

SEMI-ANNUAL



THE HONORS  
— AND —  
UNDERGRADUATE  
RESEARCH SCHOLARS  
POSTER PRESENTATION

WEDNESDAY, MAY 1, 2019

11:00AM - 4:00PM  
LIBRARY BUILDING  
GROUND & FIRST FLOORS

THURSDAY, MAY 2, 2019

10:00AM - 3:00PM  
LIBRARY BUILDING  
GROUND & FIRST FLOORS

AWARDS CEREMONY

BEGINS AT 12:30PM  
LIBRARY BUILDING AMPHITHEATER

The background is a light cream color decorated with various elements: small circles in blue, yellow, red, and light blue; small rectangles in blue, red, and yellow; and two large, irregular, wavy shapes. One shape is a muted blue, located at the top and bottom of the page. The other is a light orange, located on the left side. The text 'TABLE OF CONTENTS' is centered within the top blue shape.

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REGULAR COURSE

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# AWARDS CEREMONY

MAY 2, 2019 · 12:30 PM  
LIBRARY BUILDING AMPHITHEATER

## Greetings

**Russell K. Hotzler**

President

**Bonne August**

Provost and Vice President  
for Academic Affairs

**Pamela Brown**

Associate Provost

## Recognition of Undergraduate Researchers

**Honors Scholars**

Reneta D. Lansiquot

**CUNY Research Scholars**

Hamidreza Norouzi

**Emerging Scholars**

Hamidreza Norouzi

**LSAMP Scholars**

Hamidreza Norouzi

**Grant-Funded Projects**

Jean Hillstrom

**Special Projects**

Jean Hillstrom

## Best Poster Awards

Jean Hillstrom



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Honors Scholars Program Orientation  
February 7, 2019

# HONORS IN A REGULAR COURSE

## How Has Photography Caused Social Reform?

Jefry Aguirre

Prof. Tamsin Green

ARTH 1100: History &

Appreciation of Photography

## What Does It Mean to be Human?

Jefry Aguirre

Prof. Laureen Park

ENG 1773ID: Weird Science

## Body Positivity in the Fashion Industry

Amber Alicea

Prof. Denise Sutton

BUF 1101: Introduction to the

Fashion Industry

## Requirements for the Installation & Implementation of HBase (NoSQL Data Store)

Nahid Arman

Prof. Elizabeth Milonas

CST 4724: Data on the Web

## Comparison of Relational & Non-Relational Structures

Nahid Arman

Prof. Elizabeth Milonas

CST 4724: Data on the Web

## Hurricanes: Predication, Warning & Consequences

Ilhom Bakiyev

Profs. Vitaliy Dorogan & Howard Sisco

PHYS 1433: General Physics I Lab

## **Implication of the Impact of Local Weather on Heat Losses through Building Entrance Doors**

Jelani Barro

Prof. Mahbub Chowdhury

FMGT 4850: Mechanical Systems

Operation/Maintenance II

## **How Psoriasis can Limit your Quality of Life**

Afsana Begum

Prof. Niloufar Haque

BIO 2311: Human Anatomy &

Physiology I Lab

## **Kodi Media Center**

Sajal Bhargava

Prof. Mark Nelson

CET 4811: Capstone Design Project

## **Hurricanes: Predication, Warning & Consequences**

Christina Bhawanidin

Profs. Zheng Zhu & Howard Sisco

COM 1332: Introduction to

Human Communication

## **What Does It Mean to be Human?**

Wesley Brown

Prof. Laureen Park

ENG 1773ID: Weird Science

## **Hyperbolic Functions**

Adam Cancel

Prof. Joel Greenstein

MAT 1475: Calculus I

## **The Impact of Technology on the Paralegal & Legal Professions**

Marisol Correa

Prof. Marissa Moran

LAW 4704: Legal Technology

## **What Does It Mean to be Human?**

Savan De Jesus

Prof. Laureen Park

ENG 1773ID: Weird Science

## Analysis of the Effects of Online Homework on Student Performance in College Algebra & Trigonometry

Meryem El Baz

Prof. Boyan Kostadinov

MAT 4788: Financial Risk Modeling

## Experimental Learning in Beverage Production

Bannesa Espinal Cruz

Prof. Karen Goodlad

HMGT 2402: Wines &

Beverage Management

## Real-World Applications of Precalculus: Nuclear Half-Life & Carbon-14 Dating

Patrick Garana

Prof. Suman Ganguli

MAT 1375: Precalculus

## Cube Stacking Problem

Saugat Ghimire

Prof. Satyanand Singh

MAT 2540: Discrete Structure II

## Analyzing Exponential Models of US Population Growth

Enrique Gomes

Prof. Suman Ganguli

MAT 1375: Precalculus

## Unaffordable Healthcare Crisis

Mehrab Hossain

Prof. Niloufar Haque

BIO 2311: Human Anatomy &

Physiology I Lab





## Earth's Holistic "Pharmacy"

Kristine Jallim

Prof. Niloufar Haque

BIO 2311: Human Anatomy &  
Physiology I Lab

## Analysis of the Effects of Online Homework on Student Performance in College Algebra & Trigonometry

Dahiana Jimenez

Prof. Boyan Kostadinov

MAT 4788: Financial Risk Modeling

## How a Growing Aging Population is being Affected by the Lack of Geriatricians

Estarlin Jimenez

Prof. Daniel Boudon

SOC 1101: Elements of Sociology

## Analysis of the Effects of Online Homework on Student Performance in College Algebra & Trigonometry

Gabrielle Langston

Prof. Boyan Kostadinov

MAT 4788: Financial Risk Modeling

## Designing a Brief Survey & Analysis of Undergraduate Research at City Tech

Stephanie Lovett

Prof. Lin Zhou

MAT 2572: Mathematical Statistics I

## Resilient & Sustainable Kalinago

Elena Malysheva

Prof. Illya Azaroff

ARCH 3551: Sustainability:  
History & Practice

## A Virtual Future World

Aleann McIntyre

Prof. Laureen Park

ENG 1773ID: Weird Science

## Virtual Reality: Redefining Humanity

Danielle Mclean

Prof. Laureen Park

ENG 1773ID: Weird Science

## Cellular & Hormonal Changes on Long Term High-Fat Diet Exposure in Mice

Bushra Miah

Prof. Alberto Martinez

CHEM 1210: General Chemistry II

## Poster Board for 3D Unity Project

Joshua Neuman

Prof. Laureen Park

ENG 1773ID: Weird Science

## Cellular & Hormonal Changes on Long Term High-Fat Diet Exposure in Mice

Viktoriia Olshana

Prof. Isaac Barjis

BIO 3524: Nutrition

## What Does It Mean to be Human?

Natasha Phillips

Prof. Laureen Park

ENG 1773ID: Weird Science

## How Gender Diversity & Racial Issues Affect The Legal Profession

Juwanie Piquant

Prof. Jerome Greenberg

LAW 1201: Legal Research I

## Prosthetic Hand Using Gear System

Olivert Saldivia

Prof. Andy Zhang

MECH 3510: Advanced Solid Modeling II

## Effects of the Cold War on Cuba

Tracey Scott

Prof. Kyle Cuordileone

HIS 3402ID: Topics in Modern

World History since 1945

## Cube Stacking Problem

Ibrahima Sow

Prof. Satyanand Singh

MAT 2540: Discrete Structure II



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Cultivating Fine Dining Etiquette  
March 11, 2019

## **Cross Laminated Timber (CLT), The Silent Material Competing in the High Rise Building Race**

Sebastian Tamayo

Prof. Sigurd Stegmaier

CMCE 1114: Materials & Methods of  
Construction I

## **Hostile Work Environment**

Cheryl Thomas

Prof. Ikiesha Al-Shabazz

LAW 3604: Employment Labor Law

# CUNY RESEARCH SCHOLARS

## **Schematic/3D Printing of Bluetooth Speaker**

Adewale Adegbemigun  
Prof. Sebastian Morales

## **Semi Classical Motion of Quantum Particles in One Dimension**

Carlos Aguayza  
Prof. Boris Gelman

## **Study of Jansen Linkage for Robotic Applications**

Rafaela Alba  
Prof. Angran Xiao

## **Comparison of the Indoor Thermal Environment in A Lobby in Two Campus Buildings**

Fuxin Bao  
Prof. Daeho Kang

## **3D Printed Computer Circuits**

Sultana Begum  
Prof. Farrukh Zia

## **Comparison of the Environment in a Lobby in Two Campus Buildings**

Adam Brzozowski  
Prof. Daeho Kang

## **Impact of Sea Waves on the Coast of New York**

Bill Chinskul  
Prof. Geralda Shields

## **Entertainment Connection**

Angel De La Vega  
Prof. Tamrah Cunningham

## Voice Controlled Augmented Reality

Juan Estrella  
Prof. Benito Mendoza

## Mechanical Characterization of Nano-material Doped Polydimethylsiloxane (PDMS)

Deldrys Gomez Reynoso  
Prof. Ozlem Yasar

## Entertainment Connection

Conny Gordon  
Prof. Tamrah Cunningham

## A Comparative Study of Incidence of Domestic Violence between Immigrant & Non-immigrant Women in USA

Nadia Gordon  
Prof. Urmi Gosh-Dastidar

## Pitch Labelling of Corpus of Guitar Sounds For Training a Neural Net Pitch Classifier

Arash Izadi  
Prof. Adam Wilson

## Gut Microbiome Analysis

Daniella Labarbera  
Prof. Jeremy Seto

## Degradation Rate Calculations of PEGDA

Mitchell Landero  
Prof. Ozlem Yasar

## RoboQueen 3D

Jensy Maldonado  
Prof. Farrukh Zia

## Stock Market Prediction with Neural Network

Dominika Markowska-Desvallons  
Prof. Marcos Pinto

## Advanced Composites for Structural & Biomedical Applications

Saminur Miah  
Prof. Akm S. Rahman

## Environmental & Energy Sustainable City

Patrice Prosper  
Prof. Masato Nakamura

## **Smart Sprinkler System**

Galib Rahman  
Prof. Xiaohai Li

## **Comparison of the Indoor Thermal Environment in A Lobby in Two Campus Buildings**

Raymond Sandoval  
Prof. Daeho Kang

## **Interchangeable All Fiber-Based Passive VOA/VOC System**

Andrei Statchevschi  
Prof. Muhammad Ummy

## **Design & Fabrication of UV Light Holder for Photolithography**

Szewai Michael Tang  
Prof. Ozlem Yasar

## **Building Occupancy & Environment Monitoring System**

Syeda Tonni  
Prof. Farrukh Zia

## **Entertainment Connection**

Edsel Torres  
Prof. Tamrah Cunningham

## **Remote Control Car**

Fox Williams  
Prof. Zhou Zhang

## **Solar Responsive Facade in an Urban Environment**

Cheriyah Wilmot  
Prof. Phillip Ross Anzalone

## **Kinetic Study of Amine Cured Epoxy Resins**

Xiaona Zhou  
Prof. Urmi Ghosh-Dastidar

# EMERGING SCHOLARS

## Assessing Participants' Feedback to Dental Hygiene Care provided by New York City College of Technology Dental Hygiene Students

Nazrin Akbarova  
Prof. Susan Davide

## Exploration of the Lessons Learned by Students Attending Peer-led Workshops

Fahmida Akhter  
Profs. Armando Cosme & Nadia Kennedy

## The Feasibility of Augmented Reality in Modern Society

Haddi Al Jazzaf  
Prof. Marcos Pinto

## Interaction of Ionophoric Popyphenols with DNA by Fluorescence & UV-Visible Spectroscopies

Yaa Andoh  
Prof. Alberto Martinez



## **Data Analysis & Visualization of Heart Disease Patient Data**

Afis Animashaun  
Prof. Boyan Kostadinov

## **Light Animations Using Arduino & MATLAB**

Rabia Arif  
Prof. Farrukh Zia

## **The City Performs: A GIS History of NYC Theater**

Diego Atauchi  
Prof. Christopher Swift

## **Cellular & Hormonal Changes on Long Term High-fat Diet Exposure in Mice**

Ilhom Bakiyev  
Prof. Sanjoy Chakraborty

## **Comparison of the Indoor Thermal Environment in A Lobby in Two Campus Buildings**

Jelani Barro  
Prof. Daeho Kang

## **Genetic Diversity of Local Canines Assessed by Derived Cleaved Amplified Polymorphic Sequences**

Nicole Benmoshe  
Prof. Jeremy Seto

## **The Psychology of Hurricane Warnings: Why are they sometimes ignored?**

Christina Bhawanidin  
Prof. Howard Sisco

## **Wonder Woman Warbringer**

Julie Bradford  
Prof. Sara Woolley

## **Motion UI – A Web Development Trend That Is Here To Stay**

Adderly Brito  
Prof. Marcos Pinto

## **What is Celiac Disease & how is it Affected by Gluten Free Diet?**

Stephanie Cabrera  
Prof. Liana Tsenova



## **Web Application for a Daily Payment Labor**

Marlon Cameron  
Prof. Marcos Pinto

## **Fortifying Lower Manhattan's Shoreline**

Krystel Campuzano  
Prof. Elizabeth Parks

## **Differential Effect of High Fat Diet (HFD) in Male & Female Mice**

Travis Caraballo  
Prof. Sanjoy Chakraborty

## **Modular Lithium Ion Battery Pack from Recycled 18650 Cells**

Mason Chen  
Prof. Angran Xiao

## **Peer-Leaders' Learning: Is there a difference Between what new & experienced Peer-Leaders learn from group facilitation?**

Ryan Chen  
Profs. Armando Cosme & Nadia Kennedy

## **3D Printed Smart Mobile Robot**

Bingfang Chen  
Prof. Farrukh Zia

## **Enhanced Security System with Image Feature Identification**

Musharrat Chowdhury  
Prof. Farrukh Zia

## **3D Structures of Biological Nature**

Daniel Conners  
Prof. Tatiana Voza

## **The Impact of Technology on the Paralegal & Legal Profession**

Marisol Correa  
Prof. Marissa Moran

## **Know Your Body**

Maria De Leon  
Prof. Niloufar Haque

## **Hiding in the Light: An Investigation of Galactic Halos**

Ana Maria Delgado  
Prof. Ari Maller

## 5G Technology/Network

Ahmed Dembele  
Prof. Asm Delowar Hossain

## Comparison of the Indoor Thermal Environment in A Lobby in Two Campus Buildings

Demba Diop  
Prof. Daeho Kang

## Effects of Oxidative Stress on Sirtuin, Tetrahymena Thermophila

Emmanuel Dubuisson  
Prof. Ralph Alcendor

## Data Analysis & Visualization of Traffic Mortality in the USA

Meryem El Baz  
Prof. Boyan Kostadinov

## Redefining Gender in Classroom Discussions

Eleazer Espinosa Jr  
Prof. Alyssa Dana Adomaitis

## The City Performs: A GIS History of NYC Theater

Solange Falla Crespo  
Prof. Christopher Swift

## The Effect of Urban Island on Society

Tameeka Forbes  
Prof. Hamidreza Norouzi

## Works in Process - Scholar Edition

Pablo Galindo Aragon  
Prof. George Garrastegui

## A Cube Stacking Problem

Saugat Ghimire  
Prof. Satyanand Singh

## Research on Optimization of Faculty Office Hours

Edgar Gomez  
Prof. Pamela Brown

## Assessment of Two Year Study of Cultural Competence Among Healthcare Students

Tetiana Grygoruk  
Prof. Zoya Vinokur



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Developing and Delivering Effective Research Presentations  
March 28, 2019

## **Motion UI – A Web Development Trend That Is Here To Stay**

Christopher Guzowski  
Prof. Marcos Pinto

## **Software Application - Light Emitting Diodes**

Liqi Haq  
Prof. Farrukh Zia

## **Assessment of Two Year Study of Cultural Competence Among Healthcare Students**

Fahameda Hassan  
Prof. Zoya Vinokur

## **Double Blind Professional Live Sound Console Listening Test**

Boaz He  
Prof. John Huntington

## **Implementation of Sensors in an Assistive Technology Robot**

Jannat Hoque  
Prof. Farrukh Zia

## **Life Saving Human Detector**

Abid Hossain  
Prof. Ohbong Kwon

## **Understanding Water Consumption & Energy Trends in New York City**

Wen Yong Huang  
Prof. Johann A. Thiel

## **Understanding the Impact of Peer-Led Workshops on Student Learning**

Afolabi Ibitoye  
Prof. Armando Cosme & Nadia Kennedy

## **The Impact of Peer-Led Workshops in an Intermediate Algebra Course for Women, Minorities & First-Generation College Students**

Malika Ikramova  
Prof. Janet Liou-Mark

## **Injection Molding Using 3D Printed Molds**

Gavriel Ilyayev  
Prof. Angran Xiao

## **Motion Sensing Wearable Technology**

Jennifer Islam  
Prof. Farrukh Zia

## **IOT**

Ayesha Javed  
Prof. Farrukh Zia

## **Data Analysis & Visualization of Heart Disease Patient Data**

Dahiana Jimenez  
Profs. Boyan Kostadinov &  
Kenneth Parker

## **Using READ Strategies (Reading Effectively Across Disciplines) to Enhance Student Learning**

Nevila Kica  
Prof. Michael Gotesman

## **Thermally Active Wall Prototype Development For Building Energy Efficiency**

Leona Ko  
Prof. Jihun Kim

## **Mechanical & Thermal Properties of Poly Lactic Acid (PLA) Nanofibers with the Reinforcement of Thermoplastic Nanofiber**

Khristian Lang  
Prof. Akm S. Rahman

## **Mathematical Art Visualizations**

Gabrielle Langston  
Prof. Boyan Kostadinov

## **Assessment of Two Year Study of Cultural Competence Among Healthcare Students**

Mary Lee  
Prof. Zoya Vinokur

## **Hardware Implementation of an Assistive Technology Mobile Robot**

Joycephine Li  
Prof. Farrukh Zia

## **Waste to Energy: Eco Composter**

Xiao Lin  
Prof. Masato Nakamura

## **Building Facades: Their Benefits to the Environment & Their Stakeholders**

Florence Litchmore-Smith  
Prof. Phillip Ross Anzalone

## **A Web Application that Implements Event Handlers in a Custom Directive**

Janet Llinas  
Prof. Marcos Pinto

## **Assessment of Two Year Study of Cultural Competence Among Healthcare Students**

Teresa Lok  
Prof. Zoya Vinokur

## **Designing a Brief Survey & Analysis of Undergraduate Research at City Tech**

Stephanie Lovett  
Prof. Lin Zhou

## **The Role of Sirtuins in T. Thermophila**

Christopher Magloire  
Prof. Ralph Alcendor

## **Software Implementation of an Assistive Technology Robot**

Jannatul Mahdi  
Prof. Farrukh Zia

## **Resilient & Sustainable Kalinago**

Elena Malysheva  
Prof. Illya Azaroff

## **Penn Station Virtual Reality Experience**

Lenny Marin  
Prof. Esteban Beita

## **Students' Perceptions of the Impact of Peer-led Workshops on their Team-working & Problem Solving Skills**

David Mastalerz  
Profs. Armando Cosme & Nadia Kennedy

## The Role of Calpains in *T. Thermophila*

Nakasie Matthews  
Prof. Ralph Alcendor

## Fortifying Lower Manhattan's Shoreline

Mathlyn Mckie  
Prof. Elizabeth Parks

## Cellular & Hormonal Changes on Long-Term High-Fat Diet Exposure in Mice

Bushra Miah  
Prof. Sanjoy Chakraborty

## Brush Bots

Jane Morales  
Prof. Farrukh Zia

## Student Perspective on Enjoyment in Mathematics Classes

Miralia Moreau  
Prof. Nadia Kennedy

## Measuring Health Behaviors on Diverse Samples: Exploring & Confirming Factorial Structure of Decisional Balance Scale

Trianna Nunes  
Prof. Amanda Almond

## The Incredible Carry Buddy

Patrick Older  
Prof. Angran Xiao

## Cellular & Hormonal Changes on Long Term High-Fat Diet Exposure in Mice

Viktoriia Olshana  
Prof. Sanjoy Chakraborty



## **Perovskite Solar Cells**

Bryan Ortiz  
Prof. Masato Nakamura

## **Using Various Bioinformatic Tools to Analyze Sequences to Determine Speciation**

Eric Park  
Prof. Christopher Blair

## **What is Celiac Disease & how is it Affected by Gluten Free Diet?**

Eugenia Pierre  
Prof. Liana Tsenova

## **Effects of Tetrodotoxin Concentration on Action Potential: a Computational Study**

Shaina Raklyar  
Prof. German Kolmakov

## **Titanium Dioxide Sensitized with Porphyrin Dye as a Photocatalyst for the Degradation of Water Pollutants**

Kevin Reyes  
Prof. Ivana Jovanovic

## **Geometry Expresses its Designs on Art & Architecture**

Evelyn Richardson  
Prof. Anne Leonhardt

## **City Tech Talk & Roll Bot**

Samiha Riham  
Prof. Farrukh Zia

## **Research on Optimization of Faculty Office Hours**

Andre Rodriguez  
Prof. Pamela Brown

## **Motion Sensing Wearable Technology**

Caroline Rodriguez  
Prof. Farrukh Zia

## **A Smart Robot for a Smart Home**

Pratima Roy  
Prof. Farrukh Zia

## **The City Performs: A GIS History of NYC Theater**

Freddy Ruiz  
Prof. Christopher Swift

**Assessing Participants' Feedback to  
Dental Hygiene Care provided by  
New York City College of Technology  
Dental Hygiene Students**

Dirien Santos  
Prof. Susan Davide

**Solar & Rain Catching Canopy**

Subhra Sen  
Prof. Alexander Aptekar

**Cultural Competence:  
Issues & Benefits in Healthcare Delivery**

Amina Shahbaz  
Prof. Zoya Vinokur

**Hardware Application - Light Emitting Diodes**

Lubna Sharmin  
Prof. Farrukh Zia

**Implementing READ in the Classroom  
(Reading Effectively Across Disciplines)**

Anisa Shkembi  
Prof. Michael Gotesman

**IoT Home Automation Security System -  
Software Implementation**

Arooba Sohail  
Prof. Farrukh Zia

**Student Perspective on  
Enjoyment in Mathematics Classes**

Yasmine Soofi  
Prof. Nadia Kennedy

**The City Performs:  
A GIS History of NYC Theater**

Mohamed Soofi  
Prof. Christopher Swift

**A Cube Stacking Problem**

Ibrahima Sow  
Prof. Satyanand Singh

**Artificial Intelligence Techniques in  
Analyzing Stroke Victim Data**

Kateryna Strokach  
Prof. Joanne Esther Weinreb



## **Design & Prototyping of a Robot that Follows**

Joyce Tam  
Prof. Angran Xiao

## **Remote Sensing + ATF**

Luc Telemaque  
Prof. Viviana Vladutescu

## **Water, Race, & Class III**

Jean-Hus Theodore  
Prof. Aida Egues

## **Assessing Participants' Feedback to Dental Hygiene Care provided by New York City College of Technology Dental Hygiene Students**

Roseanna Torres  
Prof. Susan Davide

## **Sustainable & Resilient Kalinago**

Yesenia Ward  
Prof. Illya Azaroff

## **Kinetic Study of Amine Cured Epoxy Resins**

Xiaolan Wu  
Prof. Diana Samaroo

## **Assessment of Two Year Study of Cultural Competence Among Healthcare Students**

Tiffany Yip  
Prof. Zoya Vinokur

## **Modeling Changes in Cellular Micro-Environment in Mild to Moderate Head Trauma**

XiangFu Zhang  
Prof. Subhendra Sarkar

## **Simulation as a Predictor in Probability**

Xiaona Zhou  
Prof. Satyanand Singh

# GRANT- FUNDED PROJECTS

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

Program Coordinator:  
Ms. Ericka Saldana

### **The Effect of Air Quality on Humans: Asthma**

Kiyatou Konate  
Prof. Lisa Pope Fischer

### **An Anthropological Study of Globalization: McDonaldization, Glocalization, Power & Resistance**

Sumya Raha  
Prof. Lisa Pope Fischer

### **Anthropological Study of Social Media: Snapchat's Dictatorship**

Ida Touray  
Prof. Lisa Pope Fischer

### **Environment Mapping Robot**

Caren Yang  
Prof. Farrukh Zia

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

(NSF REU Grant # 1560050)

Profs. Reginald Blake & Janet Liou-Mark,  
Ms. Julia Rivera

**Investigating Seasonality in Forecast Bias**

Adrian Barros

**Effect of Extreme Weather Disasters on  
Global Rice Production**

Thierno Barry

**Signals in Urban Soil**

Fatimata Dia

**The Dionysus Project:  
Classifying & Monitoring Vineyards with  
Satellite Remote Sensing & Image Analysis**

Nicole Flores

**Building Integrated Photovoltaic Panels to  
Reduce & Meet the Cooling Load for  
Tropical-Coastal Cities**

Juan Garcia

**Analysis of Urban Surface Temperature  
Using Satellite Remote Sensing &  
In-Situ Applications**

Justine Ginchereau

**Geolocation Correction of  
Satellite Precipitation Estimates using a  
Radar-Gauge Product**

Edgar Gomez

**Analysis of Freeze & Thaw Dates over  
Glaciers in High Mountain Asia using  
Satellite Remote Sensing**

Khaing Hsu Wai

**Catchment-Scale Storm Orientations &  
Rainfall Patterns in the Missouri River Basin**

Mohamed Layachi

**Influence of Extreme Weather Disasters on  
Maize across the Globe during the  
Last Several Decades**

Benjamin Pascal

**The Dionysus Project:  
Classifying & Monitoring Vineyards with  
Satellite Remote Sensing & Image Analysis**

Evelin Perez-Flores

**Observation of Aerosols &  
Characterizing Planetary Boundary Layer  
Using Ceilometers & LIDAR's**

Akash Persaud

**Impact of Extreme Climate Change on Crops**

Sharib Rizvi

**Geolocation Correction of  
Satellite Precipitation Estimates using a  
Radar-Gauge Product**

Andre Rodriguez

**Detecting Ozone at the Earth's Surface in the  
New England Region**

Shawn Telesford

**Analysis of Urban Surface Temperature  
Using Satellite Remote Sensing &  
In-Situ Applications**

Makini Valentine

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

(NSF IUSE GEO Grant # 1540721)

Profs. Reginald Blake, Janet Liou-Mark,  
Masato Nakamura, Hamidreza Norouzi,  
Dereck Skeete, Viviana Vladutescu, &  
Ms. Julia Rivera & Laura Yuen-Lau

**Analysis of Surface Temperature Trends of  
World's Major Lakes & Relationships with  
Their Basins' Characteristics**

Jelani Barro, Patrice Prosper,  
Jimmol Singh  
Prof. Hamidreza Norouzi

**Analysis of Surface Temperature Trends of  
World's Major Lakes & Relationships with  
Their Basins' Characteristics**

Ronaldo Carhuarica  
Profs. Reginald Blake &  
Hamidreza Norouzi

## **Analysis of Urban Surface Temperatures Using Remote Sensing & Ground Based Applications**

Jonathan Chea, Leonardo Ramos  
Prof. Hamidreza Norouzi

## **Analysis of Urban Heat Islands with Air Flow Simulation**

Xiao Lin, Timothy Medina, Carlos Villalva  
Prof. Masato Nakamura

## **Assessing Urban Drinking Water using (ICP-MS)**

Abel Urgiles, Tezel Yearwood  
Prof. Dereck Skeete

## **NATIONAL INSTITUTES OF HEALTH: BRIDGES TO THE BACCALAUREATE PROGRAM**

(NIH Grant # 5R25GM102793-05)

Associate Provost Pamela Brown  
Profs. Liana Tsenova, Pa Her,  
Jean Hillstrom, Janet Liou-Mark,  
Diana Samaroo, Armando Solis,  
Tatiana Voza

## **Undergraduate Narratives of Traumatic Experiences: Exploring Meaning-making & Emotions in a Diverse Urban College Setting**

Justin Cantor, Yamilet Cruz,  
Destiny Mercado,  
Khandaker Rishalatullah  
Prof. Pa Her

## **Exercise, Smoking, & Weight Maintenance: Exploring & Confirming Factoral Structure of Decisional Balance Measures on Diverse Samples**

Mariam Kamara  
Prof. Amanda Almond

## **Sequencing & Barcoding of DNA Extracted From the Scales of Phataginus Tricuspis from Nigerian Locations**

Samantha Lee  
Prof. Olufemi Sodeinde

# SPECIAL PROJECTS

## **Culinary/Pastry Future Innovators – Engaging Tomorrow’s Leaders for the Hospitality Industry Through Development & Exhibition of Creative Works**

Sharleen Cardenas, Amber Furey-Lessen,  
Carina Reyes-Gonzalez, Jennifer Lara,  
Amy Lin, Aquille Pierre, David Rivera

Culinary Pastry Innovators (Spring 2019)  
Prof. Robert Walljasper

Department of Hospitality Management

### **ABSTRACT:**

Experiential, goal-oriented student learning can greatly boost connections between classroom knowledge, professional growth and creativity. The use of tiered-level mentoring as part of preparation for Culinary/Pastry competition—sanctioned by the American Culinary Federation, the leading national professional chefs organization—can increase student engagement, improve their creativity, and test their critical thinking skills. Weekly communication with mentors and their instructor, as well as guided hands-on practice generate several assessment opportunities prior to public exhibition of their creative works. Students develop action plans to respond to the judging criteria.

Industry experts and certified judges adjudicate students’ gastronomic creations. Students who plan, participate, and reflect on their learning appear more confident and able to enhance their academic studies, as well as develop their professional demeanor.



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Culinary Pastry Innovators: Innovators and Assistants  
Returning After Exhibiting Creative Works  
April 13, 2019

## **PHYS 1010ID: Science in the Kitchen**

Prof. Laina Karthikeyan

Prof. Robert Walljasper

Departments of Biological Sciences &  
Hospitality Management

### **ABSTRACT:**

This Interdisciplinary (ID) course explores scientific concepts behind every day culinary processes in the kitchen. In small groups, students research, develop and discover the implications & applications of science to the dinner table. Course content is designed around food, cooking and the biological basis to explain what happens in the kitchen. For this research project, teams were asked to identify connections between biology and culinary arts, apply theory and discover practical applications through experimentation.

### **Egg Properties & Cooking Applications**

Michelle Chen, Mohammad Raihan,  
Edson Santos

### **Sous Vide Origins & Practical Applications**

Kristine Ann Balubar, Chinelle Ann Hooper,  
Gabriela Rosa

### **Culinary Preservation & Traditions**

Trinidad Difo, Cei Kar Ng Wu, Tony Yu

### **Salt Varieties & Culinary Implications**

Jonathan Jimenez, Destiny Rivera,  
Azadeh Sarjoughian

### **Cheese Transformation with Application of Heat**

Safayethur Chowdhury, William Rodriguez,  
Youry Valcin

## CMCE 2454: Applied Hydraulics

Prof. Robin Sanchez

Department of Construction Management  
& Civil Engineering Technology

### ABSTRACT:

The Applied Hydraulics course highlights the principles of water supply and sewerage collection and treatment, with an emphasis on NYC's water supply and wastewater treatment systems. For this class project, groups were asked to research and address the essential question: How can New York City's water infrastructure be improved?

### City of Dreams & Overflow

Ryan Etwaroo, Nfamory Kaba,  
Sik Fun Alex Ng, Mohammad Tous

### The Modernization of Wastewater Treatment in NYC

Jonathan Castellanos, Nixon Gaston,  
Ted Louis, Valentin Ramirez

### New York City's Delaware Aqueduct Reconstruction & Water Supply

Anabel Emile, Kareem Jackson,  
Mohamed Mousa, Makini Valentine

### Drinking Water Quality of NYC Schools

Maya Fidelia, Said Kasimov,  
Zachary Niles, Abdullah Zafar





## **Effects of Stormwater on NYC's Sewer System**

Nour Elbroul, Austin Govindu,  
Ivan Molina, Ridwan Samad

## **Managing & Disposing of Household Chemicals to Protect Water Quality**

Anton Ambrosov, Nohelia Franceschi,  
Marco Leung, Joel Quispe

## **How Methane Gas is a Product of Sludge Through the Wastewater Treatment Process**

Bill Chinskul, Bryan Gonzalez,  
Michael Mohammed, Carlos Rondon

# NOTES

# NOTES

## THE 30TH SEMI-ANNUAL HONORS & UNDERGRADUATE RESEARCH POSTER PRESENTATION

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

### SPECIAL THANKS TO

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Ms. Ericka Saldana  
Dean David Smith  
Mr. Lubosh Stepanek  
Mr. David Turkiew  
Dean Justin Vazquez-Poritz  
Ms. Laura Yuen-Lau

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NEW YORK CITY COLLEGE OF TECHNOLOGY