THE 33rd SEMI-ANNUAL

WEDNESDAY, DECEMBER 2, 2020
VIRTUAL POSTER PRESENTATION
(Poster Judging)

THURSDAY, DECEMBER 3, 2020
VIRTUAL POSTER PRESENTATION
(Award Ceremony)
1PM – 2PM
HONORS IN A REGULAR COURSE 08

CUNY RESEARCH SCHOLARS 12

EMERGING SCHOLARS 16

GRANT- FUNDED PROJECTS 21

INTERDISCIPLINARY PROJECTS 22
Greetings
Russell K. Hotzler
President

Pamela Brown
Interim Provost and
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
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 L. Almond
Interim Assistant Director of the Honors Scholars Program
I would like to tell you a story. I hope you will indulge me.

Dr. Janet Liou-Mark was the Director of the Honors Scholars Program, my mentor, and friend. I met her in the early 2000s while I was a full-time student in the Computer Systems Technology Department while working full-time at a patent and trademark law firm. My mathematics professor advised me to enroll in the Honors Calculus course. When I found out the course did not fit in my schedule, I was told to see Dr. Liou-Mark because she would help me. Sensing my disappointment, she asked for my help; she wanted to create a City Tech chapter of the National Society of Collegiate Scholars (NSCS), but she needed a student to initiate it.

Subsequently, she wrote me a successful recommendation letter for graduate school, a master’s of science program at Polytechnic University, which is across the street from City Tech in Downtown Brooklyn, and we kept in touch. When it came time for me to pursue my doctorate, she wrote me another successful recommendation letter. A few months before I graduated, she invited me to talk at a Women in STEM luncheon that she organized at the College. After my talk, Pamela Brown, [then] Dean of the School of Arts and Sciences, encouraged me to apply for a new Technical Writing tenure-track faculty position in the English Department. Janet guided me through the application process too, providing interview tips and speaking highly of me to her colleagues. Coming full circle, in my first semester as a faculty member at this College, she invited me to deliver the keynote address, “On the Need for Interdisciplinary Studies,” to the largest group of inductees at the convocation of the City Tech National Society of Collegiate Scholars chapter.

Janet provided me with opportunities outside my department as well as outside City Tech. She recommended me for the Project Kaleidoscope Facilitating Interdisciplinary Learning (FIDL) Initiative that offered constant fully funded travel across the country and participation in FIDL think tanks on interdisciplinary studies.

Whether promoting interdisciplinary studies or writing my first book, I was always inspired and encouraged by her to pursue my big ideas and bring them to fruition. As I think about the big idea for my seventh book, one that may be too ambitious, Janet is not here to cheer me on. Almost three months ago, I lost my mentor. I know she will be remembered. Not because this student research poster presentation will now bear her name, but because she was an exceptional human being. I will end my story with an anecdote.

One typical evening while having what I called “dunch” (a meal between lunch and dinner), a student stopped by her office for help. She directed the student to see Dr. Earl Hill. I asked her to describe him to me because I had not met him. The first thing she said was “he has a kind face.”

Dr. Janet Liou-Mark will be remembered because she was kind and she was a mentor. I continue to honor her by being kind and being a mentor. I hope you will join me.

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Dr. Reneta D. Lansiquot
Director of the Honors Scholars Program
Professor and Founding Program Director,
Bachelor of Science in Professional and Technical Writing
Founding Chair of the Interdisciplinary Committee
New York City College of Technology
The City University of New York
What Entrepreneurial Start up Project would you Open in the Current COVID-19 Environment?
Yaneth Arevalo
Prof. John Dello Russo
MKT 2327: Entrepreneurship

The Impact of eDiscovery and Technology in the Practice of Law
Mercedes Aznar
Prof. Marissa Moran
LAW 4704: Legal Technology

Effectiveness of Group Work Practice Skills/Coursework in Student Internship Rotation-A Quantitative Study
Daphne Bernadotte
Prof. Marshall Charisse
HUS 3504: Group Work Practice

Black Theatre: Looking Back to Moving Forward
Ashley Camacho
Prof. Jeannine Foster-McKelvia
AFR 1321: Black Theater

Could Cognitive Technologies Solve Global Issues
Nakeita Clarke
Prof. Jason Ellis
ENG 2575: Technical Writing

Care and Maintenance of Dental Restorations
Ibeth Erazo
Prof. Anthony Sena
RESD 2313: Removable Partial Dentures II

Steven Holl Research Paper
Michelle Guzman
Prof. Anne Elizabeth Leonhardt
ARCH 2321: History of ARCH: 1900 - Present

An Investigation into the Response of the US and EU5 to the COVID-19 Disease
Omar Hassan
Prof. Mohammed Feknous
MECH 1240: Computer Applications in Mechanical Engineering

Open Educational Resources: What do Students Want?
Aneeza Hussain
Prof. Tatiana Voza
BIO 1201ID: Biology II

Implementation of Pseudo-Random Number Generator Using LFSR
Fahmeda Khanom and Touheda Khanom
Prof. Yu Wang
EMT 1250: Fundamental of Digital Systems

High Performing House Research
Karen Lucero Arita
Prof. Alexander Aptekar
ARCH 2331: Building Technology II

Measuring Influence on Twitter
Daniela Martinez
Prof. Stathis Verras
MAT 1372: Statistics with Probability
Burnout in Hospitality Worker; Stress, Lifestyle and Health
Mishka Morris
Prof. Evelyn Kolidas
PSY 1101: Introduction to Psychology

Magnus Vertical Axis (Magnus VAWT) “Typhoon-Proof” Wind Turbine Innovation for Japan’s Electricity Power Generation
Sherene Moore
Prof. Lukasz Sztaberek
ENVC 2420: Principles of HVAC Controls

Instructional Design for Virtual Training Presentations
Michael Meyer
Prof. Julian Costa
COM 1330: Public Speaking

The Legal Challenges and Solutions of Adolescents with ADHD
Susannah Oliveira
Prof. Pamela Scheininger
LAW 4900: Senior Legal Seminar

Adobe RoboHelp User Guide for Importing Data in Matlab
Olga Privman
Prof. Paula Korhonen
CST 3559: Technical Documentation

Recent Advances in the Foundations of Quantum Mechanics
Olga Privman
Prof. Boris Gelman
PHYS 2607: Introduction to Quantum Mechanics

Signal and Noise Comparison between Ultra-Low Electromagnetic Digital Energy Response as in MRI and High Energy Electromagnetic Beams as in Mammography
Luz Solano
Prof. Subhendra Sarkar
RAD 4829: Advanced MR Theory and Applications

Impacts of Responsive Web Design
Ashley Varon
Prof. David Karlins
COMD 2451: Web Design I
Creating an Augmented Reality (AR) Web Application
Syed Ahmed
Prof. Marcos Pinto

Radiographic Mapping of Nanoparticle Transport in Animal Tissues: Ionic Exchange and Restricted Diffusion Models
Carlos Aguayza
Prof. Boris Gelman

Understanding of Aerosol Transmission of COVID-19 in Indoor Environment
Adama Barro and Jacob Lopez
Prof. Daeho Kang

COVID-19 Impact on Radiology Students’ Distance Learning
Jason Chan, Cheryllann Jackson-Holmes
Mary Lee and Renzo Marmolejo
Prof. Zoya Vinokur

Face Detection with Machine Learning
Kadiatou Diallo
Prof. Marcos Pinto

Mobile Robot Inspector in A Wireless Sensor Network Framework
Kadiatou Diallo
Prof. Marcos Pinto

PEDGA Degradation Rate Studies
Marvin Espinoza
Prof. Ozlem Yasar

Two and Three-Dimensional Radiographic Imaging of Contrast Agents in Heterogeneous Live Cell Media to Understand Contrast-induced Toxicity
Aldona Gjoni and Fahameda Hassan
Prof. Subhendra Sarkar

Deep Lens Based American Sign Language Translation
Jakob Horowitz
Prof. Xiaohai Li

Predicting COVID-19 Virus Spread with the use of Machine Learning
Brian Jerez
Prof. Marcos Pinto

Visual Communication Design for Assistive Technology
Gui Jing Jiang
Prof. Farrukh Zia

Polyethylene Glycol Diacrylate Degradation Rate Studies
Almami Kanazoe
Prof. Ozlem Yasar
A Low-cost SLAM RC Car with RPLIDAR
Najwan Kased
Prof. Zhou Zhang

Smart IoT Car Seat Alarm System for Preventing Hot Car Death
Fahmeda Khanom and Touheda Khanom
Prof. Xiaohai Li

Machine Learning and Physical Computing
Joan Beatrice Ladaban
Prof. Farrukh Zia

Developing Ionic Nanomaterials for Biomedical Applications: Surface Chemistry and Morphologic Imaging
Lin Mousa and Hayley Sanchez
Profs. Subhendra Sarkar and Zoya Vinokur

Electric Vehicle (EV) Charging Stations Proximity
Abdullah Nabil
Prof. Marcos Pinto

Graphene Coated Laminated Composite for Light Striking Prevention
Aaryan Nair
Prof. Akm S Rahman

Low-Cost 3D Printed Rapid Deployment Arm (RDA)
Erik Peregrina
Prof. Andy Zhang

Forecasting Football (Soccer) Games Results Using Deep Learning
Hugos Rivas
Prof. Marcos Pinto

Recovered Energy Solutions for Controlled Environment Agriculture (CEA)
Itay Rubin
Prof. Masato Nakamura

Imaging Nanomaterials During Active Biochemical Transport in Model Plants and Chicken Eggs: Diffusion and Near Infra-Red Measurements
Amina Shahbaz and Tetiana Soloviova
Profs. Subhendra Sarkar and Chen Xu

Metric Dimension and Strong Metric Dimension of Graphs
Luc Telemaque
Prof. Nadia Benakli
EMERGING SCHOLARS

Parametric Art
Daanial Ahmad and Shaun Pollard
Prof. Satyanand Singh

The Energy Challenge: Moving from Fossil Fuels to Bio-fuels, Hydrogen and Green Energy Sources
Abrar Alhashidi and Russybel Richiez
Prof. Ivana Jovanovic

A STEM-COMD Interdisciplinary Approach to Illustrating STEM Manuscript
Edward Alston
Prof. Sara Woolley

What Entrepreneurial Start up Project Would You Open in the Current COVID-19 Environment?
Yaneth Arevalo
Prof. John DelloRusso

The Impact of eDiscovery and Technology in the Practice of Law
Mercedes Aznar
Prof. Marissa Moran

3D Bionic Arm
Anny Baez Silfa
Prof. Farrukh Zia

Signal and Noise Comparison between Ultra-low Electromagnetic Digital Energy Response as in MRI and High Energy Electromagnetic Beams as in Mammography
Bleidis Buitrago
Prof. Subhendra Sarkar

Immunotherapy in Cancer Treatment: Synthetic Approaches and Mechanisms of Action
Keyandra Bussey
Profs. Alberto Martinez and Diana Samaroo

Sexual Dimorphism, Obesity, and COVID-19
Travis Caraballo, Bushra Miah and Yomary Vargas
Prof. Sanjoy Chakraborty

Sustainable Renovation of Historical Buildings
Melita Cekani
Prof. Jihun Kim

Mindcontrol of Mobile Robot
Bingfang Chen
Prof. Farrukh Zia

Using Statistical Analysis to Examine Weather Variability in New York City
Ryan Chen and Yuhang Wang
Prof. Jiehao Huang

Heat Transfer Effects in Animal Tissues by Mammography and Signal and Noise Comparison of Nanoparticle Modified Animal Tissues in MRI
Daniela Costin
Prof. Subhendra Sarkar

Object Recognition and Voice Assistant with Augmented Reality
Juan Estrella
Prof. Aparicio Carranza
The 1935 Hurricane Houses of Islamorada:
A Case of Successful and Rapidly Deployed
Post-Disaster Housing
Glória Garcia and Kendra Gibbs
Prof. Anne Marie Sowder

Markov Chains and the PageRank Algorithm
Mahoutin Godonou
Prof. Nadia Benakli

Blast + Velocity: Animated Web
Shisir Humagain
Prof. Marcos Pinto

Open Educational Resources:
What do Students Want?
Aneeza Hussain and Joyette Noel
Prof. Tatiana Voza

Virtue at the Coffee House: Poetry and Community
in Contemporary America
Jessyca Jones
Prof. George Guida

Understanding of Aerosol Transmission of
COVID-19 in Indoor Environment
Jacob Lopez, Sherene Moore
Cathal O’toole, Matthew Quinones
and LiaLun Xiao
Prof. Daeho Kang

Improve the Prototype of Low–cost Near-Infrared
Diffuse Optical Imaging System
Mohammed Shakil
Prof. Chen Xu

Principal Component Analysis for Predicting the
party of the Legislators
Afsana Mimi
Prof. Nan Li

Benefits of Pre-Construction Analysis: CET Senior
Capstone Expands Understanding of an Urban
Refuge at GallopNYC Sunrise Stables
Aalaa Mohammed
Prof. Anne Marie Sowder

Use of sustainable Architecture in Nigeria in
Relation to Electricity, Water, and Pollution
Ololade Owolabi
Prof. Paul King

Diffusion Tensor MRI in Late Onset of Alzheimer’s
Disease: A Critical Assessment of ADNI Databases
Jennifer Padilla
Prof. Subhendu Sarkar

Oral History of Contemporary Immigration to
New York City
Valeria Recalde
Prof. Peter Catapano

Human Rights content in Human Services Major-
Measuring existing HUS Student Knowledge and
Interest to Learn about Human Rights
Kaishawn Scott
Prof. Smita Dewan

Improve the Prototype of Low–cost Near-Infrared
Diffuse Optical Imaging System
Mohammed Shakil
Prof. Chen Xu
A Year of Encounter: The 1948 Photo Album of African American Soldiers Stationed in Gifu, Japan
Manhoor Sheikh
Prof. Emilie Boone

Worm Reduction Gearbox
Alcha Soumailou
Prof. Zhou Zhang

Customized Global Tip Calculator
Tatyana Taylor
Prof. Marcos Pinto

AngularJS: Top Client-Side Javascript Framework for Web Pages
Andray Whyte
Prof. Marcos Pinto

Brain Glioblastoma Morphologic Features in MRI: Predictive Models for Spread
Ruth Zero and XiangFu Zhang
Prof. Subhendra Sarkar

Data Analysis and Visualizations of Drosophila Behavioral Phases
Xiaona Zhou
Prof. Boyan Kostadinov

A STEM-COMD Interdisciplinary Approach to Illustrating STEM Manuscript
Jennie ZhuPan
Prof. Sara Gomez Wooley

NATIONAL SCIENCE FOUNDATION LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION (LSAMP) IN STEM
Design and Prototyping of a Speed Reducer GearBox
Sheikh Ahmar
Prof. Angran Xiao

Defining Practices to Mitigate the Effects of Orbital Debris in Space
Caroline Eco
Prof. Mohammad Razani

Care and Maintenance of Dental Restorations
Ibeth Erazo
Prof. Anthony Sena

Mechanical Characterization of Nano-material Doped Polydimethylsiloxane (PDMS)
Robert Janik
Prof. Ozlem Yasar

Response Abilities: Digital Health Literacy through Words and Images
Judeen Peters
Prof. David Lee

NATIONAL SCIENCE FOUNDATION RESEARCH EXPERIENCES FOR UNDERGRADUATES (NSF REU GRANT #1950629)
Profs. Abdou Bah, Reginald Blake, Hamid Norouzi, Janet Liou-Mark, and Ms. Julia Rivera

Streamflow Prediction using Deep Learning Models
Ana Abreu
Prof. Arezoo Bybordi
Ozone (O3) And Particulate Matter (PM2.5): Summer Heat and High Pollution Within the NY Metro Region
   Babacar Dieng
   Prof. Yonghua Wu

The Effects of Late Spring Frost on Forest and Landscape Health and Recovery of the Black Rock Forest, New York
   Caroline Eco, Oliver Imhans
   Profs. Aaron Davitt and Andrew B. Reinmann

   Christal Jean-Soverall,
   Profs. Abdou Bah, Reginald Blake and Hamid Norouzi

Estimating Hourly Brightness Temperature Data Using SSMIS and GMI Sensors
   Mamadou Balde
   Prof. Zahra Sharinezhadazizi

Microfibers: From the store to the shore
   Maria DeLeon
   Prof. Valerie Were

Detecting Forecast Error Signatures
   Stance Mason
   Prof. Hannah Aizenman

Investigating Water Usage Patterns Tied to California State Water Project
   MXiaoqing Wu
   Prof. Indrani Pal

PHY1002ID: An Introduction to the Physics of Natural Disasters
   Prof. Abdou Bah

Earthquake Evacuation Plan for NYC Public Schools
   Sherene Moore, Jude R Valon,
   Ruben D Vecino Gazabon, Jing Wang,
   Myat K. Thar, Olawale S Ayeni

Hurricane: Nature’s Circle Pit
   Ely J. Gonzalez, Kevin Vinces, Brian D Maison,
   Faiza Naz, Melissa Agosto, Oumou Diallo

United States Contribution to the Mitigation of Global Warming
   Raihan Hossain, Arelis Gutierrez,
   Fabio Gonzalez Colacicco, Jiaxiang Chen,
   Ronald Ezekiel Felipe, MD Shahid Himel,
   Mahim Pritom, Estephany Tapia

New York City’s Preparations for Major Flooding
   Naved Khan, Ashley Mateo, Eliza Mullins,
   Albin Mulic, Mohammed Sharif, Siobhan Smith

BIO 1201ID: Biology II
   Prof. Tatiana Voza

Open Educational Resources: What do Students Want?
   Aneeza Hussain and Joyette Noel
Honors Scholars Program

GRADUATE SCHOOL FAIR

Join us virtually in Second Life and Zoom
Over 100 programs will be represented!

Second Life Session
December 3, 2020, 9:30AM-2PM

Zoom Info Session
December 3, 2020, 4-5PM

Organized by Dr. Reneta D. Lansiquot, Mr. Christopher A. Navarrete, and Prof. Tamrah D. Cunningham.
THE 33rd SEMI-ANNUAL
DR. JANET LIOU-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. Laura Yuen-Lau

A SPECIAL THANK YOU TO THE DEDICATED POSTER JUDGES

Ralph Alcendor
Navid Allahverdi
Nadia Benakli
Monica Berger
Josh Borja
Stephanie Boyle
Susan Brandt
Gwen Cohen Brown
Yu-Wen Chen
Tamrah D. Cunningham
Susan Davide
Aida Eguès
Ossama Elhadary
Li Geng
Katherine Gregory
Joseph Jeyaraj
Nanette Johnson
Ivana Jovanovic
Laina Karthikeyan
Ellen Kim
Jinwon Kim

Boyko Kostadinov
Nan Li
Sean MacDonald
Alberto Martinez
Ariane Masuda
Elizabeth Milonas
Marissa J. Moran
Camille Phaire-Morton
Marcos S. Pinto
Myldred Prévil
Nandi Prince
Noemi Rodriguez
Satyanand Singh
Denise Sutton
Christopher Swift
Chen Xu
Zoya Vinokur
Robert Walljasper
Mai Zahran
Zhou Zhang
Zheng Zhu

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Ms. Or Szyflingier for designing the program

Organized by City Tech’s Honors Scholars Program