithms for the Design of Combinational Logic Circuits

Volodymyr Komendyak
Prof. Benito Mendoza

Understanding the Important Interaction between VEGFD and VEGF3

Christopher Mason
Prof. Mai Zahran

Number Theoretic Problems

Justin Meyer
Prof. Satyanand Singh



Institutional Review Board (IRB) Training
March 17, 2016



Writing Effective Cover and Thank You Letters
April 14, 2016

Hydrogel Fabrication Using Maskless Photolithography

Joyce Tam
Prof. Ozlem Yasar

Structural Health Monitoring of Bridges

Danielle Telemaque
Prof. Navid Allahverdi

The Limitations in Increasing Spectral Efficiency of Optical Communications

Ina Tsikhanava
Prof. Djafar K. Mynbaev

The Role of Sirtuins in T. Thermophila

Masood Usman
Prof. Ralph Alcendor

Self-Balancing Walking Instrument

Dylan Wolf
Prof. Andy Zhang

Advanced Design of Bionic Hand with Cost Analysis

Jiamian Zhao
Prof. Gaffar Gailani

Elucidating Novel Species of Deep-Sea Black Coral (Order Antipatharia) from the Hawaiian Archipelago

Sheila Moaleman
Prof. Mercer Brugler

The Role of Sirtuins in T. Thermophila

Kabiru Omolaja
Prof. Ralph Alcendor

Cash Free Aerial Vehicle for Assistiv Navigation System for Visually Challenged People

Tenzing Rabgyal
Prof. Xiaohai Li

Predicting the Structure of Protein Kinase A

Elizabeth Rosenzweig
Prof. Mai Zahran

Combating Horizontal Violence in Nursing using Peer-Led Workshops

Peggy Saint-vil
Prof. Elaine Leinung

Self-Balancing Walking Instrument

Luca Scarano
Prof. Andy Zhang



Advancing Library Research Techniques
March 24, 2016

Emerging Scholars

Curating DNA Methylation Signatures in Rheumatoid Arthritis (RA)

Sajjad Abedian
Prof. Eugenia Giannopoulou

A Computer Keyboard with Finger-detection Sensors on Each Key

Joe Nathan Abellard
Prof. Farrukh Zia

Using a Tensegrity Structure for External Actuated Shading Systems on Buildings

Starky Acevedo
Prof. Phillip Anzalone

GravGen an Interdependent Alternate Energy Generator

Yevgeniy Babkin
Prof. Yu Wang

Using a Tensegrity Structure for External Actuated Shading Systems on Buildings

Raveena Bahadur
Prof. Phillip Anzalone

Landscape Determinants of Neutral and Adaptive Genomic Diversity in Leaf-toed Geckos within the Mexican Dry Forest

Saptarsi Basu
Prof. Christopher Blair

Chronicling the Achievements and Activities of Honors Scholars at City Tech

Savannah Blodgett
Prof. Reneta Lansiquot

Health Effects of Long Term Exposure to Carbon Monoxide

Brittania Brown
Prof. Olufemi Sodeinde

Tinnitus: Causes, Diagnosis and Treatment

Shenika Burke
Prof. Olufemi Sodeinde

Differential Effect of Fat or Energy Intake in Males and Females

Trevor Caraballo
Prof. Sanjoy Chakraborty

The Impact, Sources, and Resolutions of Error in GPS

Carl Chan
Prof. Holly Carley

Room Temp Dynamics of Polarities in TMD

Rakibul Chowdhury
Prof. German Kolmakov

Designing and Building 3D Printer

Justin Colon
Prof. Gaffar Gailani

The Role of Calpain in Oxidative Stress

Coreen Cooper
Prof. Ralph Alcendor

Spectroscopic Studies on the Interaction of Chlorin and Isobacteriochlorin with Bovine and Human Serum Albumin

Alexandra De Pasquale
Prof. Diana Samaroo

Differential Effect of Fat or Energy Intake in Males and Females

Bora Durrsi

Prof. Sanjoy Chakraborty

Analyzing and Visualizing Social Networks

Fatime Zahra El Fatimi

Prof. Nadia Benakli

Gender Differences in Vagal Tone Adaptation in an Expressive Writing Paradigm

Ahmed Emrah

Prof. Jean Hillstrom

Benefits of Expressive Writing: Improvements in Vagal Tone Over Time

Dana Glatzer

Prof. Jean Hillstrom

iPractice Challenge: A Mobile App for Practicing Computer Programming

Anthony Grullon

Prof. Benito Mendoza

Exploring Internship and Student Teaching Evaluations

Jimmy Guity

Prof. Lieselle Trinidad

STEM Teacher Scholarship in NYC

Kendra Guo

Prof. Fangyang Shen

Differential Effect of Fat or Energy Intake in Males and Females

Devya Gurung

Prof. Sanjoy Chakraborty

Antioxidant Properties of Multi-target Compounds by the DPPH Assay

Sarah Hambleton

Prof. Alberto Martinez

Combating Horizontal Violence in Nursing Using Peer-Led Workshops

Monica Heredia

Profs. Aida Egues and Elaine Leinung

Strong COBRA Israel

Nava Hernandez

Prof. Edward Morton

Characterization of Auphylococci from the Built Environment

Manuela Hoyos

Prof. Jeremy Seto

Extraction of DNA from the Scales of *Phataginus Tricuspis* for PCR-based Identification and Barcoding using Different Extraction Protocols

Angela Huang

Prof. Olufemi Sodeinde

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

Malika Ikramova

Prof. Karen Goodlad

Normalizing Field Data for Liquefaction Analysis in NYC

Areeba Iqbal

Prof. Melanie Villatoro

iPractice: An AI-enabled Platform for Self-assessment Systems

Munthasir Islam

Prof. Benito Mendoza

The Role of Sirtuins in *T. Thermophile*

Suzanne Jacob

Prof. Ralph Alcendor

Text and Network Discovery with Netlytic

Felicia Jeter

Prof. Nadia Benakli

**Molecular Characterization of Black Corals
(Antipatharians) from the Flower Garden Banks
National Marine Sanctuary (NW Gulf of Mexico)**

Colin Joseph
Prof. Mercer Brugler

RNA-Seq Analysis (PC12 Cells)

Daenna Joseph
Prof. Jeremy Seto

Tidal Energy Generator

Anita Keo
Prof. Masa Nakamura

LGBT Muslim Experience

Felix Kurniawan
Prof. Eric Rodriguez

Digital Design Using VHDL

Wai Ming Lam
Prof. Ohbong Kwon

**Differential Effect of Fat or
Energy Intake in Males and Females**

Nicole Madrazo
Prof. Sanjoy Chakraborty

**Molecular Characterization of Black Corals
(Antipatharians) from the Flower Garden Banks
National Marine Sanctuary (NW Gulf of Mexico)**

Juanita Marin
Prof. Mercer Brugler

**Using a Tensegrity Structure for
External Actuated Shading Systems on Buildings**

Albina Mavlyutova
Prof. Phillip Anzalone

**An Analysis of the Impact
of the Harlem Renaissance**

Nykkeicha McEwan
Prof. Javiela Evangelista

**Combatting Horizontal Violence in
Nursing Using Peer-Led Workshops**

Christine Quashie
Profs. Aida Egues and Elaine Leinung

**An Information-theoretic Investigation
of Decoy Structures Used in
Protein Threading and Fold Recognition**

Chris Pang
Prof. Armando Solis

**A Comparative Study of the
Protein Sequences of BSA and HAS and
Their Interaction with Organic Molecules**

Valentina Pineda
Prof. Jeremy Seto

**Chronicling the Achievements and
Activities of Honors Scholars at City Tech**

Mariah Rajah
Prof. Reneta Lansiquot

**Modeling Peptides that Imitate the
Role of Vascular Endothelial Growth Factor**

Adam Sadowski
Prof. Mai Zahran

**Combating Horizontal Violence in
Nursing Using Peer-Led Workshops**

Esther Saint-vil
Profs. Aida Egues and Elaine Leinung

**A Comparative Study of the
Protein Sequences of BSA and HSA and
Their Interaction with Organic Molecules**

Denia Saleh
Prof. Diana Samaroo

**Comparing SDSS Spectral Quantities
and their Inclination Dependence**

Roberto Serrano
Prof. Ariyeh Maller



New York Hall of Science
February 26, 2016

Combating Horizontal Violence in Nursing Using Peer-Led Workshops

Tatiana Toussaint

Profs. Aida Egues and Elaine Leinung

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

Houyu Wei

Prof. Ting Chin

Theoretical Analysis of the Flow through the Cement Line of a Single

Meleha Yousaf

Prof. Gaffar Gailani

A Modified Predator-Prey Model with Disease in the Prey

Xuebin Zou

Prof. Johann Thiel

Peer-Led Team Learning in an Intermediate Algebra and Trigonometry Course: Examining the Effects of Gender and Workshop Participation

Farjana Shati

Prof. Janet Liou-Mark

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

Xiaoneng Tang

Prof. Ting Chin

Extraction of DNA from the Scales of Phataginus Tricuspis for PCR-based Identification and Barcoding Using Different Extraction Protocols

Keisha Theobald

Prof. Olufemi Sodeinde



New York Hall of Science
February 26, 2016

Special Projects

Water Resource Management of Fairview Lake

Keron Adams Hamilton, Safreen Akbar, Salim Al Din, Volha Asadchaya, Atif Azam, Jesus Dorantes, Stephanie Gonzalez, Nathaniel James, Alan Jimenez, Rajvinder Kaur, Jesus Martinez, Jorge Martinez, Roger Mason, Richardson McLeod, Jibril Mohammed Bashiru, Alan Oms, Raymil Perez, Manellva Peters, Khiran Samsundar, Colle Seck, Mohammad Sharif, Pape Thioune, Giovanni Vaque, Christian Veras, Akeem Watson, and Deirdra Williams

CMCE 2454: Applied Hydraulics
Prof. Gerarda M. Shields

Abstract: A sample project site was selected in Tafton, PA. Students analyzed, designed and managed the water resources found in Fairview Lake and the surrounding watershed. First, the watershed was delineated and the amount of available water determined. A computer model was developed to route the water through the stream to determine flow and velocity. Students then designed a basic drinking water and wastewater treatment system for the community using the resources from the lake and stream.

Unifying the Presence of First Year Programs at New York City College of Technology

Arianna Bollers, Graphic Design Intern
Faculty Commons Design Team
Lauri Aguirre, Director of First Year Programs

Abstract: First Year Programs is well established at New York City College of Technology, however it lacks a cohesive visual identity that appeals to students entering City Tech for the first time. This presentation will display print and digital design elements that solve this problem, including a brochure, bookmarks, awareness posters, and various other media designed specifically for First Year Learning Communities, one of the many programs supported by First Year Programs. The deliverables feature class schedules and the list of titles and class descriptions, which are created to promote and aid in scheduling of the First Year Learning Communities. The deliverables will be introduced for the first time throughout the spring and summer of 2016 to approximately 400 First Year Learning Community students and 1200 First Year Summer Program students. Students, faculty, and staff will benefit from this unified presence as it is represented throughout the college.

Drink at Your Own Risk! Comparative Analysis of East River, Distilled and Tap Water

Serkan Akgun, Renee Barnes, Teddy Concepcion, Alexandra DePasquale, Narmin Gadimova, Matthew Lawson, Christy Yuling Liang, Kashana McRae, Anthony Serrano, Alona Shevchenko, Macrooseler Sylla, Jin Hua Wu, Yingyan Yang, Cristian Ynfante
CHEM1210L: General Chemistry II Laboratory
Prof. Alberto Martinez

Abstract: Water samples were collected from the East River in New York City (on March 15th, 2016) to measure for dissolved oxygen, conductivity, hardness, pH, and nitrates/nitrites. East River samples, taken at 6.5°C after a rainy day, were then compared to distilled and tap water. Total dissolved oxygen (DO) was higher in East River water (9.4 ppm) than levels found in tap water (8.9 ppm) or distilled water (8.6 ppm), which can be attributed to several factors, including exposure to atmospheric oxygen, mostly to colder water temperatures at the time of collection, and turbulence. However, oxygen saturation was substantially lower in East River water (76.4%) than in tap or distilled water ($\approx 100\%$), fact that could be an indication of water pollution. Conductivity at 70.5 mS/cm was ≈ 400 times higher than tap water (175 mS/cm). These results were expected due to the proximity of the East River to ocean water. The pH of river samples was 7.8 on average, which was slightly more basic than tap water at 6.7, and distilled water at 6.5. The measured value of nitrates at 3 ppm in the East River sample was comparable to measured values for distilled water (2.2 ppm) and tap water (4.2 ppm), an unexpected result that may be caused by inadequate recycling efforts at reservoir water treatment facilities. Nitrite values were negligible in all cases. Hardness was higher in both the East River (>400 ppm) and tap water (10ppm) samples respectively, which could be attributed to dissolved minerals which are absent in distilled water. In conclusion, our results suggest that, despite the efforts by NYC authorities, Hudson/East River water quality still seems to show some signs of pollution.

Earthquakes and New York City Buildings

Sara Aslam, Johnny Liu, Marissa Lyons, Sadaf Ramazan, and Kennedy Samarakody
Supervolcanoes: Earth's Most Destructive Force
Maen Caka, Khalood Nagi, Kleber Perez, Chunkit Szeto, Briken Vukaj

The Past, Present and Future of Climate Change

Joe N. Abellard, Jessica Choi, Michael Mateo, Tucker Salovaara, Punlop Wongsopar

Flood Characteristics that are the Most Damaging

Yanna Chen, Montimaire Joseph, Charyssa Morgan, Olakunle Olawoyin, Danny Sen

Have Hurricanes Become More Threatening over the Years?

Milko Castillo, Andrew Greaves, Carlos Matute, Andrew Ng, Feng Zheng
PHYS 1002: An Introduction to the Physics of Natural Disasters
Prof. Reginald Blake

Recursion, Dynamic Systems, and Chaos

Rasheda Akhtar, Kadiatou Camara, Joel Chapman, Brian Cuevas, Shannon Evans, Eugene Fung, Naveen Grero, Adam Gronowski, Owen Hylton, Olivia Hewitt, Latina Laing, Sarja Lowe, Sugeiry Pena, Juan Ramirez Jr., Kennedy Samarakody, Tshering Wangchuk, Noura Yasin, and Anthony Yorrick

Abstract: In this study we create by recursive processes certain fractals. These images embody dynamic systems and are created in the complex plane. We will discuss applications of fractals as we capture their allure and experience the beauty of mathematics. Studies will be made of perturbed systems such as $f(z)=z^c+z+c$, where z is in the complex plane.

MAT 2630: Numerical Analysis
Prof. Satyanand Singh

NSF LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION (LSAMP) IN STEM

Program Coordinator: Mr. Marvin Bennett

Detecting and Eliminating Noisy (Fraud Instances in Big Data

Hantz Angrand
Prof. Ashwin Satyanarayana

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

Mikhail Bennett
Prof. Benito Mendoza

Elucidating Black Coral (Cnidaria:Anthozoa: Hexacoralia) Species Diversity in the Flower Garden Banks National Marine Sanctuary (Gulf of Mexico)

Craig Dawes
Prof. Mercer Brugler

Study and Analysis of the Waterborne Pathogen

Thierno Diallo
Prof. Urmi Ghosh-Dastidar

Automatic Migration of Legacy Java Method Implementations to Interfaces

Olivia Moore
Prof. Raffi Khatchadourian

Google Cloud vs AWS: A Comparison

Abdou Ndiaye
Prof. Ossama Elhadary

Surveying the Flower Garden Banks National Marine Sanctuary (Gulf of Mexico) for Antipatharians (Black Corals)

Lysna Paul
Prof. Mercer Brugler

Detecting and Eliminating Noisy (Fraud) instances in Big Data

Kleber Perez
Prof. Ashwin Satyanarayana

Fireflies vs Fish: A Comparison of Bio-inspired Algorithms for Decentralized Time Synchronization in Distributed Wireless Sensors Networks

Christian Pinto
Prof. Benito Mendoza

Compare Cancer Mutations Stored in COSMIC (The Catalogue of Somatic Mutations In Cancer) and TCGA (The Cancer Genome Atlas) Databases

Taheefa Stephen
Prof. Eugenia Giannopoulou

Simulating Binary Options

Marieme Toure
Prof. Jonathan Natov

Mobile App: College Student's Peek at Authors of College Textbooks

Gwenneth Worthy
Prof. Marcos Pinto

NSF RESEARCH EXPERIENCES FOR UNDERGRADUATES IN SATELLITE AND GROUND-BASED REMOTE SENSING AT NOAA-CREST 2

(Grant # AGS-1062934)

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

A Proposed Remote Sensing Early Warning Dura Home Earthquake System

Frederic Anglade

Prof. Alexander Aptekar

Monitoring Land-Cover Changes in Lake Urmia Basin Using LandSat Imagery

Amarou Bah

Prof. Hamidreza Norouzi

Satellite Base Soil Moisture Product Validation Using Ground Observations

Christian Campo

Prof. Hamidreza Norouzi

The Feasibility Study of Using Microwave Emission in Detecting Drought and Land-Cover/ Land-Use Change Studies

Yanna Chen

Prof. Hamidreza Norouzi

Quantitative Analysis of Generation Processes of Greenhouse Gases Emitted from Landfill Sites Using

Remote Sensing Data

Tiffany Chong

Prof. Masato R. Nakamura

Using Satellite Imagery to Monitor Major Lakes; Case Study: Lake Hamun and Lake Eyre

Rezwon Islam

Prof. Hamidreza Norouzi

Retrieving Vegetation Reflectance at Beltsville Using Photosynthetically Active Radiation (PAR) Sensor and a Spectroradiometer Positioned at an Unmanned Aerial Systems (UAS)

Francois Mertil

Profs. Siwei Li, Ricardo Saika and
Demetrius Venable

An Analytical Study Comparing the Outcomes and Successes of a National Science Foundation Research Experiences for Undergraduates (NSF REU) Program

Ricky Santana

Profs. Reginald Blake and
Janet Liou-Mark

Quantitative Analysis of Generation Processes of Greenhouse Gases Emitted from Landfill Sites Using Remote Sensing Data

Usaama Van

Prof. Masato R. Nakamura

NOYCE EXPLORERS, SCHOLARS, TEACHERS (NEST): FOSTERING THE CREATION OF EXCEPTIONAL MATHEMATICS AND TECHNOLOGY TEACHERS IN NEW YORK CITY

(Grant #1340007)

STEM Teacher Scholarship in NYC

Kendra Guo

Prof. Fangyang Shen

NSF GP-EXTRA: RECRUITING AND RETAINING NON-GEOSCIENCE MINORITY STEM MAJORS FOR THE GEOSCIENCE WORKFORCE

(Grant #1540721)

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

Earthquakes and New York City Buildings

Sara Aslam, Marissa Lyons, and
Kennedy Samarakody

Supervolcanoes: Earth's Most Destructive Force

Maen Caka and Kleber Perez

The Past, Present and Future of Climate Change

Joe Nathan Abellard

Flood Characteristics that are the Most Damaging

Yanna Chen and Charyssa Morgan

Have Hurricanes Become More Threatening over the Years?

Andrew Greaves

THE BLACK MALE INITIATIVE PROGRAM AND P.S. 307

The Five Dancing Spheres

Ramon Romero, Ngima Sherpa
Profs. Diana Samaroo
and Melanie Villatoro
Ms. Servina Narine

U.S. DEPARTMENT OF EDUCATION HSI TITLE V: A LIVING LABORATORY: REVITALIZING GENERAL EDUCATION FOR A 21ST CENTURY COLLEGE OF TECHNOLOGY

(Grant #P031S100159)

The Buzz on the OpenLab Campus Involvement: Assessing Student Engagement on the OpenLab

Jean-Luc Antoine, Amoni Brown,
Pamela Drake, Konyca Francis,
Mandy Mei, Samantha Pezzolanti,
Brianna Vasquez
Prof. Jonas Reitz

PEER LEADER TRAINING The Black Male Initiative, Perkins VTEA, and First Year Programs

Peer Leading Strategies

Carlos Alvarez, Mukadder Cinar,
Ronaldo Carhuaricra,
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Observations from Peer Leaders: The Rhythm of a General Chemistry Team-Learning Workshop

Miguel Gomez, Sarah Hambleton
and Matthew Henning
Prof. Diana Samaroo

NIH BRIDGES TO THE BACCALAUREATE PROGRAM

Associate Provost Pamela Brown
Profs. Liana Tsenova, Nathan Astrof,
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Diana Samaroo, Armando Solis,
Tatiana Voza, and Ms. Lori Younge

Intersections of Identifying Features in Medical Practice: Measurement, Outcomes, and the Role of Feminist Identity

Kimberly-Ann Basdeo
Prof. Amanda Almond

Molecular characterization of black corals (antipatharians) from the Flower Garden Banks National Marine Sanctuary (NW Gulf of Mexico)

Nicole Bellaflores-Mejia
Prof. Mercer Brugler

Effect of Oxidative Stress on Thioredoxin Reductase and Peroxiredoxin mRNA levels in *Tetrahymena thermophila*.

Jules Julienane
Prof. Ralph Alcendor

Understanding VEGF-D and Computationally Designing its Synthetic Mimics

Zelda Nelson
Prof. Mai Zahran

Gender Differences in Vagal Tone Adaptation in an Expressive Writing Paradigm

Saber Venture
Prof. Jean Hillstrom

Use of Immunofluorescence to Identify Markers of Cell Proliferation and Differentiation

Ling Yang
Prof. Andleeb Zameer

U.S. 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
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Case Studies for Peer Leader Training

Carlos Alvarez, Mukadder Cinar
and Mei Zhu
Prof. Janet Liou-Mark



Developing and Delivering Effective Research Presentations

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