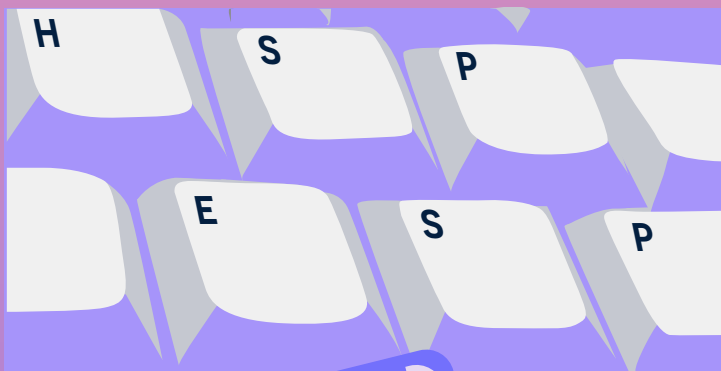


THE 36TH SEMI-ANNUAL DR. JANET LIOU-MARK



HONORS & UNDERGRADUATE

RESEARCH SCHOLARS POSTER PRESENTATION

WEDNESDAY, MAY 4, 2022

VIRTUAL POSTER PRESENTATION
(POSTER JUDGING)

THURSDAY, MAY 5, 2022

VIRTUAL POSTER PRESENTATION
(AWARD CEREMONY)

12:45-2:15PM

ORGANIZED BY CITY TECH'S HONORS SCHOLARS PROGRAM

GREETINGS

Russell K. Hotzler

President

Pamela Brown

Interim Provost & Interim Vice President
for Academic Affairs

Reginald A. Blake

Interim 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 (LSAMP)**

Hamidreza Norouzi
Director of Undergraduate Research

Emerging Scholars

Hamidreza Norouzi

Grant-Funded Projects

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 REGULAR COURSES

Create an Automated Door Alarm Security System using Gate Systems

Aaryan Nair
Prof. Kim Smith
[EET 1122: Circuit Analysis I](#)

Propagation Analysis of Autosomal Recessive Inheritance Traits in a Population using Matrices

Adrian Guin Rizzo
Prof. Ariane Masuda
[MAT 2580: Introduction to Linear Algebra](#)

A Survey for Understanding How Undergraduate Organic Chemistry Students Learn

Aneeza Hussain
Prof. Peter Spellane
[CHEM 2223: Organic Chemistry I](#)

The Leslie Matrix Model

Angie Zumba
Prof. Ariane Masuda
[MAT 2580: Introduction to Linear Algebra](#)

Using R Markdowns & Notebooks in Bioinformatics

Ashley LaSalle
Prof. Evgenia Giannopoulou
[BIO 3352: Bioinformatics II](#)

Advanced Obturator Denture Case

Daniela Dixelis Castellanos
Prof. Avis Smith
[RESD 2411: Complete Dentures & Maxillofacial Concepts](#)

Grating Mounting Holder

Emanie Maitland
Prof. Viviana Vladutescu
[EET 1202: Electrical Drafting](#)

Passive Details for a Temperate Climate

Fatima Ikhmais
Prof. Shaad Zaidi
[ARCH 1212: Architectural Design II: Foundations & Visual](#)

Exploring SolidWorks Simulation & Structural Analysis Tools to Predict Real-World Physical Behaviors

Itay Rubin
Prof. Gao Feng
[MECH 3510: Advanced Solid Modeling II](#)

A New Era of Mental Health Treatment

Jena Rodriguez
Prof. Ryan Wallace
[COM 2403: Health Communication](#)

The Fundamental Theorem of Calculus

Joanna Quizhpe
Prof. Lin Zhou
[MAT 1575: Calculus II](#)

Regenerative Design in High Performance Buildings

Kada Clyne
Prof. Azaroff Illya
[ARCH 3812: Architectural Design VIII: Special Topics](#)

La Bella Storia Dei Cannoli

Kemoya McLeod
Prof. Joanne Lewin-Jacus
[HMGT 1204: Baking & Pastry Arts I](#)

Architecture & Sustainability: Japan

Michelle Guzman
Prof. Rob Robthblatt
[ARCH 3551: Sustainability: History & Practice](#)

A Survey for Understanding How Undergraduate Organic Chemistry Students Learn

Olorundamilola Okemeta
Prof. Peter Spellane
[CHEM 2223: Organic Chemistry I](#)

The Beauty of Bézier Curves

Qing Chen
Prof. Ariane Masuda
[MAT 2580: Introduction to Linear Algebra](#)

The Effectiveness of Open Lab on Radiologic Technology Students' Overall Performance

Robert O'Brien
Prof. Zoya Vinokur
[RAD 1225: Radiographic Procedures II](#)

Airline Routes with Matrices

Samantha Quiah
Prof. Ariane Masuda
[MAT 2580: Introduction to Linear Algebra](#)

The Method of Constructing a Constitution, & Why They are Important

Sherene Moore
Prof. Ikiesha Al-Shabazz
[LAW 2306: Legal Issues for Facilities Managers](#)

Puff Pastry Through Time: Its Evolution & Applications

Thomas Ham
Prof. Tracy Zimmermann
[HMGT 2304: Baking & Pastry Arts II](#)

X-Ray Imaging of Local & Global Diffusion of Biominerals Induced by Chemical & Mechanical Stress in Biological Model Systems

Aaliyah Salmon
Profs. Subhendra Sarkar & Evans Lespinasse

Integrated Solid Waste Management System Leading to Zero Waste for Sustainable Resource

Aaryan Manoj Nair
Prof. Akm Rahman

The Energy Challenge: Moving from Fossil Fuels to Biofuels, Hydrogen, & Green Energy Sources

Aneeza Hussain
Prof. Alberto Martinez

Harvesting of Animal Populations

Angie Zumba
Prof. Ariane Masuda

Characterizing Tetrahymena thermophila Calpains Using Computational Tools

Anjalee Rabbani
Prof. Ralph Alcendor

X-Ray Imaging of Local & Global Diffusion of Biominerals Induced by Chemical & Mechanical Stress in Biological Model Systems

Aravis McBroom
Profs. Subhendra Sarkar & Evans Lespinasse

Modeling of Infiltration through Large Openings in Buildings

Carlanthony Lanton
Prof. Daeho Kang

Soft X- Ray Imaging of Possible Transmetallation among Endogenous Fe(II)/Fe(III) & Mn(I-IV) States due to Thermo-mechanical Stress in Model Carbohydrates

Daler Djuraev
Prof. Subhendra Sarkar & Zoya Vinokur

You are Prepared

Emma Bjornsen
Prof. Allison Berkoy

The Effects & Consequences of Chemical Warfare

Gabriel Martinez
Prof. Jose Martinez

The 4 Color Math Theorem

Harouna Guisse
Prof. Nadia Benkali

Force-feedback Design for Robotics Hand

Husnain Khan
Prof. Zhou Zhang

Modeling of Infiltration through Large Openings in Buildings

Istvan Zagyi
Prof. Daeho Kang

X- Ray Imaging of Local & Global Diffusion of Biominerals Induced by Chemical & Mechanical Stress in Biological Model Systems

Joanna Syska
Prof. Subhendra Sarkar & Evans Lespinasse

A Strategic Analysis of Drug Trafficking Network

Julia Burnside, Aneeza Hussain, & Katie Salas
Prof. Urmi Ghosh-Dastidar

Tissue Scaffold Fabrication with Digital Micro-mirrors

Kina Wu
Prof. Ozlem Yasar

Soft X- Ray Imaging of Possible Transmetallation among Endogenous Fe(II)/Fe(III) & Mn(I-IV) States due to Thermo-mechanical Stress in Model Carbohydrates

Maria Orellana
Prof. Subhendra Sarkar & Zoya Vinokur

Open labs Vs. Students' Final Grades

Navdeep Kaur
Prof. Zoya Vinokur

Applications of Computer Hardware & Software in Biotechnology

Noor Shamanta Jahan
Prof. Farrukh Zia

Effectiveness of Collimation in Radiation Protection

Ollana John
Prof. Eric Lobel

Bezier Curves

Qing Chen
Prof. Ariane Masuda

Compare how Students Performed & Attendance before, during & after Pandemic Waves

Ralph Lauren Ocampo
Prof. Zoya Vinokur

Compare how Students Performed & Attendance Before, During & After Pandemic Waves

Rohini Mattan
Prof. Zoya Vinokur

EMERGING SCHOLARS

The Effects & Consequences of Chemical Warfare

Ryan Donnelly
Prof. Jose Martinez

Open Labs Vs. Students' Final Grades

Safraz Harun
Prof. Zoya Vinokur

Modeling of Infiltration through Large Openings in Buildings

Satesh Mahabir
Prof. Daeho Kang

Soft X- Ray Imaging of Possible Transmetallation among Endogenous Fe(II)/Fe(III) & Mn(I-IV) States due to Thermo-mechanical Stress in Model Carbohydrates

Sonia Orellana
Profs. Subhendra Sarkar & Zoya Vinokur

Modeling of Infiltration through Large Openings in Buildings

Syed Ali
Prof. Daeho Kang

Los Pirineos, the Mostly True Memoirs of Esperancita Gómez

Wilna Michel
Prof. Sara Woolley

Genotype Distribution in a Population

Adrian Guin Rizzo
Prof. Ariane Masuda

COMD Futures Collaboratory AR Project

Adrika Hoque
Prof. Jay Buren

Programing the Robot Arm Suitable for an Assembly Line

Agha Akram
Prof. Muhammad Ummy

COMD Futures Collaboratory AR Project

Agustin Melo Galvez
Prof. Jay Buren

Robotic Manipulation: A Practical Application of Linear Algebra in Perception & Path Planning

Akhil Sankar
Prof. Ariane Masuda

Forensic Analysis of Local HIV Isolates

Alexandra Rogers
Prof. Jeremy Seto

Learning to Innovate Websites & Apps Through Knowledge & Understanding of How the Internet Works

Ali Abbas
Prof. Daniel Wong

Characterization of Fe(II)/Fe(III) Cycling due to Thermo-Mechanical Stress in Carbohydrate Model Systems: Low vs High Field MR Feasibility Testing

Analia Basilicata
Profs. Subhendra Sarkar & Lazar Fleysler

High-field MR Microscopy of Paramagnetic Biomaterials in Heat-shocked Phantoms

Anam Riaz
Profs. Subhendra Sarkar & Duke Shereen

COMD Futures Collaboratory AR Project

Andre Sadhu
Prof. Jay Buren

Learning to Innovate Websites & Apps Through Knowledge & Understanding of How the Internet Works

Bilal Badar
Prof. Daniel Wong

Relational & Non-Relational Database Technologies

Brandon Alulema
Prof. Elizabeth Milonas

Investigating Project Success Factors in Post Disaster Rebuilding Efforts in NYC

Calvin Walters Jr.
Prof. Anne Sowder

Computational Design of Electro-Optical Converters for Quantum computers

Daneilla McEwan
Prof. German Kolmakov

Computational Design of Electro-Optical Converters for Quantum Computers

Dante James
Prof. German Kolmakov

LGBTQ Youth Substance Use during COVID-19 Pandemic

Dillon Seebalack
Prof. Smita Dewan

An analysis of Non-Comparison Based Sorting Algorithms

Edgar Aponte
Prof. Brad Isaacson

Radiology Technologist: More Than a Button Pusher

Erika Perez
Prof. Lillian Amaan

Code Cyber: A Curated Collection of Cyber Security Sources

Ethan Pruzhansky
Prof. Patrick Slattery

Characterize a Calpain of Choice from Tetrahymena Thermophila using Bioinformatics Tools

Eva Tse
Prof. Ralph Alcendor

Child Detection System For Preventing Hot-Car Death

Fahmeda Khanom
Prof. Xiaohai Li

The Brooklyn-New Jersey Freight Tunnel: An Alternative to Truck Distribution

Farai Matangira
Prof. Michael Duddy

Refugees in the World

Fatima Malik
Prof. Mukadder Cinar

What's all the Hoopla about Metaverse?

Frank Lema
Prof. Marcos Pinto

Biometal Distribution & Diffusion: Contrast Resolution by Low kV Mammography Versus High Spatial Resolution by Computed Tomography

Guito Charles
Profs. Zoya Vinokur, Subhendra Sarkar, & Teri-Ann Hawley

ARCscholars

Habiba Abdelgawad
Prof. Naomi Langer-Voss

Genotype Distribution in a Population

Irina Urmi
Prof. Ariane Masuda

Development of an Assistive App on Girls Who Code

Isory Santana
Prof. Farrukh Zia

Radiologic Technologists: More Than a Button Pusher

Isra Aly
Prof. Lillian Amann

An Analysis of Non-Comparison Based Sorting Algorithms

Jacob Gomez
Prof. Brad Isaacson

Smart Physics

Jake Postiglione
Prof. Giovanni Ossola

COMD Futures Collaboratory AR Project

Jennell Thomas
Prof. Jay Buren

Code Cyber: A Curated Collection of Cyber Security Sources

Jason Lin
Prof. Patrick Slattery

ARCscholars

Jeanpaul Montano
Prof. Naomi Langer-Voss

Radiologic Technologists: More Than a Button Pusher

Jennifer Yu
Prof. Lillian Amann

Pain communication or absence thereof in diseased white matter tracts in neurodegenerative

Jennifer Padilla
Prof. Subhendra Sarkar

Art & Mathematics meet at the edge of Chaos

Julia Burnside
Prof. Satyanand Singh

DNA Mapping & Identifying

Kalsoom Bibi
Prof. David Giganti

“Our Stories” First Year Transition to College

Kamara Smith
Prof. Mery Diaz

“Our Stories” First Year Transition to College

Katelyn Lopez
Prof. Mery Diaz

**Role of Effective Health Communications in
Creating Assistive Technology Devices**

Katelyn Lopez
Prof. Farrukh Zia

Art & Mathematics meet at the edge of Chaos

Katie Salas
Prof. Satyanand Singh

Open labs Vs. Students' Final Grades

Katie Tam
Prof. Zoya Vinokur

**Code Cyber: A Curated Collection of Cyber
Security Sources**

Kazi Tasin
Prof. Patrick Slattery

**Pain Communication or Absence Thereof
in Diseased White Matter Tracts in
Neurodegenerative Brain**

Maleeha Sheikh
Prof. Subhendra Sarkar

**A Mobile Robot for Educational
Robotics Competitions**

Maya Papayan
Prof. Farrukh Zia

Covid-19 Vaccine Mandate Effects

Mikhail Kun
Prof. Zoya Vinokur

**Hardware & Software Co-design of
Assistive Technology**

Modhumita Dey
Prof. Farrukh Zia

**Code Cyber: A Curated Collection of Cyber
Security Sources**

Mohammed Zaman
Prof. Patrick Slattery

How Covid-19 Affected Dentistry

Nathaly Rojas
Prof. Susan Davide

**The Structure & Analysis of calpains in
Tetrahymena Thermophila**

Niger Rinky
Prof. Ralph Alcendor

**Radiologic Technologists:
More than a Button Pusher**

Nino Jvarishvili
Prof. Lillian Amann

**The Structure & Analysis of Calpains
in Tetrahymena Thermophila**

Olorundamilola Okemeta
Prof. Ralph Alcendor

**Study of Pregnancy Related Deaths in United
States**

Oneisha Conway
Prof. Avis Smith

**Data Analysis & Structural Exploration of Protein-
DNA recognition**

Pascal Hermann Kouogang Tafo
Prof. David Giganti

**Compare how students Performed
& Attendance before, During & After Pandemic
Waves**

Peber De Jesus
Prof. Zoya Vinokur

**Biometal Distribution & Diffusion: Contrast
Resolution by Low kV Mammography versus High
Spatial Resolution by Computed Tomography**

Robert O'Brien
Profs. Zoya Vinokur, Subhendra Sarkar,
& Teri-Ann Hawley

Open labs Vs. Students' Final Grades

Robert O'Brien
Prof. Zoya Vinokur

**The start of a New Revolution: Addressing
Government Failure in Ending Homelessness
in NYC**

Ruth Joseph
Prof. Laura Westengard

**Identifying Protein-Protein
& Specific Protein-DNA Contacts
using Programming Tools**

Samantha Lee
Prof. David Giganti

America Through Immigrant Eyes

Samuel Cheung
Prof. Peter Catapano

**Mechanical Characterization of
Engineered Scaffolds**

Sandya Persaud
Prof. Ozlem Yasar

**Radiology technologists are
More than a Button Pushers**

Sarahjireh Estrada
Prof. Lillian Amann

ARCscholars

Scarlett Morales
Prof. Naomi Langer-Voss

ARCscholars

Shun Ebihara
Prof. Naomi Langer-Voss

Convolved Neural Network – Image Classification

Sisiame Sakasamo
Prof. Marcos Pinto

Data Loss Caused of Nature Disaster

Svetlana Idrovo Shindler
Prof. Patrick Slattery

**Code Cyber: "A Curated Collection of Cybersecurity
Career Learning & Preparation Resources"**

Tanvir Rahman
Prof. Patrick Slattery

Novice Peer-leader Learning during Initial Training

Taspia Jannat
Prof. Nadia Kennedy

Covid-19 Vaccine Mandate Effects

Tatiana Ryzhakova
Prof. Zoya Vinokur

Child Detection System For Preventing Hot-Car Death

Touheda Khanom
Prof. Xiaohai Li

ARCscholars

Tylee Rivera
Prof. Naomi Langer-Voss

**Radiology Technologist:
More than a Button Pushers**

Walquiria Acosta Ovalle
Prof. Lillian Amann

Mechanical Characterization of Nano-material Doped Polydimethylsiloxane (PDMS)

YeHun Jeong
Prof. Ozlem Yasar

The Use of Avatars by Vtuber in the Live, & Why they Use it

Yuehan Guo
Prof. Lauren Park

Use of DNA Technology to Identify Insects Found in the NAB Courtyard

Chukwuebuka Amaefule
Prof. Jeremy Seto

Refugees in the World

Rayen Osorio
Prof. Mukadder Cinar

Computer Controlled System Design

Divya Kaushal
Prof. Farrukh Zia

Studying Connectance & Robustness of Criminal Networks

Raihan Bhuiyan
Prof. Urmi Ghosh-Dastidar

Studying Connectance & Robustness of Criminal Networks

Simon Zhang
Prof. Urmi Ghosh-Dastidar

Studying Connectance & Robustness of Criminal Networks

Beck Bao
Prof. Urmi Ghosh-Dastidar

How Has Covid-19 Impacted Dental Hygienist & Other Dental Practitioners

Dosyleny Arias
Prof. Susan Davide

The Energy Challenge: Moving from Fossil Fuels to Biofuels, Hydrogen, & Green Energy Sources

Afrina Nishat
Prof. Alberto Martinez

Computational Characterization of Calpains in T.thermophila

Derbie Desir
Prof. Ralph Alcendor

Ferrate VI: An Environmentally Friendly Oxidant for Water Treatment

Le Van La
Prof. Vishwas Joshi

GRANT-FUNDED PROJECTS

NSF IUSE GEO Grant # 2023174

Profs. Abdou Bah, Reginald Blake, Masato Nakamura, Hamidreza Norouzi, & Ms. Julia Rivera

Remote Sensing & Land Surface Temperature from Satellite Observations

Angel Vargas & Isatu Jalloh
Profs. Zahra Sharif, Reginald Blake, & Hamidreza Norouzi

What is the Comparison of NDVI & LST of Two Parks Based on the Tree, Grass, & Turf Density?

Ivan Boamah & Mohammad Masud
Profs. Carolien Mossel, Reginald Blake, & Hamidreza Norouzi

A Geographic Study for Landfill Sites & Emission Control Technology for Reducing Greenhouse Gases

Mark Stewart & Windiana Georges
Prof. Masato Nakamura

A Method to Downscale Satellite Land Surface Temperature Data in Urban Areas

Naved Khan
Profs. Abdou Bah, Reginald Blake, & Hamidreza Norouzi

Validation of Global Lake Surface Water Temperature

Pascal Kouogang & Mamadou Balde
Profs. Abdou Bah, Reginald Blake, & Hamidreza Norouzi

Green Hybrid Renewable VAWT Energy Systems

Sherene Moore
Prof. Masato Nakamura

NSF REU Grant # 1950629

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

Analyzing Anthropogenic & Climatic Trends on Regional Farms

Fambougouri Diane
Profs. Caroline Schwab & Tarendra Lakhankar

Correlations Between Gentrification Patterns in NYC Derived From Gas Outage Data & Reports Using Data Science & Geographic Information System (GIS) Tools

Itay Rubin
Profs. Md. Rahman & Ronak Etemadpour

Analyzing Anthropogenic & Climatic Trends on Regional Farms

MD Karim
Profs. Caroline Schwab & Tarendra Lakhankar

A Method to Downscale Satellite Land Surface Temperature Data in Urban Areas

Nadia Sultana
Profs. Abdou Bah, Reginald Blake, & Hamidreza Norouzi

Drought Climatology & Impacts in the Northeast United States

Rabeca Mohammed
Profs. Leulaye Maskal & Nir Y Krakaue

A Method to Downscale Satellite Land Surface Temperature Data in Urban Areas

Serigne Mbaye
Profs. Abdou Bah, Reginald Blake, & Hamidreza Norouzi

Effects of Riverine Inputs on Long Island Sound Water Quality

Syeda Mehjabin
Profs. Alana Menendez & Maria Tzortziou

Honors Scholars Program

STUDENT ACADEMIC CONFERENCE

Panel Presentations

Panel 1: Music, Fashion, & Culture

The Davies Tartan: From Then Until Now

Lucas Davies

Mentor Prof. Nazanin Munroe

Business & Technology of Fashion Major

Introduction to Textiles Course

Ludovico Einaudi: Why is His Music “Minimalist”, and Not “Classical”?

Ashley Persuad

Mentor Prof. James Matheson

Mechanical Engineering Technology Major

Musical Styles Course

The Evolution of the American Fine Dining

Check Traore

Mentor Prof. Rosa Abreu

Hospitality Management Major

Dining Room Operations Course

Panel 2: Health & Safety Education

The Pandemic & the Hospitality Industry

Letrecia Azor

Mentor Prof. David Lee

Hospitality Management Major

Principles of Persuasion Course

Navigating the Nursing Program

Grazziane Morbidelle

Mentor Prof. Michelle Gellar

Nursing Major

Foundations of Caring Course

**THE 36TH SEMI-ANNUAL
DR. JANET LIU-MARK HONORS AND UNDERGRADUATE
RESEARCH SCHOLARS POSTER PRESENTATION**

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

SPECIAL THANKS TO

**Ms. Iman Abdulfattah
Ms. Lauri Aguirre
Mr. Abdou Bah
Prof. Tamrah D. Cunningham
Mr. Christopher Navarrete
Ms. Julia Rivera**

Rosa Abreu
Gulgun Bayaz-Ozturk
Nadia Benakli
Karen Bonsignore
Stephanie Boyle
Marie-Cecile Chalbot
Yu-Wen Chen
Tamrah D. Cunningham
Susan Davide
Ossama Elhadary
Li Geng
Urmi Ghosh-Dastidar
Katherine Gregory
Sitaji Gurung
Ezra Halleck
Nina Hoch
Jennifer Hoyer
Brad Isaacson
David Sanchez Jimenez
Nanette Johnson
Ivana Jovanovic
Ellen Kim
David Lee
Sean P. MacDonald
Bridget Maley
Alberto Martinez
Ariane Masuda
John McCullough
Suzanne Miller
Elizabeth Milonas
Marissa Moran
Nanci Prince
Rory Richards
Noemi Rodriguez
Gerarda Shields
Satyanand Singh
Zoya Vinokur
Robert Walljasper
Zheng Zhu
Mai Zahran

**A special recognition and appreciation to
Or Szyflingier for designing this program.**

ORGANIZED BY CITY TECH'S HONORS SCHOLARS PROGRAM