44TH SEMI-ANNUAL

DR. JANET LIOU-MARK

HONORS SCHOLARS & UNDERGRADUATE RESEARCH CONFERENCE

WEDNESDAY, May 13, 2026

Poster Presentation (Poster Judging)
Academic Complex Lobby • 10AM - 4PM

Honors Scholars Presentation, Day 1
Academic Complex A-105 • 9:30AM - 2:30PM

THURSDAY, May 14, 2026

Honors Scholars Presentations, Day 2
Interdisciplinary Design Game-Based Learning Lab Showcase
Academic Complex A-105 • 9AM - Noon

Conference Award Ceremony
Amphitheater LG-30 • 12:45PM - 2:15PM

In remembrance of

PROF. JANET LIOU-MARK

Greetings

Milton Santiago
Interim President

Pamela Brown
Provost &
Vice President for Academic Affairs

Reginald A. Blake
Associate Provost and
Dean of Curriculum and Research

Recognition of Conference Participants

Honors Scholars
Reneta D. Lansiquot-Panagiotakis
Director of the Honors Scholars Program
Co-Advisor of the National Society of Collegiate Scholars
Co-Director of the Interdisciplinary Design
Game-Based Learning Lab

Undergraduate Research
Hamidreza Norouzi
Co-Director of Undergraduate Research

Diana Samaroo
Co-Director of Undergraduate Research

Grant-Funded Projects
Juila Rivera

Conference Awards
Tamrah D. Cunningham
Assistant Director of the Honors Scholars Program
Co-Advisor of the National Society of Collegiate Scholars
Co-Director of the Interdisciplinary Design
Game-Based Learning Lab

HONORS SCHOLARS PROGRAM

HONORS IN A REGULAR COURSE

3D Printed Portable Automatic Pill Dispenser Version 2

Amber M. Ocasio
Prof. Fernando Hernandez Arias
CET 3525: Electrical Networks

Anticipatory Structures in Continuous Geometry

Cindi Sosa
Prof. Khashayar Koly
ARCH 2381: Structures I

Building an Interactive Photobooth Experience: A Software System Approach

Mirianna Acevedo
Prof. Ossama Elhadary
CST 1215: Operating Systems Fundamentals

Can Construction Be Sustainable and Profitable in New York City? A Comparative Analysis of LEED-Certified Buildings!

Maja Shaqiri
Prof. Pilar Ramirez Prensa
CMCE 2321: Fundamentals of Construction

Deeper Understanding and Rigorous Proofs of Calculus I Concepts

MD Yeasin Sami
Prof. Thomas Johnstone
MAT 1475: Calculus I

Financial Forecast & Cash Flow Model

Kyler Lindo
Prof. Mohand Khoukhi
MECH 4860: Project Management

Evolution of the Art of Photography

Feriyal Khan
Prof. Michael McAuliffe
ARTH 1100: History and Appreciation of Photography

Strategic Marketing Plan for a Hospitality Business

Barbara Suarez
Prof. Amit Mehrotra
HMGT 2405: Hospitality Marketing

Structural Analysis of a Parabolic Arch Under Uniformly Distributed Load

Valeria Daffarra
Prof. Michael Boulis
CMCE 1115: Statics

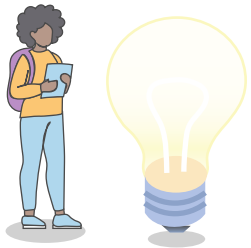
Studying the fate of a NYC discourse community in a gentrifying neighborhood

Feriyal Khan
Prof. Bradley Fox
ENG 1121: English Composition II

Zoning Law Reform & Building Conversions: A Pathway to Housing Affordability

Aaron Muller
Prof. Jeannette Espinoza
LAW 1202: Real Estate Law

The Interdisciplinary Nature of Biotechnology: An Emerging Career Pathway
Organized in collaboration with the Interdisciplinary Committee
March 26, 2026



VOLUNTEERS

American Red Cross

Artur Abramyan, Amanda Acevedo, Oumaima Aitelghachi, Harmony Divine, Joshua Edmond, Victoria Edmond, Marwan Elsayed, Chasity Guerrero, Casandra Hinds, Sirandou Keita-Traore, Diego Lopez Barrientos, Danny Mainato, Casey Mohabir, Dyana Monroy, Sharlene Moses, Candice Neil, Hayli Nieves, Alisha Shahzad, Aryona StCome, Nardia Anglin Taylor, Roberlin Espinal Torres, Jacob Vanegas, WenXiong Zhang

Best Friends Animal Society

Alimary Mejia, Dayana Navarro

FABSCRAB

Aziza Aminjonova

Friendship Circle NYC

Hila Abarzel

New York Academy of Sciences

Parbatti Boodhoo

NASA EXOPLANET WATCH

Mohammed Imad, Eric Palacios, Poonam Siwdat, Jacob Vanegas, Ronny Yeap, Rona Zhang

DNA BARCODING LAB SERIES FOR HONORS SCHOLARS, DNA LEARNING CENTER

Sajid Bhuiyan, Shiou Ching Chen, Shahribonu Djabbarova, Kevin Gadsden, Victoria Gedrich, Cindy Lambert, Hadiza Lamin, Erik Lazo, Jolette Licona Martinez, Osvaldo Perez, Amrisha Persaud, Alexandra Pipta, Kacey Roman, Ariana Sampson, Denis Sokoletskiy, Parviz Subkhankulov, Fatiha Sultana, Lydia Zheng

INTERDISCIPLINARY DESIGN GAME-BASED LEARNING LAB

Drucillia Ralph, Mariamu Bokum, Simon Lin, Samuel Mensah, Ryan Meykler, Evelyn Pulla, Roberlin Espinal Torres

Fifth-Grade Students from Brooklyn Landmark Elementary Visit City Tech for Game-Based Learning Experience
March 6, 2026
September 11, 2025

DNA BARCODING LAB SERIES FOR HONORS SCHOLARS,

DNA LEARNING CENTER

DNA Extraction from Plants
February 19, 2026

Copying the DNA Sequence
March 19, 2026

Sequence Analysis and Species Identification
April 16, 2026

Making the Connection: Aligning Purpose, Audience, and Impact in Your Materials, Cornell University
February 19, 2026

Hands-Only CPR, American Red Cross
March 12, 2026

Interdisciplinary Mixer, Comfort Tea & Pastries, NSCS Networking
April 30, 2026

UNDERGRADUATE RESEARCH PROGRAM

CUNY RESEARCH SCHOLARS PROGRAM

Using Assistive Technology to Improve Health and Fitness of People with Disabilities

Zelea Hall
Prof. Farrukh Zia

Fabricating the Future: PEGDA Hydrogels for Smart Drug Delivery in Tissue Engineering

Elva Zhang
Prof. Ozlem Yasar

Non-invasive characterization of biometal transport in porous carbohydrates after induction of stress

Zeenia Ahmed, Ali Algemsh, Siham Benabou, Feldy Liriano, Hailah Nagi
Prof. Subhendra Sarkar

Does X-ray scattering always decrease structural details: why the rule does not apply to low-density samples

Al Emran, Joseph Laguerre, Jaskaran Singh, Natalya Tomskikh
Prof. Subhendra Sarkar

The Potential and Benefits of Turf to Native Rewilding in New York City

Naomi Vasquez
Prof. Heather Eliezer

Validating an Artificial Intelligence Model for Achalasia Detection in Chest Radiography

Joel Perez, Shauyen Ng-Mei
Prof. Eric Lobel

Frameworks for Data Visualization

Kazi Tamim Nomany
Prof. Patrick Slattery

Evaluating the Potential Impacts of Quantum Computing

Andy Lopez
Prof. Patrick Slattery

Heteromorphic Robot

William Morales
Prof. Xiaohai Li

First mammography screening participation and breast cancer incidence and mortality in the subsequent 25 years: population based cohort study

Forruk Ahmed, Anna Aleksyeyeva, Oman Balan, Ashley Hassang
Prof. Zoya Vinokur

Effect of personality characteristics on gaze patterns for a repulsive stimulus

Jazmine Martin
Prof. Daniel Capruso

Controlled Drug Delivery Using PEGDA-Based Hydrogels

Keven Sanchez
Prof. Ozlem Yasar

Bio-Aware Blended Spaces: Stage 1 Sprint

Francky Duperval
Prof. David Smith

Applications of the Quantum Zeno Effect

Christopher Osorio, Aaron Soriano
Prof. Seth Cottrell

Plant Responses to Radiation: The Central Role of Reactive Oxygen Species

Shaibu Alhassan, Andrew Feng, Lianghao Mai
Prof. Eric Lobel

EMERGING SCHOLARS PROGRAM

Chemotherapy Adherence and Side Effect Management

Yewande Adesina
Prof. Mohammed Islam

Gingerbread Architecture Reframed: Design for Use and Construction

Anjum Ahmmed, Nick Antoine, Jennifer Garcia, Alimary Mejia, Brailyn Ventura
Prof. Alexander Aptekar

The Economic Impact of Universal Healthcare Policy

Hasib Mahmood
Prof. Sean MacDonald

Tactile Learning Through 3D-printed Assistive Technology

Halima Alazeb
Prof. Farrukh Zia

The Film Side of Healthcare

Nour Alkhadi
Prof. George Guida

X-ray and MRI discrepancies in filler-polymer dynamics of Poly Dimethyl Siloxane (PDMS)

Shaima Alsaidi, Jennifer Bulbuena, Daler Djuraev, Mostakim Shahed
Prof. Subhendra Sarkar

AI Driven Sustainable Waste Utilization

Kyshia Anderson
Prof. Alyssa Adomaitis

ArcScholars

Bryant Ariza, Elijah Walker
Prof. Naomi Langer-Voss

The Canal House: A Prototype for Tropical Savanna Climate

Zayed Baig, Alfonzo Grant, Mahir Rafed, Joel Rosales Sosa, Rebekah Zayas
Profs. Kenneth Conzelmann, Patricia Semmler, and Chris SW Leung (Professional Advisor)

Assessment of Lake Water Quality Parameters Using UAV Hyperspectral Imaging

Hasanul Banna
Prof. Marzi Azarderkash

Fear and Fascination Continuation

India Barker
Prof. David Smith

Social Policies as Public Health Interventions: Reducing Health Inequality through Tax-Funded Programs

Fatima Barnes
Prof. Sean MacDonald

From Silos to Data Centers: Research Through Drawing of Industrial Typologies

Erickson Cabrera
Prof. Dorde Bulajic

Innovative Gearbox for E-bike

Miguel Veliz Castellan, Ahmad Dawoud,
Karim Pulatov, Gregory Shatsman
Prof. Andrea Ferroglia

Software Integration in Personal Healthcare

Yassine Chahid
Prof. Patrick Slattery

AI Power in Fitness

Yuzhen Chen Chan
Prof. Fang Yang Shen

Transradial Force Myography Prosthetic Limb

Shiou Ching Chen
Prof. Farrukh Zia

Comparative Analysis of CNN, LSTM, and Attention-Based Architectures for Post-Translational Modification Site Prediction

Christopher Chow, Shiu Wong
Prof. Ahmet Yuksel

Smart Automatic Toll Gate & Car Parking System Using Arduino & RFID

Suchi Chowdhury, DiaaEldin Elabsy
Prof. Farrukh Zia

Vibrations and Standing Waves Experiments

Alex Davis
Prof. Vitaliy Dorogan

Cryptocurrency Price Prediction using Machine Learning

Amadou Diallo
Prof. Marcos Pinto

Conformal Maps and their applications

Sergine Diaw, Marc Verma-Bonany
Prof. Satyanand Singh

Students Helping Students: Does It Really Work?

Jacky Dong, Oscar Situ, Henry Ye
Prof. Li Geng

Computer Aided Design of 3D Printed Assistive Technology Devices

Ugochukwu Emenawu, Amna Saifi
Prof. Farrukh Zia

Breathing and Feeling the Difference: An analysis of Temperature and Air Quality Variations across Two Neighborhoods in NYC

Brisalis Fernandez Cid, Julianna Trujillo
Prof. Anne Leonhardt

Analyzing the benefits of of tutoring and Peer Led team learning on academic performance in Statics

Christopher Guerrero, Richmond Smith Birch
Prof. Melanie Villatoro

Civic Threshold: Reframing the Interface Between Architecture and Landscape in Public Space

Daniela Guzman
Prof. Anne Chen

Home Face Recognition & Remote Control

Safoan Hossain
Prof. Ahmed Hassebo

Frameworks of Digital Visualization

Kazi Islam
Prof. Patrick Slattery

Implementation of Assistive Technology Based Adaptive Gaming System

Mithila Islam, Mlaikah Noor
Prof. Farrukh Zia

DNA Barcoding of Gut Contents

Shayna Jung
Prof. Jeremy Seto

Developing an AI-Powered Security Agent for Blockchain Transaction Safety

Derrick Keith Jr.
Prof. Marcos Pinto

MediTrack – Medication Scheduling & Tracking Applications

Nadia Khan
Prof. Farrukh Zia

AI Cyber Security Skils Gap: Aligning Higher Education Curricula with Workforce & Employer Expectations

Jabber Kibria
Prof. Patrick Slattery

Charactirizing Oxidative Stress Genes in T.thermophila

Sydney Kurland
Prof. Ralph Alcendor

OpenLab UX/UI Design & Outreach

Samridha Lamicchane, Yeimilee Marcano, Isabella Ramos Guimaraes
Prof. Jenna Spevack, Prof. Jody Rosen, Prof. Jonas Reitz

The Effects of Cerebrovascular Disease...

Casey Mohabir
Prof. Daniel Capruso

Determinants of Dental Health Access and Outcomes

Keera Mohammed
Prof. Diana Samaroo

Understanding Neuralink

Adnan Nirob
Prof. Niloufar Haque

Cemeteries As Green Infrastructure

Kunchok Norbu
Prof. Jeffrey Keiter

The Relationship of Systemic Illness to Severity of Neurological Disease

Cassara Norville
Prof. Daniel Capruso

3D Printed Smart Plant Pot

Amber Ocasio
Prof. Farrukh Zia

Investigations Into the Quantum Zeno Effect

Christopher Osorio, Aaron Soriano
Prof. Seth Cottrell

The Impact of Information Technology of Accounting

Fehaj Pabal
Prof. Elizabeth Milonas

Modeling Bus Arrival Time Using a Poisson Process

Evelyn Pulla
Prof. Xiaohua Wang

Enculturation Scale Development

Perla Reyes
Prof. Smita Ekka Dewan

Secure Federated Learning for Financial Fraud

Adam Rozaqui
Prof. Marcos Pinto

MRI and X-Ray to Assess Porous Carbohydrate & Biological Tissue

Mostakim Shahed
Prof. Subhendra Sarkar

Risk-Based Continuous Authentication for Individuals with Cognitive Disabilities Without Smartphones

Kelsang Sherpa
Prof. Farrukh Zia

Implementation of Automatic Position ...

Nryan Singh, Jiawei Zhen
Prof. Farrukh Zia

Analysis of Drone Imagery to Extract Information over Water Bodies

Taufiqa Tajnin
Prof. Marzi Azarderkash

Design & Fabrication of a Scaled Bridge for National Student Bridge Competition

Katerina Uruci
Prof. Navid Allahverdi

Livability and Sustainability in NYC

Sonya Weinstock
Prof. Anne Leonhardt

Health Equity & Public Health Infrastructure: A State-Level Analysis of Community Health Worker Employment

Ashley William
Prof. Noemi Rodriguez

Geopolymer based nanoscale formulations using recyclable materials for CO2 adsorption Scalable Additive manufacturing for for Lunar construction and Co2 Adsorption

Gabriela Bernales, Angelo Demetroulako
Prof. Samsur Rahman

Technology in Human Trafficking

Kaytleen Phipps
Prof. Smita Ekka D

Illuminating the Connection Between Galaxy Morphology and Evolution with the Legacy Survey Of Space and Time

Samiya Shamsur
Prof. Charlotte Olsen

Ethics and Non-Rational Data

Angie Navarro
Prof. Elizabeth Milonas

"Enculturation" in Social Work Practice: A Scoping Review of Research and Practice Approaches

Perla Reyes
Prof. Smita Ekka D

Characterizing Cystathionine Beta-Synthase in Tetrahymena thermophila

Darien Mendez
Prof. Ralph Alcendor

Frameworks for Data Visualization Methods

Kazi Rahimu Islam, Kazi Tamim Nomany
Prof. Patrick Slattery

Mitigation of the Impact of Climate Change in Building Energy Consumption

Takoda Nestor
Prof. Daeho Kang

Optical Prediction of Personality Characteristic

Tamara Tugulashvili
Prof. Daniel Capruso

Planning a Health Impact Assement Framework for Major Events in New York City

Fehaj Pabal
Prof. Samaneh Gholitabar

Quantum Music Generation Methodology

Elizabeth Frias
Prof. David Smith

Control of Electro-Mechanical Systems with Assistive Technology Devices

Shiou Ching Chen
Prof. Farrukh Ziav

Can autoimmune diseases affect the Oral Cavity?

Shahd Abdalla
Prof. Dora-Ann Oddo

GRANT-FUNDED PROJECTS

NSF REU GRANT #2447604

Drs. Reginald Blake, Hamidreza Norouzi, & Ms. Julia Rivera

NSF IUSE GRANT #2327431

Drs. Reginald Blake, Hamidreza Norouzi, Masato Nakamura, Marzieh Azarderakhsh, & Ms. Julia Rivera

Development and Evaluation of an MPAS-Based Urban Modeling System for the New York City Region

Kristian Rice and Marco Yu
Prof. Yanna Chen
NSF IUSE Grant # 2327431

Evaluating Cloud Radiation - Hydrometeor Species Interaction in WRF: Implications for Lower Troposphere Temperature and Precipitation Type

Kazi Islam
Prof. Yanna Chen
NSF IUSE Grant # 2327431

Monitoring Heat and Air Quality in Brooklyn Subway Stations

Saba Alkobadi, Addree Barua, Harmony Divine, Maria Hashmi, Zohaib Khan, and, Babacar Sarr
Profs. Abdou Bah, Hamid Norouzi, AP. Reginald Blake
NSF IUSE Grant # 2327431 &
NSF REU Grant # 2447604

Monitoring Heat and Air Quality in Manhattan Subway Stations

Sabina Abduvakhidova, Zeshan Rafiq, and Rean Shahidullah
Profs. Abdou Bah, Hamid Norouzi, AP. Reginald Blake
NSF IUSE Grant # 2327431 &
NSF REU Grant # 2447604

When Does the Lake Freeze? Linking Ground-Based Cameras and Satellite Observations of Lake Ice

Emmanuel Forte
Prof. Marzieh Azarderakhsh
NSF IUSE Grant # 2327431

City Tech AI Smart Cities Innovation Challenge 2026

Faculty Organizers: Navid Allahverdi, Benito Mendoza-Garcia, Farrukh Zia

CITYPULSE AI: Smarter Road Repair for New York City

Mohammed Imad, Moroni Luna, Yusuf Smaili, Azamat Utkurov, Ronny Yeap
Faculty Mentor: Benito Mendoza-Garcia

AI-Powered Inspection Robot for Structural Safety

Student Team: Shiou Ching Chen, Kelsang Sherpa, Lesly Guzman, Stephanie Rendon
Faculty Mentor: Joycephine Li

AI Flood-Risk Prioritization for Vulnerable NYC Neighborhoods

Student Team: Kazi Rahimu Islam, Kazi Tamim,
Faculty Mentor: David Smith

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HONORS SCHOLARS & UNDERGRADUATE RESEARCH CONFERENCE

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

SPECIAL THANKS TO

Dr. Kelsie Anson
Ms. Chioma Okoye
Dr. Anna Feitzinger
Ms. Julia Rivera
Ms. Angelina Santiago
Ms. Monisha Sooklall
Mr. Roberlin Espinal Torres

A SPECIAL THANK YOU TO THE DEDICATED CONFERENCE JUDGES:

Ralph Alcendor
Lillian Amann
Marzieh Azarderakhsh
Monica Berger
Caroline Darin
Hyunjoo Do
Ezra Halleck
Ahmed Hassebo
Joelle Jean
Jeffrey Keiter
Despina Lalaki
Kate Lee
Anne Leonhardt
Michael Loo
Lili Ma
Elizabeth Milonas
Laureen Park
Nandi Prince
Jonas Reitz
Noemi Rodriguez
Jody Rosen
Patricia Semmler
Satyanand Singh
Jeremy Seto
Meagan Sylvester
Viviana Vladutescu
Robert Walljasper
Angran Xiao
Ozlem Yasar

A special recognition and appreciation to Wilna Michel for designing this program.

ORGANIZED BY CITY TECH'S HONORS SCHOLARS & UNDERGRADUATE RESEARCH PROGRAMS