

**39<sup>th</sup> semi annual  
Dr. Janet Liou Mark**



**HONORS &  
UNDERGRADUATE  
2023**

**Research Scholars Poster Presentation**

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**Wednesday, December 6**

Poster Presentation  
(Poster Judging)  
10:00am - 4:00pm  
Academic Complex Lobby

**Thursday, December 7**

Poster Presentation  
(Award Ceremony)  
12:45pm - 2:15pm  
Amphitheater LG30



Organized by City Tech's  
Honors Scholars program



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# GREETINGS

## **Russell K. Hotzler**

President

## **Pamela Brown**

Provost & Vice President for  
Academic Affairs

## **Reginald A. Blake**

Associate Provost and Dean of  
Curriculum and Research

## **Recognition of Undergraduate Researchers**

### **Honors Scholars**

#### **Reneta D. Lansiquot**

Director of the Honors Scholars Program

### **CUNY Research Scholars & Louis Stokes Alliances for Minority Participation**

#### **Hamidreza Norouzi**

Director of Undergraduate Research

### **Emerging Scholars**

#### **Hamidreza Norouzi**

### **Interdisciplinary Projects**

#### **Reneta D. Lansiquot**

Founding Chair of the  
Interdisciplinary Committee

## **Best Poster Awards**

### **Amanda Almond**

Assistant Director of the  
Honors Scholars Program



# HONORS IN A REGULAR COURSE



## **PCT and MRI Contrast Media Safety revisited in 2023. "Are the contrast safe to use as we know now?"**

Viktoria Dubrinskaya, Jessica Leppla ,  
& Ralph Lauren Ocampo  
Prof. Subhendra Sarkar  
[RAD 3726: Advanced Medical Imaging](#)

## **A Glimpse Into Mimar Sinan's Life**

Aleēsha Hafeez  
Prof. Cathy Santore  
[ARTH 1101: History of Art: Prehistoric to Gothic](#)

## **Code to Combustion: CNC rotor replication using CAM**

Luis Luna  
Prof. Zayed Saleh  
[MECH 1201: Computer-Aided Manufacturing Systems](#)

## **Exploration of the Statistical Distribution**

Daohong Qiu  
Prof. Satyanand Singh  
[MAT 2572: Probability and Mathematical Statistics I](#)

## **Bridging Architecture and video games**

Lenin Melendez  
Prof. Jieun Yang  
[ARCH 2412: Architectural Design 4](#)

## **Using Communication to Correct Healthcare Inequity**

Maya Seaforth  
Prof. Jaclyn Griffith  
[COM 1403: Communication in Healthcare Professions](#)

## **Reducing Carbon Emissions by using sustainable building materials**

Nick Antoine  
Prof. Alexander Aptekar  
[ARCH 2331: Building Technology 2](#)

## **Arduino Bluetooth Remote Control Car**

Abraham Orell Moses  
Prof. Farrukh Zia  
[CET481I: Capstone Design Project](#)

## **3D Statically Determine Analysis of a Structure**

Layla Taffurelli  
Prof. Ivan Guzman  
[CMCE 1115: Statics](#)

## **Biophilic Aspects of Japanese Architecture**

Mohammad Mostafa  
Prof. Esteban Beit  
[ARCH 3622: Japanese Architecture](#)

## **Second Story House Extension**

Aqil Ahmed  
Prof. Cesar Salazar  
[CMCE 2410: Construction Drawings III \(CAD\)](#)

## **SPECIAL PROJECTS**

[Environmental Stewardship Service Learning Project: Volunteerism and Coping with Ecoanxiety](#)  
Shennette Lewis, Hannah Matias,  
& Raneem Mohamed  
Prof. Amanda Almond

**CUNY RESEARCH  
SCHOLARS  
PROGRAM (CRSP)  
& LOUIS STOKES  
ALLIANCES FOR  
MINORITY  
PARTICIPATION  
(LSAMP)**

**Advancement of the Measurement of the Indoor Environment in Building Entrances**

Abdellah Gessra  
Prof. Daeho Kang

**Does Abnormal Biometal Distribution Cause Protein Misfolding Affecting Neuronal Communication and Neurodegeneration: Modeling and Experimental Correlation**

Achlyn Genao  
Prof. Subhendra Sarkar

**Turntable Theaters in Entertainment**

Amanda Padilla ❖  
Prof. Leah Montesinos

**Polyethylene Glycol Diacrylate Degradation Rate Studies**

Andy Moposita, Arda Taha Battaloglu,  
Destiny Erhunmwunse, Israel Lang,  
& Obinna Jeremy Duru  
Prof. Ozlem Yasar

**Optimized Data Storage Algorithm for IoT Based on Cloud Computing in Distributed Systems**

Arian Berisha  
Prof. Aparicio Carranza

**How Can Technology Reverse Deafness**

Ashanti Belone  
Prof. Farrukh Zia

**The Impact of AI on Healthcare**

Farian Shahzad ❖  
Prof. Muyessser Topcuoglu

**Stresses and Challenges Faced by Radiologic Technology Students in the First and Second Semesters of the Radiologic Technology Program**

Fatima Kassim & Makadeer Kassim  
Prof. Jennett Ingrassia

**Does Abnormal Biometal Distribution Cause Protein Misfolding Affecting Neuronal Communication and Neurodegeneration: Modeling and Experimental Correlation**

Guadalupe Gonzalez-Cesar, & Ishaak Olougodi  
Prof. Subhendra Sarkar

**Hydration and Alkali Halides in Biology-Structure of Water in Proteins Studied by X-Ray**

Jasper Cheung & Somdat Kissoon  
Prof. Subhendra Sarkar

## **Developing a Facial Expression Recognition Application**

Jean Tela ❖  
Prof. Marcos Pinto

## **Moderating Effects of Consumer Traits and Situational Factors of Collaborative Consumption**

Juan Del Pozo Severino  
Prof. Alyssa Dana Adomaitis

## **Cultivating Economic Success: A Comprehensive Analysis of Migrant Training Programs in NYC and Their Economic Implications**

Kazi Tasin  
Prof. Patrick Slattery

## **The Role of Linguistics in Education**

Laiba Zia  
Prof. Lubie Alatraste

## **The Interaction of Age, Psychiatric and Neurologic Disease on Cognitive Functioning**

Lauren Lopez  
Prof. Daniel Capruso

## **Black Representation in Hospitality: Past, Present, and Future**

Lishelle Moore ❖  
Prof. Fatima Kuras

## **Language Bias on College Campus**

Masuma Begum & Sumiya Jahan  
Prof. Lubie Grujicic-Alatraste

## **Deforestation**

Md Uddin  
Prof. Patrick Slattery

## **Enrollment Trends at Public Colleges and Universities in New York State**

Mohammed Nabid ❖  
Prof. Ezra Halleck

## **The Development, History, and Significance of the Tracey Towers**

Mohammed Jalloh  
Prof. Michael Duddy

## **Fraudulent Transaction Detection**

Muhammad Jaffery ❖  
Prof. Patrick Slattery

## **Detecting Parking Lot Availability**

Ousmane Diallo  
Prof. Marcos Pinto

## **The Importance of Vital Signs in Dentistry**

Rebeca Philiias ❖  
Prof. Susan Davide & Anty Lam

## **Should Acetazolamide Be Added to Loop Diuretic Therapy in Patients with Decompensated Heart Failure?**

Simran Puri  
Prof. Vishwas Joshi

## **Brooklyn Pier Concept**

Tyrone Hull  
Prof. Damyanti Radheshwar

# EMERGING SCHOLARS PROGRAM



## Secondary Electrons and Compton X-ray Generation in Solid and Heated Biological Samples in the Presence of Radiologic Contrast Media

Vanessa Robinson  
Prof. Subhendra Sarkar

## The Relationship of Temporal Orientation to Recent and Remote Memory in Patients with Neurologic Disease

Willcare Desmornes ❖  
Prof. Daniel Capruso

## Cloud Computing in the World of Generative AI

Yassine Chahid  
Prof. Patrick Slattery

## Use of Recycled Textile Fabric to Modify Geotechnical Properties of Soil

Yehya Elfgeeh  
Prof. Ivan L. Guzman

## Numerical Calculations of Fully Differential Semileptonic B-quark Decay

Yitao Li  
Prof. Andrea Ferroglia

## The Application and Absence of Aesthetics and Functionality: A Deep Dive into the Utilization of Visuals and Practical Construction of Product Design and the Effects on Consumer Preferabilit

Michael Lester ❖ & Ze Huang ❖  
Prof. Maria Giuliani

## Teaching Children Safety in a Changing World

Abdourahaman Balde  
Prof. Rachel Gertzog

## Home Automation for the Physically Challenged

Afroza Aktar  
Prof. Farrukh Zia

## C2Smarter: Taking on Today's Mobility Challenges to Equitably Reduce Congestion

Aleks Cili ❖, Alexis Torres ❖, Amir Zaman ❖,  
Anissa Ramadini ❖, Jada Carlton ❖,  
& Sandya Persaud ❖  
Prof. Gerarda Shields & Navid Allaverdi

## Mapping the Campus

Alyssa Duran & Yiyi Zhong  
Prof. Anne Leonhardt

## Exploring the Link: A Review of Obesity and Nonalcoholic Fatty Liver Disease

Amal Hizam, Janatul Barsha, Ju Young Park,  
Mariam Otero, & Rosa Quinonez  
Prof. Sanjoy Chakraborty

## Effect of Cinnamon-Spiced Rum on Tetrahymena Thermophila

Ana Muy, Jose Ramon Marte Perez,  
Safia Abdemeziem, & Samar Elkholy  
Prof. Ralph Alcendor

## Deep Learning-Based Detection of Breast Cancer Using Pathology Images

Anastasiya Sytina  
Prof. Pegah Khosravi

## **Urban Tech: Deep Energy Retrofit**

Andrew Aucanzhala ❖, Dahrel Cadore,  
& Kevin Hernandez  
Prof. Kenneth Conzelmann

## **Use of Recycled Textile Fabric to Modify Geotechnical Properties of Soil**

Angelis Almanzar Chevalie ❖ & Calvin Walters ❖  
Prof. Ivan Guzman

## **Does Abnormal Biometal Distribution Cause Protein Misfolding Affecting Neuronal Communication and Neurodegeneration: Modeling and Experimental Correlation**

Anjalee Rabbani & Jakiya Akter  
Prof. Subhendra Sarkar

## **Color Use in Kindergarten Spaces**

Antonio Forbes  
Prof. Elizabeth Parks

## **Can Computer Technology Help Solve Mobility and Congestion Challenges**

Ariana Sampson ❖ & Salma Rivera Ruiz ❖  
Prof. Farrukh Zia

## **Risk Analysis of Windborne Debris in Construction**

Arnaldo Valenzuela  
Prof. Samaneh Gholitaber

## **Employment Restrictions and Psychosocial Distress Among Immigrant Women in the US**

Brian Flores  
Prof. Smita Ekka Dewan

## **AR Scavenger Hunt**

Bryan Estevez  
Prof. Anne Leonhardt

## **Detecting a Parking Lot Availability**

Cesar Santana ❖  
Prof. Marcos Pinto

## **The Role of Epstein-Barr Virus (EBV)- Malaria Coinfections in Promoting Autoimmune Pathologies in Patients**

Charlene Chung  
Prof. Juan Rivera-Correa

## **ARCScholars**

Cheriyah Wilmot, Elijah Walker, Kaylynn Daoud,  
Kevin Valencia, & Sofia Bilbao  
Prof. Naomi Langer-Voss

## **Programming and Control of a ROS-Compatible Mobile Robot**

Christian Rosa  
Prof. Lili Ma

## **Neocolonialism: The Resistance of the African Youth**

Coumba Innah Tall  
Prof. Annie Ngana Mundeke

## **Secondary Electrons and Compton X-Ray Generation in Solid and Heated Biological Samples in the Presence of Radiologic Contrast Media**

Daler Djuraev & Fatima Ahmed  
Prof. Subhendra Sarkar

## **The Processing Method Influence on the Properties of Heat-Activated Denture Base Resins**

Dan Chen  
Prof. Laura Andreescu

## **Characterizing the Filaments of the Cosmic Web Using GAMA and SAMI Galaxies**

Daniel Gallego  
Prof. Daniel Gallego

## **Exploration of the Statistical Distribution**

Daohong Qiu  
Prof. Satyanand Singh

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

Elena Shefsky ❖  
Prof. Christopher Swift

## **Recently Discovered Exotic Hadrons**

Elizabeth Brandwein  
Prof. Boris Gelman

## **Using Graph Theory to Solve Puzzles**

Emmanuel Oitamong ❖, & Jesus Reyes ❖  
Prof. Satyanand Singh

## **Can Cool Cosmic Filaments Protect Galaxies from the Hot Gas in Clusters**

Ena Chia  
Prof. Charlotte Welker

## **Interdisciplinary Information Design Research**

Erickson Diaz  
Prof. Anne Leonhardt

## **Data Science and the Ethics of Pricate Information**

Faria Promi  
Prof. Elizabeth Milonas

## **Assessing the Autoantibody Repertoire During Malaria**

Fariha Choudhury  
Prof. Juan Rivera-Correa

## **Advancement of the Measurement of the Indoor Environment in Building Entrance**

Ferasuddin Siddiqui  
Prof. Daeho Kang

## **Universally Designed**

Husnain Khan  
Prof. Bruce Hannah

## **Gameification's Role in Inquiry-Based Mathematics Classrooms**

Irina Chernyavskiy  
Prof. Jonas Reitz

## **Cultivating Economic Success: A Comprehensive Analysis of Migrant Training Programs in NYC and Their Economic Implications**

Jack Hachicho  
Prof. Patrick Slattery

## **How is AI Influencing Our Generation's' Engagement in Education and Recruitment Systems?**

Jason Lin  
Prof. Patrick Slattery

## **Exploring 19th Century Suspension Bridges**

Jeremiah Reilly  
Prof. Paul King

## **Structural Inequities, Climate Change, and Health Outcomes in Puerto Rico: A Case Study**

Julie Lynch  
Prof. Katherine Gregory

## **Online Class vs. In-person Classes: Why is it Important to Take Classes In Person?**

Junxi Chen  
Prof. Annie Ngana Mundeke

## **Control of the VEX Robots Using Raspberry PI**

Justin Bartholomew  
Prof. Lili Ma

## **Understanding Gender Identity Through Intersectionality Theory**

Karlique Caesar  
Prof. Alyssa Adomaitis

## **The Processing Method Influence on the Properties of Heated-Activated Denture Base Resins**

Kiana Valdez  
Prof. Laura Andreescu

## **Implicit Bias in Healthcare**

Kimora Toussaint  
Prof. Javiela Evangelista

## **Do Cosmic Filaments Protect Galaxies from Gas Stripping in SAMI Clusters?**

Lianys Feliciano  
Prof. Charlotte Welker

## **Study of Viable Hydroponic Plants for Utilization in Culinary Labs at the New York City College of Technology**

Madelyn Kelly  
Prof. Tracy Zimmermann

## **Robotics and Intelligent Systems Lab**

Mamadou Jalloh ❖  
Prof. Xiaohai Li

## **Design and Manufacturing of a Prosthetic Leg Aesthetic Cover**

Maria Hashmi  
Prof. Akm S. Rahman

## **Gendered Immigrant Foodways**

Marian Cepeda  
Prof. Michael Krondl

## **Hydration and Alkali Halides in Biology-Structure of Water in Proteins Studied by X-Ray**

Michael Li  
Prof. Subhendra Sarkar

## **Developing Facial Recognition for Android Mobile**

Mohammed Amin  
Prof. Marcos Pinto

## **Desert-Inspired Biomimetic Bricks**

Mohammad Mostafa  
Prof. Michael Duddy

## **Risk Analysis of Scouring for New York State Bridges Due to Climate Change Impact**

Muhammad Hassan Butt \*  
Prof. Patrick Slattery

## **Smart House Design with Assistive Technology**

Noarin Laima  
Prof. Farrukh Zia

## **Deep Learning Classification of Gastrointestinal Images**

Nora Zougari  
Prof. Pegah Khosravi

## **Generating Energy with Flowing Waterr**

Omar Faruk  
Prof. Akm S. Rahman

## **Health Disparities in the United States at the Intersection of Class and Race**

Patrice Richard  
Prof. Jinwon Kim

## **Using Product Coefficient for Machine Learning in Point Clouds**

Qing Chen  
Prof. Francis Patricia Medina

## **Exploring Parental Communication About Mental Health Within the Chinese Community**

Queenie Chau  
Prof. Kelsey Binion

## **Coastal Shoreline Monitoring Using Urban Landscaping Approach**

Rokhaya Ndiaye  
Prof. Jieun Yang

## **Implementation of AI-assisted Pattern Recognition for Mobile Robots**

Ruyel Rodrigues  
Prof. Lili Ma

## **Assessing the Prevalence of Epstein-Barr Virus (EBV) Co-Infections in P. Vivax Malaria Patients**

Sabrina James  
Prof. Juan Rivera-Correa

## **COVID-19: Biology and General Perspectives**

Sasha Blenman  
Prof. Annie Ngana Mundeke

## **Ethical AI in Criminal Justice**

Silma Khan  
Prof. Elizabeth Milonas

## **Predicting Forest Fires: An Integrated Approach Using Machine Learning and Environmental Data**

Tanvir Rahman  
Prof. Patrick Slattery



### **The Signs and Impacts of Climate Change**

Taspia Sultana  
Prof. Annie Ngana Mundeke

### **Importance of Incorporating Computer Ethics in Computer Curriculum**

Tiya Williams  
Prof. Elizabeth Milonas

### **Energy Harvesting Sensors for Sustainable Air Quality Monitoring**

Tomas Valentin  
Prof. Li Geng

### **A Study on Enhanced Data Security Protocols in Cloud Computing**

Valon Dellovci  
Prof. Patrick Slattery

### **C2Smarter: Connected and Autonomous Mobility**

Vladislav Molchanov \*  
Prof. Gerarda Shields

### **The Benefits of Simulated EHR Case Studies for Undergraduate Students**

Yeshi Dolma  
Prof. Sitaji Gurung

### **NSF REU Grant # 2150432**

Profs. Reginald Blake & Hamidreza Norouzi  
& Ms. Julia Rivera

### **Enhancing Urban Climate Modeling through 3D Quantification of Greenspace using LiDAR and Generative AI**

Ethan Peters  
Profs. Reginald Blake, Hamid Norouzi  
& F. Patricia Medina

### **A Supervised Machine Learning Approach for Determining Air Temperature in Global Urban Areas Using Satellite Land Surface Data**

Taseen Islam, Audrey Lofthouse, Kip Nielsen  
& Shaunak Sharma  
Profs. Ashley Grey, Reginald Blake,  
& Hamid Norouzi

### **Analyzing the Precursors to Tropical Cyclone Activity in the Caribbean and the Main Developing Region Under Climate Change**

Sorbello Melendez & Giovanni Rosario  
Prof. Keneshia Hibbert

### **Analysis of Dissolved Organic Content and Water-Color Trend in the Adirondacks Using Satellite Remote Sensing**

Aisha Malik, Fahmeda Khanom, Touheda Khanom, Charles T. Driscoll, & Kevin C Rose  
Prof. Marzi Azarderakhsh



**INTER-**  
**DISCIPLINARY**  
**PROJECTS**

**Study of Micro Pollution in India**

Yeshi Dolma, Jake Ortiz, Virginia Lima,  
Aishwari Paul, Jai Shah, & Illana Vasquez  
Prof. Brian Vant-Hull

**Weather Analysis and Visualization  
for Everyone**

Charith Jayasekerage & Kestor Todd  
Profs. Richard Rivera & Shakila Merchant

**The Eyes of Demi Darkreed: An  
Accessible Application of Logic**

Daniel Hernandez  
Profs. Tamrah D. Cunningham  
& Reneta D. Lansiquot

**Beyond Syntax: Navigating SQL Queries  
Through Visual Aids**

Kimberly Ramgopal  
Profs. Tamrah D. Cunningham  
& Reneta D. Lansiquot

**Interdisciplinary Information Design  
Research**

Erickson Diaz  
Prof. Anne Leonhardt

**Structural Inequities, Climate Change,  
and Health Outcomes in Puerto Rico:  
A Case Study**

Julie Lynch  
Prof. Katherine Gregor

**Predicting Forest Fires: An Integrated  
Approach Using Machine Learning and  
Environmental Data**

Tanvir Rahman  
Prof. Patrick Slattery

**ENG 1773ID: Weird Science**

Profs. Reneta D. Lansiquot  
& Tamrah D. Cunningham

**Artificial Intelligence: AI Apocalypse**

Neil Duran, Kiara Martinez, & Sandya Persaud

## **Existence: Arms Evolution**

Emmanuel Agyare-Poku, Jay Gurung,  
Qixian Lin, Noelia Lazo, & Umar Mahmoo

## **Urban Farming: EcoGenetics**

Scott Leung, Javier Bonilla Lopez, Julie Lynch,  
& Yusuf Rahman

## **Virtual Identity: Crossroads**

Jacqueline Palacios Aguilar, Divya Kaushal,  
Skilyn Leon, Nieran Peterson,  
& Jasmin De Santiago

## **PHYS 1002ID: An Introduction to the Physics of Natural Disasters**

Prof. Abdou Bah

## **How will implementing 'Green Buildings' as the standard for newly and already built buildings help mitigate climate change?**

Guadalupe Gonzalez, Leron Hinds, Mathew  
Huiracocha, Somdat Kissoon, Richard Rohoman,  
& Shabik Sherchan

## **Hurricane Hilary**

Carrillo Ernesto, Hernandez Mendez Brandon,  
Hewitt Owen, Linden Steven, Melo Alex,  
& Zhao Tianyi

## **Understanding Earthquake Preparedness and Resilience**

Bulan Ozlem, Jimenez Gabriel,  
Krzystyniak Patrick, Melville Christopher,  
Rodriguez Stephanie, Rozario Matthew,  
& Perkins Stephanie

## **Floods in Libya and their Link to Climate Change**

Abbasi Muhammad, Cruz Alexander,  
He Zapata Avar, Koirala Milan,  
& Kuang Raymond

Honors Scholars Program  
**Student Academic Conference**

# Thriving and Surviving in Spaces Not Made for Us: Navigating Being “The First” in All That You Do



**Dr. Catherine Ma**

Professor of Psychology  
Kingsborough Community College

Thursday, December 7  
9:00AM – 12:00PM  
Academic Complex, A-105

“ I TRY TO BE THE PROFESSOR I NEVER HAD. It’s a whole different ballpark when you share that you’ve been where they are, that you understand their unique struggles and what they are going through, and you are here to help students every step of the way. ”



Join Dr. Catherine Ma, the first Chinese full professor of psychology at Kingsborough Community College and the 2022 recipient of the Society of the Psychological Study of Social Issues (SPSSI) Two-Year College Teaching and Mentoring Excellence Award, as she speaks about her experience as an immigrant and first-generation college graduate.



# RESEARCH SCHOLARS POSTER PRESENTATION



**39<sup>th</sup> semi-annual | Dr. Janet Liou-Mark**

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

### Special thanks to:

Prof. Abdou Bah  
Prof. Tamrah D. Cunningham  
Mr. John Momeni  
Ms. Chioma Okoye  
Ms. Julia Rivera  
Ms. Mary Zaradich

### A special thank you to the dedicated poster judges:

Muhammad Awal	Annie Ngana Mundeke
Tamrah D. Cunningham	Marcos Pinto
Susan Davide	Nandi Prince
Katherine Gregory	Lina Romasanta
Nanette Johnson	Alba Rossi-George
Ivana Jovanovic	Satyanand Singh
Eirini Melena Karoutsos	Meagan Sylvester
Lyubava Kroll	Mary Tedeschi
Joseph Luther Jeyaraj	Khrystyna Vyprynyuk
Elizabeth Milonas	Tracy Zimmermann



A special recognition & appreciation to Ms. Or Szyflingier for designing the program.